State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF DRINKING WATER
Kenneth H. Bousfield, P.E.
Director

DRINKING WATER BOARD MEETING

January 17, 2014
1:00 p.m.
DEQ Board Room - # 1015
195 North 1950 West
Salt Lake City, Utah 84116

Ken Bousfield's Cell Phone #: (801) 674-2557

1. Call to Order – Chairman Hansen

2. Roll Call – Ken Bousfield

3. Introductions – Chairman Hansen

4. Approval of the Minutes - November 8, 2013

5. Financial Assistance Committee Report
    1. Status Report
    2. Project Priority List
    3. SRF Applications
       FEDERAL:
        a. Sheep Creek Cove HOA – Julie Cobleigh
        b. Pleasant View City – Rich Peterson
    4. OTHER:

6. Final Adoption of Rule Revisions - Tammy North & Bob Hart
    a. R309-511 - Hydraulic Modeling Requirements
    b. R309-515 - Source Development

7. Rural Water Association's Update – Dale Pierson

8. Chairman's Report
    a. Mayor Heather Jackson
    b. Mayor Natasha Madsen

9. Linda Matulich's Retirement – Kate Johnson

10. Director's Report
    a. 2014 Legislative Session
    b. Drinking Water Board's 2014 Meeting Schedule - Final
    c. Rural Water Association of Utah's 2014 Annual Conference
    d. Energy Efficiency In-Depth Training

11. Next Board Meeting:
    Date: February 27, 2014
    Time of Board Meeting: 2:00 p.m.
    Location: Dixie Convention Center, Garden Room
    1835 Convention Center Drive
    St. George, Utah 84790
    Phone: (435) 628-7003

12. Other

13. Adjourn

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Brooke Baker, Office of Human Resources, at: (801) 536-4412, TDD (801) 536-4424, at least five working days prior to the scheduled meeting.

AGENDA ITEM 4

APPROVAL OF THE
NOVEMBER 8, 2013

DRINKING WATER BOARD
MINUTES

State of Utah
GARY R. HERBERT
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Department of
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MINUTES OF THE DRINKING WATER BOARD MEETING HELD ON NOVEMBER 8, 2013 AT 1:30 P.M. IN SALT LAKE CITY, UTAH

BOARD MEMBERS PRESENT

Paul Hansen, Chair
Betty Naylor, Vice Chair
Tage Flint
Heather Jackson
Brad Johnson
Natasha Madsen
David Stevens
Mark Stevens

BOARD MEMBERS EXCUSED

Brett Chynoweth

STAFF

Ken Bousfield
Michael Grange
Nathan Lunstad
Rich Peterson
Gary Kobzeff

GUESTS

Dale Pierson, Rural Water Association
Clyde Watkins, Rural Water Association
Travis Jockumsen, Payson City
Brent Arns, Payson City
David Tuckett, Payson City
Susan Tuckett, Payson City
Ted Mickelsen, Jones & DeMille Engineering
Christian Anderson, Woodland Hills
Chris Helvey, Woodland Hills City
Steve Laritsen, Woodland Hills City
Corbett Stephens, Woodland Hills City
Erick Johnson, Duchesne County WCD
Scott Wilson, Duchesne County WCD

STAFF Continued

Heather Bobb
Linda Matulich
Misty Tabor

ITEM NO. 1 – CALL TO ORDER

The Drinking Water Board convened at 1:00 p.m. in Salt Lake City, Utah with Chairman Paul Hansen presiding.

ITEM NO. 2 – ROLL CALL

Chairman Hansen asked Ken Bousfield to call roll of the Drinking Water Board members. The roll call showed that there were 8 members present. Board member Brett Chynoweth was excused.

ITEM NO. 3 – INTRODUCTIONS

Chairman Hansen asked the guests to introduce themselves.

ITEM NO. 4 – APPROVAL OF THE MINUTES

Chairman Hansen stated a motion was in order to approve the Drinking Water Board minutes of August 28, 2013 and October 11, 2013.

Betty Naylor moved to approve the August 28, 2013 and the October 11, 2013 Drinking Water Board minutes.

Tage Flint seconded.

CARRIED
(Unanimous)

ITEM NO. 5 - FINANCIAL ASSISTANCE COMMITTEE REPORT

1. Status Report

Michael Grange reported on some of the activities staff have been involved in since the June 13, 2013 Drinking Water Board meeting. There are about 10 projects, they are worth about $28,000,000, that staff is waiting to close. Some of those are moving quickly, but some of those a little more slowly. But we are working with each of those water systems; 1) to be able to close the loans, and 2) get the money out to improve their infrastructure. The $28,000,000 is obligated funding, and is in addition to the $30,000,000 the fund is projected to have by November 1, 2014.

Michael was asked if he felt any reluctance from EPA's part to commit because of central budget cuts, fights, etc. Michael said that EPA can't commit, until a budget or a continuing resolution is passed by Congress. The projected available funds include an anticipated capitalization grant of $8,500,000 for FY2014. Although it all depends on what Congress decides to do.

2. Project Priority List

We have added two new projects to Project Priority List; Bridge Hollow Water Association is being added to the project priority list as an emergency with l00 points. Their project consists replacing pressure reducing valves have failed in their system.

The Woodland Hills project is being added to the project priority list with 12 points, a new well, a transmission line and a pump.

The Financial Assistance Committee is recommending that the Drinking Water Board approve the updated Project Priority List.

Betty Naylor asked if there were any questions. Hearing none, Betty asked for the motion.

Heather Jackson moved the Drinking Water Board approve the updated Project Priority List.

David Stevens seconded.

CARRIED
(Unanimous)

3. SRF Applications

a. Woodland Hills

Christian Anderson, Chris Helvey, Steve Laritsen, and Corbett Stephens, representing Woodland Hills, were available for any questions from the Drinking Water Board.

Rich Peterson reported Woodlands Hills is proposing a project to construct a new well and transmission line. The cost of the project is $920,000. The City plans to contribute $50,000 towards the project. The system's MAGI is such that they do not qualify for a grant. The recommendation is that the Drinking Water Board authorizes a $920,000 loan at 2.92% for 20 years with a self-contribution of $50,000. Conditions include resolving the appropriate issues on their compliance report.

Chairman Hansen asked the representatives if they have reviewed the costs to be sufficient on what all they need to do on their project is sufficient. Chairman Hansen asked they have a contingency, and that they are built into it appropriately.

The representatives answered questions from the Drinking Water Board to them. They told the Drinking Water Board they feel really good about the results of the test.

Betty Naylor asked Rich Peterson about the water bill. Rich reported Woodland Hills is planning to use the numbers proposed by the Division of Drinking Water.

Betty Naylor called for the vote.

Heather Jackson moved the Drinking Water Board authorize a $920,000 loan at 2.92% for 20 years with a self-contribution of $50,000. Conditions include resolving the appropriate issues on their compliance report.

Natasha Madsen seconded.

CARRIED
(Unanimous)

b. Payson City

Travis Jockumsen, Brent Arns, David Tuckett, Susan Tuckett, and Charlotte Susan Tuckett, Payson City residents, were available for any questions from the Drinking Water Board.

Nathan Lunstad reported that Payson City received authorization a few years ago to construct two drinking water storage tanks. They completed that project, and they have received their operating permits. Due to the design-build nature of the project, very favorable bidding and construction conditions and good project management - the City has approximately $1.1 million remaining from the original SRF authorization.

Payson City has requested the Drinking Water Board authorize a change to the original project scope of work, and allow the City to use the remaining funds to drill and equip a new culinary water supply well.

Staff believes Payson City's request is the most efficient and cost-effective way to proceed. The additional time and cost to both the city and staff to return the remaining money to the fund, as well as to begin the application, authorization, bonding and loan closing process over again is prohibitive and is not the best use of the limited financial assistance available for water system improvement projects. The construction of a new well is included in Payson City's master plan.

Chairman Hansen commended Payson City's on using their money resources wisely. He also stated that the Financial Assistance Committee discussed the options available for the City to proceed with constructing the new well, including cost to Staff and the City if the Drinking Water Board decided to require the City to begin the financial application process all over again. The FAC agreed with the staff recommendation that a Drinking Water Board authorization to modify the original Scope of Work was the best alternative.

Nathan Lunstad stated the Financial Assistance Committee is recommending the Drinking Water Board authorize a change to the November 9, 2011 tank replacement project Scope of Work to allow Payson City to use the remaining SRF financial assistance to drill a new culinary water supply well. All terms and conditions of the original November 9, 2011 authorization remain in effect.

Payson City thanked the Drinking Water Board for their help and assistance.

The Drinking Water Board asked Payson City if they have predetermined where a well may be drilled. Payson City is in the process now of drilling where there way may be a well.

Chairman Hansen moved the Drinking Water Board authorize a change to the November 9, 2011 tank replacement project to allow the work that Payson City has completed to allow them to use the remaining funds to drill a new culinary replacement well under the same terms and conditions as the original authorization of November 9, 2011 with the understanding that if the costs exceed that balance, that Payson City will pick up the costs.

Mark Stevens seconded.

CARRIED
(Unanimous)

FEDERAL:

a. Duchesne County WCD

Erick Johnson, Scott Wilson and Ted Wilson, representing Duchesne County WCD, were available for any questions of the Drinking Water Board Members.

Gary Kobzeff reported that on September 5, 2013, the Community Impact Board authorized $29,900,000 to fund their Victory Pipeline Project. The terms of the authorization includes a $14,950,000 grant and a $14,950,000 loan at 1.5% interest. The project will be constructed in two phases. Phase one will supply water to the East Duchesne, Johnson and Myton water systems. On multiple times the loan has been reauthorized in order to get all of the funding for the project, which has been a road block for them. With the approval of funding from the Community Impact Board, they will be able to accomplish their project.

Gary Kobzeff mentioned the Financial Assistance Committee's recommendation was that the Drinking Water Board reauthorizes a $4,000,000 construction loan at 0% interest for 30 years with $700,000 in principal forgiveness.

Scott Wilson thanked the Drinking Water Board for their historical support of this project.

Betty Naylor asked Scott Wilson about having to go around the tribal lands, since they met last.

Scott Wilson gave some background on the complexities on being in a tight corridor and bypassing tribal territory.

Betty Naylor asked if the Drinking Water Board money was going in with the CIB money on the project.

Scott Wilson said that the Drinking Water Board's money will be used for Phase l of the project.

Chairman Hansen asked about the scope again. You now have the $34,000,000 for both Phase l and Phase ll. When do you expect to be complete with Phase l and start on Phase ll?

Ted Mickelsen said the Phase l process is underway. The District is starting to acquire easements, and the engineers are working on the design of the project, and going through the contractor qualification process right now. Construction on Phase l is expected to begin in the first quarter of 2014. While Phase l is being built, work on the design and acquisitions for Phase ll will begin. The intent is to just continue on to Phase ll when Phase l is complete. The District anticipates completing Phase l around November 2014 and Phase ll in 2015.

Natasha Madsen moved the Drinking Water Board reauthorize a $4,000,000 construction loan at 0% interest for 30 years with $700,000 in principal forgiveness.

Heather Jackson seconded.

CARRIED
(Unanimous)

4. OTHER:

No other business.

ITEM NO. 6 – APPROVAL OF THE CROSS CONNECTION CONTROL RULE CHANGES R309-305

Ken Bousfield indicated that the Rule making process for changes to R309-305 Cross Connection Control Rules have run its course and staff recommends that the Board authorize staff to finalize the Rule. Ken indicated that there were no comments received during the comment period.

Chairman Hansen asked the Drinking Water Board if they had any discussion on this agenda item.

Tage Flint moved the Drinking Water Board authorize staff to proceed with finalizing rulemaking.

David Stevens seconded.

CARRIED
(Unanimous)

ITEM NO. 7 – APPROVE THE OPERATOR CERTIFICATION COMMISSION RULE CHANGES R309-300

Ken Bousfield indicated that the Rule making process for changes to R309-300 Operator Certification Commission Rules have run its course and staff recommends that the Board authorize staff to finalize the Rule. Ken indicated that there were no comments received during the comment period.

Chairman Hansen asked if there were any comments.

No comments.

Betty Naylor moved the Drinking Water Board authorization staff to proceed with rulemaking to proceed with finalizing rulemaking.

Heather Jackson seconded.

CARRIED
(Unanimous)

ITEM NO. 8 - OPERATOR CERTIFICATION COMMISSION ROSTER UPDATE

Ken Bousfield reported there are several Operator Certification Commission members whose terms have expired or will expire for other members by the end of this calendar year, and where this is the last meeting for this year, it is appropriate to extend their terms.

The following candidates are willing to serve another term:

James Callison from December 31, 2011 to December 31, 2014
Craig Fahmi from December 31, 2013 to December 31, 2016
Mark Clark from December 31, 2013 to December 31, 2016 and
Gary Larsen from December 31, 2013 to December 13, 2016

Natasha Madsen moved the Drinking Water Board approve the renewal of an additional term for the following members on the Operator Certification Commission: James Callison, 12/31/11 to 12/31/14; Craig Fahmi, 12/31/13 to 12/31/16; Mark Clark, 12/31/14 to 12/31/16; and Gary Larsen, 12/31/13 to 12/31/16.

Betty Naylor seconded.

CARRIED
(Unanimous)

ITEM NO. 9 – CROSS CONNECTION CONTROL COMMISSION ROSTER UPDATE

Ken Bousfield reported there are two changes on the Cross Connection Control Commission. They are:

Tim Collings is willing to serve another term. His term expires on December 31, 2013. His new term will be from: December 31, 2013 to December 31, 2015.

Anne Hansen is unable to complete her term ending on December 31, 2014.

Brian Pattee is willing to serve the remainder of Anne's term from December 31, 2013 to December 31, 2014.

David Stevens made a correction on the Cross Connection Control Commission Roster cover page. Tim Collings expiration date is listed as December 31, 20123. It should read as December 31, 2013.

David Stevens moved the Drinking Water Board approve Tim Collings, 12/31/13 to 12/31/15, to serve another term; and Brian Pattee to finish Anne Hansen's term from; 12/31/12 to 12/31/14.

Heather Jackson seconded.

CARRIED
(Unanimous)

ITEM NO. 10 – DRINKING WATER BOARD'S DRAFT 2014 MEETING SCHEDULE

Chairman Hansen directed the Drinking Water Board members attention to the amended 2014 Drinking Water Board meeting schedule placed on the table for them. This copy was updated since it was placed in the Drinking Water Board packet.

Chairman Hansen requested changing a date on two of the amended meeting dates for the Drinking Water Board members to consider.

The first date change to make is: from January 9, 2014 to January 17, 2014.
The second date change to make is: from July 11, 2013 to July 18, 2014.
The third date change to make is: from November 14, 2014 to November 7, 2014.

Chairman Hansen moved the Drinking Water Board approve the three modified dates of January 9, 2014 to January 17, 2014, July 11, 2013 to July 18, 2014 and November 14, 2014 to November 7, 2014, at this time. As always, those dates are flexible, and we can make appropriate advance notice by public notification.

Betty Naylor seconded.

CARRIED
(Unanimous)

ITEM NO 11 – RURAL WATER ASSOCIATION'S UPDATE

Dale Pierson reported that the Rural Water Association of Utah has a contract with the Division of Drinking Water that provides services to the Counties in Utah regarding drinking water issues. We also have another contract that is handled directly with Division staff that is called the Management Technician. The contract at the present time is being handled by Curtis Ludvigson. Curtis has some medical problems, and he will be out for about 2 to 3 months. Coincidentally, we have another project that is funded through EPA, which is our EPA On-Site Training Program. That program is currently unfunded, because of some things that happened in Washington D.C. recently. We have Terry Smith, who works with the EPA contracts, sitting on the sidelines for us. What we will do during the time that Curtis is unable to fill the contract, is have Terry Smith fill Curtis' position while Curtis is recovering from his medical problems. Terry Smith is a very capable person, and he has been with the Rural Water Association of Utah (RWAU) for 6 or 7 years.

Clyde Watkins, RWAU, reported on the Development Program he is managing. He is trying to work a little more on the Non-Public Rule right now, and work more with the Local Health Departments. Specifically the Central Utah Health District has some issues with some very small developments that are further subdivided into smaller subdivision in an attempt to run under the regulatory radar. Clyde reported that Rural Water has actually come up with a document for the local health departments if they want to look at it and get their counties to go with. The document is on our website. Clyde offered to print the document out and give a copy to each one of the Board members, or e-mail a copy of the document to each one of the Board members, to review it. If the Board members want to offer him any feedback on the document, it would be greatly appreciated. The document is based on the Southwest Health Department and the TriCounty Health Department ordinance. Clyde offered to come and see each one of the Board members, if they so wished him to do that.

Dale Pierson mentioned the Rural Water Association of Utah is always there for the Drinking Water Board.

Betty Naylor, on behalf of the Drinking Water Board, thanked the Rural Water Association of Utah for their help and support through the years with the drinking water programs in the State of Utah.

Chairman Hansen asked Clyde if he used anyone's help on development this rule.

Clyde mentioned that he went to each of the District Engineers for their input. He also went to each one of the County Health Departments.

ITEM NO. 12 – CHAIRMAN'S REPORT

Chairman Hansen had nothing new to report.

ITEM NO. 13 – DIRECTOR'S REPORT

a. ASDWA's ANNUAL CONFERENCE REPORT

Ken Bousfield reported that every October there is an Association of State Drinking Water Administrators (ASDWA) Annual Conference with his counterparts throughout the country. Ken reported on some of the things that were covered at the conference, including the following proposed or recently adopted EPA Rules: the Groundwater Rule, the Stage II Disinfection Byproducts Rule, the Consumer Confidence Rule and the revisions to the Total Coliform Rule.

There was also quite a bit of discussion about Water Infrastructure Finance Investment Act (WIFIA). It is a Congressional Act that hasn't been enacted, but it's gaining traction. The proposed Act involves using the Treasury as a source of funding for water projects. The spin on the Act is that the money in the Treasury would be invested in water projects which are very financially reliable. The dollar floor on the projects funded from the Treasury is $10,000,000. The concern amongst states is that this funding source would replace the federally funded State Revolving Fund (SRF) program. As the Board fully realizes if the SRF program was replaced by WIFIA there would be no money for the small systems that really need the help.

Ken mentioned the California experience where some communities are pumping the highly treated effluent from sewage treatment plants into the ground to serve as a barrier against ocean salt water intrusion. Then as inland wells are pumped there is actually a recycling of the waste water. Ken mentioned that this is required in Southern California because the population has greatly exceeded the natural capacity of the watershed to satisfy the demand of water users. Ken then mentioned that as Utah continues to grow, the demand for water will at some point exceed the ability of the watershed to provide sufficient water. Then we may be utilizing the technology and lessons learned in California.

Chairman Hansen thanked Ken for the updated, and for being able to attend.

ITEM NO. 14 – NEXT BOARD MEETING

Chairman Hansen stated that with the revision that was made, the next Drinking Water Board meeting will be held on January 17, 2014 at 1:00 p.m. in DEQ's Board Room, #1015, 195 North 1950 West, Salt Lake City, Utah.

ITEM NO. 15 – OTHER

The Board discussed the possibility of having Board meetings in various parts of the State for the purpose of seeing interesting projects including those funded by the Board. Betty Naylor suggested at the January or the May Drinking Water Board meeting to meet at the Jordan Valley Water Treatment Plant, and have an opportunity of going through their plant. They have some nice conference rooms there that we could have our board meetings in.

Heather Jackson reported that she didn't run for re-election for Mayor of Eagle Mountain, and that she will no longer be able to stay on the Drinking Water Board. Natasha Madsen reported that she didn't file for re-election either.

Chairman Hansen thanked both Mayor Jackson and Mayor Madsen for all of their work and dedication while serving on the Drinking Water Board. Chairman Hansen invited both Mayor Jackson and Mayor Madsen back to the next Drinking Water Board meeting.

ITEM NO. 16 – ADJOURN

Chairman Hansen stated a motion to adjourn the Drinking Water Board meeting was in order.

Chairman Hansen moved the Drinking Water Board adjourn their meeting at 2:30 p.m.

David Stevens seconded.

Misty Tabor
Recording Secretary

AGENDA ITEM 5

FINANCIAL ASSISTANCE COMMITTEE REPORT

5. FINANCIAL ASSISTANCE COMMITTEE

1) STATUS REPORT

5. FINANCIAL ASSISTANCE COMMITTEE REPORT

1. STATUS REPORT

THE STATUS REPORT WON'T BE READY IN TIME TO GO OUT FEDERAL EXPRESS WITH THE DRINKING WATER BOARD PACKET.

THE STATUS REPORT WILL BE READY FOR THE DRINKING WATER BOARD MEETING, AND IT WILL BE HANDED OUT AT THAT TIME.

IF YOU HAVE ANY QUESTIONS, PLEASE LET THE DIVISION OF DRINKING WATER KNOW.

THANK YOU.

5. FINANCIAL ASSISTANCE COMMITTEE

2) PROJECT PRIORITY LIST

Project Priority List
Presented to the Drinking Water Board
January 17, 2014

DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST

There are two new projects being added to the Project Priority List:

Sheep Creek Home Owners Association is being added to the project priority list with 6 points. Their project consists of an additional point of diversion including treatment.

Pleasant View is being added to the project priority list with 3.4 points. Their project consists of a new well and reservoir.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board approve the updated Project Priority List.

November 25, 2013

Utah Federal SRF Program

Project Priority List

										Authorized
					Total Unmet Needs:	$256,819,311		Total Needs, incl. Recent funding	$275,376,346	$202,444,590
	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
N				20.1	Green Hills	Weber	210	Connect to Eden Water and Booster Pump1	$1,374,136	1,346,136	
N				19.7	Enterprise City (on hold)	Washington	1,500	replace water lines, refurbish water tank	$987,121	$887,121	
N				15.1	Sunset City	Dvais	5,122	Waterline replacement	$325,000	$50,000	
N				10.5	North Ogden City (Hold until May)	Weber	17,357	Well Rehab	$647,420	$640,946	
N				6.0	Sheep Creek HOA	Cach	75	New source and treatment			
N				3.4	Pleasant View	Weber	6,500	New well and reservoir	$2,326,263	$2,126,263	
A				75.8	Wooden Shoe Water Co.	Summit	76	Well, well house, tank	$202,424	$202,424	$201,000
A				47.4	Duchesne County	Duchesne	3,585	Supply line to 3 existing districts	$22,000,000	$4,000,000	$4,000,000
				37.2	Gunnison	Sanpete	3,285	New well, Tank, Chlorination bldg, waterlines	$6,575,000	2,500,000	
A				29.5	Elberta Water Co	Utah	141	Well equipping and transmission line	$1,657,106	$1,657,106	$1,658,535
A				19.1	Goaslind Spring	Cache	50	Spring redevelopment, tank, waterline, chlorination	$1,089,899	$1,089,899	$378,000
				18.8	Price River WID- Spring Glen	Carbon	750	Distribution system upgrades for absorption by PRWID	$800,000	$700,000	
A				14.9	Mendon City	Cache	1,400	New well, transmission linle, telemetry	$1,240,227	$1,071,595	$1,072,000
				13.7	Greendale				$1,384,444	$1,144,444	
A				13.3	Eagle Mountain	Utah	23,000	Pump Station and Waterline	$5,694,427	$4,694,427	$4,648,000
				13.2	Woods Cross				$4,403,000	$4,000,000	
				12.5	Bear River WCD- Collinston	Box Elder	50,104	1-MG tank, transmission line, pump station	$3,400,000	$3,300,000	
				12.1	Woodland Hills City				$969,899	$969,899	
A				11.1	Fremont Waterworks Co.	Wayne	600	spring redevelopment, pipeline, fir ehydrants	$425,000	$425,000	$425,000
A				9.6	Rockland Ranch	San Jaun	110	New Well	$106,050	$106,050	$214,500
A				8.9	Herriman	Salt Lake	24,000	New 3 MG tank and pump station	$8,325,000	$5,000,000	$4,682,000

N = **New Application**
A = **Authorized**
P = **Potential Project- no application**

E= **Energy Efficiency**
W= **Water Efficiency**
G= **Green Infrastructure**

I= **Environmentally Innovative**

GREEN PROJECTS

A		E/W	100%	NA	Mountain Regional SSD	Summit	6,400	SCADA, well improvements, chlorinator	$1,277,778	$1,277,778	$1,278,000

EMERGENCY FUNDING

N				100.0	Bridge Hollow Water Association	Summit	52	Replacement of 8 failed PRVs	$75,000	$75,000	

November 25, 2013

Utah Federal SRF Program

Project Priority List

												Authorized
					Total Unmet Needs:		$256,819,311		Total Needs, incl. Recent funding		$275,376,346	$202,444,590
	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized	

POTENTIAL PROJECTS

P				125.2	Soldier Summit SSD-2nd home sub	Utah	33	waterline upgrade	$530,303	$530,303	
P				36.4	Santa Clara (on hold)	Washington	8,000	Waterline upgrades	$6,419,202	$6,354,202	
P				35.0	CUWCD-Utah Valley	Utah		Treatment plant upgrades	$39,369,500	$36,950,000	
P				24.4	Jordan Valley WCD	Salt Lake	82,500	Treatment	$3,200,000		
P				20.0	Pinon Forest	Duchesne	n/a	New system- residents haul water	$21,247,000		
P				17.9	Wendover	Tooele	1,600	Waterline upgrades	$833,000		
P				17.5	Draper City	Salt Lake	15,000	Storage and distribution upgrades	$35,789,000		
P				17.1	East Zion SSD	Kane	49	waterline	$128,876	$128,876	
P				16.4	Eastland SSD	San Juan	60	New well for back up purposes	$500,000		
P				16.4	Neola	Duchesne	840	Waterline upgrades, storage, source improvements	$3,607,592	$3,607,592	
P				15.3	Newton Town	Cache	799	Spring rehabilitation, waterline upgrades	$1,581,500		
P				15.3	South Rim Water	Tooele	264	Well equipment and house, new tank	$600,000		
P				15.2	Midvalley Estates Water Company	Iron	700	Source, storage, distribution	$500,000		
N											
P				15.1	Syracuse	Davis	25,200	Waterline upgrades	$1,589,756	$1,589,756	
P				14.7	Central Waterworks Co.	Sevier	450	Storage and distribution upgrades	$1,400,000		
P				14.0	Herriman	Salt Lake	18,431	Booster Pump, waterline	$2,050,000		
P				13.7	Cornish Town	Cache	300	Connect to Lewiston, rehab well	$1,226,263		
P				13.7	Morgan City	Morgan	3,250	Waterline upgrades	$692,026		
P				13.5	Riverdale	Weber	8,200	New well and tank, waterline upgrades	$2,050,000		
P				13.3	Richfield City	Sevier	7,111	System repairs	$2,722,000		
P				13.0	Uintah City	Weber	1,300	Treatment	$1,063,000		
P				12.8	Centerfield	Sanpete	1,200	New tank, upgrade waterlines	$3,600,000		
P				12.6	Enterprise	Washington	1,500	New tank, upgrade waterlines	$1,917,100		
P				12.6	Price River	Carbon	7,659	New tank, waterlines, treatment	$2,750,000		
P				11.6	Manila Culinary Water Co.	Utah	2,450	Treatment and waterline upgrades	$700,000		
P				11.6	Jordan Valley WCD	Salt Lake	82,500	Flouride facility, well equipping	$3,694,000	$2,000,000	
P				11.4	Pineview West Water Company	Weber	115	Telemetry system	$25,000		
P				11.4	North Ogden City	Weber	15,000	Waterline upgrades	$746,000	$746,000	
P				11.3	Farmington	Davis	15,000	New well, new tank, waterline replacement	$2,830,000		
P				10.7	Ogden City	Weber	77,000	Source rehabilitation, treatment plant upgrades	$26,500,000		
P				10.7	High Valley Water Company	Summit	850	Waterline upgrades	$1,000,000		

November 25, 2013

Utah Federal SRF Program

Project Priority List

											Authorized
					Total Unmet Needs:		$256,819,311		Total Needs, incl. Recent funding	$275,376,346	$202,444,590
	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
P				10.3	City of Monticello	San Juan	2,000	Storage and distribution upgrades	$1,200,000		
P				9.8	Gorgoza	Summit	4,200	Waterline upgrades	$1,000,000		
P				9.7	Moutain Regional SSD	Summit	6,700	Transmission line	$600,000		
P				9.7	Benson Culinary Water District	Cache	743	New tank, waterline replacement	$500,000		
P				9.3	Mapleton City	Utah	7,300	Replace distribution lines	$15,339,560		
P				9.2	Greendale Water Co.	Daggett	500	Treatment system	$800,000		
P				9.1	Center Creek	Wasatch	200	Pump house and pump	$80,000		
P				8.4	Nibley City	Cache	4,300	New tank	$1,270,355		
P				8.3	Hurricane	Washington	8,000	Waterline replacement and new tank	$5,047,899		
P				7.6	Harmony Farms Water User Assoc.	Washington	300	Waterline Replacement	$3,000		
P				6.8	Hooper Water Improvement District	Weber	16,520	Storage, waterlines, treatment	$2,887,000		
P				6.7	Centerville City	Davis	16,000	Replacement well, waterline upgrades	$2,965,000		
P				6.1	Marble Hill Water Company	Box Elder	250	New storage tank	$225,000		
P				4.5	Peterson Pipeline Association	Morgan	450	Source, storage, distribution	$1,700,000		
P				4.5	Perry City	Box Elder	4,603	Source, storage, distribution	$4,782,220		
P				3.9	Wolf Creek Country Club	Weber	2,000	Waterline	$180,000		
P				3.4	Highland City	Utah	15,066	New well houses	$650,000		

5. FINANCIAL ASSISTANCE COMMITTEE

3) SRF APPLICATIONS
FEDERAL FUNDS

a) SHEEP CREEK COVE HOA -
Julie Cobleigh

Sheep Creek Cove HOA
Presented to the Drinking Water Board
January 17, 2014

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Sheep Creek Cove HOA is requesting $90,000 in financial assistance to construct a new point of diversion for their water source. The project includes a shallow well, filtration, chlorination, and a backup generator. Sheep Creek Cove HOA scored 6 points on the priority system.

STAFF COMMENTS:

Sheep Creek Cove HOA is classified as a transient, non-community system. They are a cabin-home subdivision, with no primary residents. Their current source of water, the Wilson (Gibbs) Spring, does not provide adequate flow throughout the year, so the water system has received an approval for a change of diversion on their water source. They plan to install a 20-feet deep well in a stream bed as the new diversion point. Since this will be classified as surface water, the project also includes filtration, disinfection and monitoring equipment. Additionally, the water system plans to install a backup generator.

Since this is a secondary home subdivision, the Sheep Creek Cove HOA does not qualify for additional subsidization. As in previous projects authorized by the Drinking Water Board, the interest / fee will be 90% of the market rate of 5.35%, resulting in a 4.82% interest or fee rate.

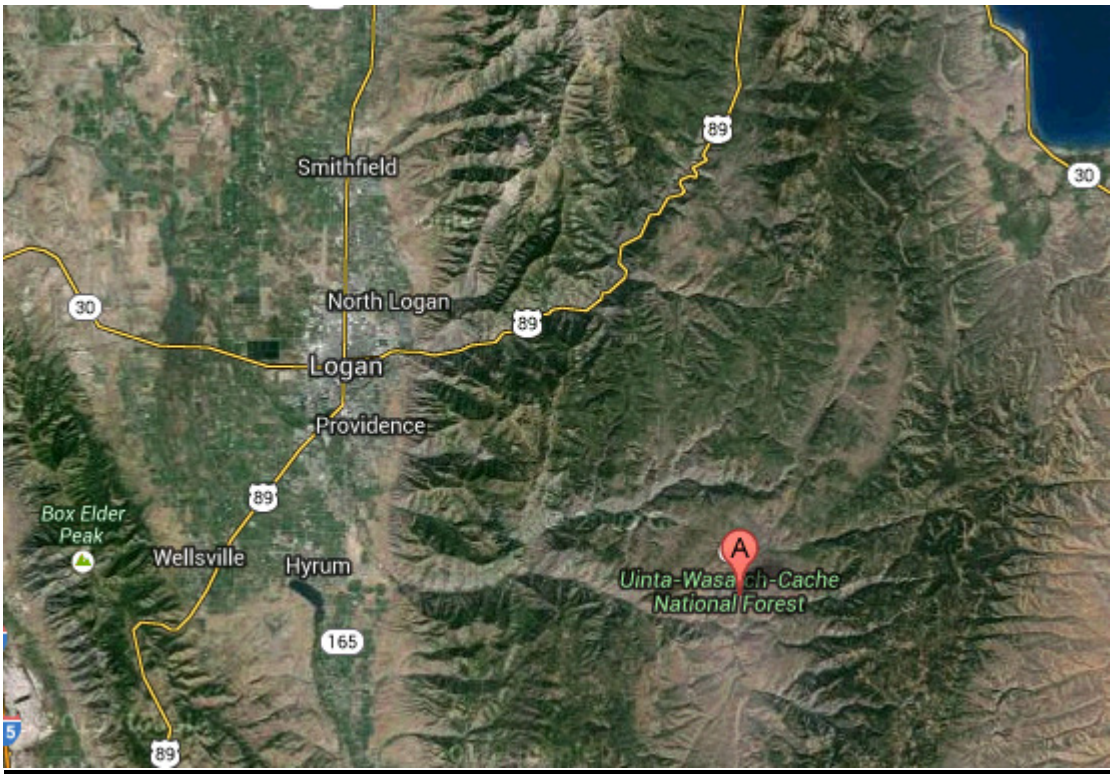
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a $90,000 construction loan to Sheep Creek Cove HOA at 4.82% annual interest or fee for 20 years.

APPLICANT'S LOCATION:

Sheep Creek Cove HOA is located in Cache County, approximately six miles south of Hardware Ranch near Hyrum.

MAP OF APPLICANT'S LOCATION:



IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	November 2013
DWB Funding Authorization:	January 2014
Complete Design:	February 2014
Plan Approval:	March 2014
Advertise for Bids:	April 2014
Bid Opening:	May 2014
Loan Closing:	June 2014
Begin Construction:	July 2014
Complete Construction:	November 2014
Receive Operating Permit:	January 2015

COST ESTIMATE:

Admin / Legal	$10,000
Engineering	$20,000
Construction- Treatment Facility	$25,000
Construction- Backup Generator	$26,000
Contingency	$8,000
Loan Origination Fee	$890
Total Project Cost:	**$89,890**

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB Loan	$90,000	100%

CONTACT INFORMATION:

APPLICANT:	Sheep Creek Cove HOA 4602 W. 4950 S. Hooper, UT 84315 Telephone: 801-985-2437
PRESIDING OFFICIAL & CONTACT PERSON:	David Prevedel - Director 4602 W. 4950 S. Hooper, UT 84315 Telephone: 801-985-2437 Email: gprevedel@msn.com
CONSULTING ENGINEER:	Kris Blauer Earth Fax 7324 South Union Park Ave. Midvale, UT 84047 Telephone: 801-561-1555 Email: kblauer@earthfax.com
ATTORNEY:	Jonathan Nash Hillyard, Anderson, and Olsen Law Office 595 S Riverwoods Pkwy, Ste 100 Logan, UT 84321
FACILITIES CONSULTANT:	Mike Zimmerman Mike Zimmerman Well Service, LLC PO Box 8 Magna, UT 84044 Telephone: 801-250-1400 Email: zdrillerteam@yahoo.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Sheep Creek Cove HOA
COUNTY: Cache
PROJECT DESCRIPTION: New Source and Treatment

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	180	NO. OF CONNECTIONS:	60 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$5.00 *			PROJECT TOTAL:	$90,000
CURRENT % OF AGI:	0.16%	FINANCIAL PTS:	20	LOAN AMOUNT:	$90,000
ESTIMATED MEDIAN AGI:	$37,718			PRINC. FORGIVENESS:	$0
STATE AGI:	$37,718			TOTAL REQUEST:	$90,000
SYSTEM % OF STATE AGI:	100%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	5.35%		4.82%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	5.35%		4.82%
REQUIRED DEBT SERVICE:	$4,500.00	$7,437.69		$7,108.98
*PARTIAL COVERAGE (15%):	$675.00	$1,115.65		$1,066.35
*ADD. COVERAGE AND RESERVE (10%):	$450.00	$743.77		$710.90
ANNUAL NEW DEBT PER CONNECTION:	$93.75	$154.95		$148.10
O & M + FUNDED DEPRECIATION:	$3,600.00	$3,600.00		$3,600.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$60.00	$60.00		$60.00
TOTAL SYSTEM EXPENSES	$9,225.00	$12,897.12		$12,486.23
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$12.81	$17.91		$17.75
% OF ADJUSTED GROSS INCOME:	0.41%	0.57%		0.56%

* Equivalent Residential Connections

R309-700-5

Sheep Creek Cove HOA
Cache
November 26, 2013

TABLE 2
FINANCIAL CONSIDERATIONS

		POINTS	
1. COST EFFECTIVENESS RATIO (SELECT ONE)			
A. Project cost $0 to $500 per benefitting connection		16	
B. $501 to $1,500		14	
C. $1,501 to $2,000		11	X
D. $2,001 to $3,000		8	
E. $3,001 to $5,000		4	
F. $5,001 to $10,000		1	
G. Over $10,000		0	
	$1,500		
2. CURRENT LOCAL MEDIAN ADJUSTED GROSS INCOME (AGI) (SELECT ONE)			
A. Less than 70% of State Median AGI		19	
B. 71 to 80% of State Median AGI		16	
C. 81 to 95% of State Median AGI		13	
D. 96 to 110% of State Median AGI		9	X
E. 111 to 130% of State Median AGI		6	
E. 131 to 150% of State Median AGI		3	
F. Greater than 150% of State Median AGI		0	
	100%		
3. PROJECT FUNDING CONTRIBUTED BY APPLICANT (SELECT ONE)			
a. Greater than 25% of project funds		17	
b. 15 to 25% of project funds		14	
c. 10 to 15% of project funds		11	
c. 5 to 10% of project funds		8	
d. 2 to 5% of project funds		4	
e. Less than 2% of project funds		0	X
	0.0%		
4. ABILITY TO REPAY LOAN			
4. WATER BILL (INCLUDING TAXES) AFTER PROJECT IS BUILT RELATIVE TO LOCAL MEDIAN ADJUSTED GROSS INCOME (SELECT ONE)			
a. Greater than 2.50% of local median AGI		16	
b. 2.01 to 2.50% of local median AGI		12	
c. 1.51 to 2.00% of local median AGI		8	
d. 1.01 to 1.50% of local median AGI		3	
e. 0 to 1.00% of local median AGI		0	X
	0.55%		
5. SPECIAL INCENTIVE POINTS Applicant: (Mark all that apply)			
A. has a replacement fund receiving annual deposits of 5% of the system's drinking water budget been established, and has already accumulated a minimum of 10% of said annual DW budget in this reserve fund.		5	
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	
TOTAL POINTS FOR FINANCIAL NEED		20	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Sheep Creek Cove HOA

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$90,000.00	ANTICIPATED CLOSING DATE	30-May-14
INTEREST	4.82%	P&I PAYMT DUE	01-Jan-15
TERM	20	REVENUE BOND	
NOMIN. PAYMENT	$7,108.98	PRINC PREPAID:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$90,000.00		$2,539.91	*	$0.00	$2,539.91	$90,000.00	0
2016	$90,000.00		$7,333.50		$3,000.00	$4,333.50	$87,000.00	1
2017	$87,000.00		$7,189.05		$3,000.00	$4,189.05	$84,000.00	2
2018	$84,000.00		$7,044.60		$3,000.00	$4,044.60	$81,000.00	3
2019	$81,000.00		$6,900.15		$3,000.00	$3,900.15	$78,000.00	4
2020	$78,000.00		$6,755.70		$3,000.00	$3,755.70	$75,000.00	5
2021	$75,000.00		$7,611.25		$4,000.00	$3,611.25	$71,000.00	6
2022	$71,000.00		$7,418.65		$4,000.00	$3,418.65	$67,000.00	7
2023	$67,000.00		$7,226.05		$4,000.00	$3,226.05	$63,000.00	8
2024	$63,000.00		$7,033.45		$4,000.00	$3,033.45	$59,000.00	9
2025	$59,000.00		$6,840.85		$4,000.00	$2,840.85	$55,000.00	10
2026	$55,000.00		$6,648.25		$4,000.00	$2,648.25	$51,000.00	11
2027	$51,000.00		$7,455.65		$5,000.00	$2,455.65	$46,000.00	12
2028	$46,000.00		$7,214.90		$5,000.00	$2,214.90	$41,000.00	13
2029	$41,000.00		$6,974.15		$5,000.00	$1,974.15	$36,000.00	14
2030	$36,000.00		$6,733.40		$5,000.00	$1,733.40	$31,000.00	15
2031	$31,000.00		$7,492.65		$6,000.00	$1,492.65	$25,000.00	16
2032	$25,000.00		$7,203.75		$6,000.00	$1,203.75	$19,000.00	17
2033	$19,000.00		$6,914.85		$6,000.00	$914.85	$13,000.00	18
2034	$13,000.00		$6,625.95		$6,000.00	$625.95	$7,000.00	19
2035	$7,000.00		$7,337.05		$7,000.00	$337.05	$0.00	20
			$144,493.76		$90,000.00	$54,493.76		

*Interest Only Payment

Sheep Creek Cove HOA

DWB Loan Terms		
Local Share (total):	$	-
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	90,000
DWB Loan Term:		20
DWB Loan Interest:		**4.82%**
DWB Loan Payment:	$	7,109

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	90,900
Existing Facility O&M Expense:	$	3,600
Proposed Facility O&M Expense:	$	3,600
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	-

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		60
Projected Growth Rate:		**0.0%**
Impact Fee/Connection Fee:	$	-
Current Monthly User Charge:	$	5.00
Needed Average Monthly User Charge:	$	17.75

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	0.0%	0	60	3,600	-	-	3,600	**-**	**-**	90,000	-	-	-	3,600	3,600	-
1	0.0%	0	60	12,780	-	-	12,780	**7,334**	**711**	87,000	3,000	4,334	-	3,600	11,644	1.25
2	0.0%	0	60	12,780	-	-	12,780	**7,189**	**711**	84,000	3,000	4,189	-	3,636	11,536	1.27
3	0.0%	0	60	12,780	-	-	12,780	**7,045**	**711**	81,000	3,000	4,045	-	3,672	11,428	1.29
4	0.0%	0	60	12,780	-	-	12,780	**6,900**	**711**	78,000	3,000	3,900	-	3,709	11,320	1.31
5	0.0%	0	60	12,780	-	-	12,780	**6,756**	**711**	75,000	3,000	3,756	-	3,746	11,213	1.34
6	0.0%	0	60	12,780	-	-	12,780	**7,611**	**711**	71,000	4,000	3,611	-	3,784	12,106	1.18
7	0.0%	0	60	12,780	-	-	12,780	**7,419**	**711**	67,000	4,000	3,419	-	3,821	11,951	1.21
8	0.0%	0	60	12,780	-	-	12,780	**7,226**	**711**	63,000	4,000	3,226	-	3,860	11,797	1.23
9	0.0%	0	60	12,780	-	-	12,780	**7,033**	**711**	59,000	4,000	3,033	-	3,898	11,643	1.26
10	0.0%	0	60	12,780	-	-	12,780	**6,841**	**711**	55,000	4,000	2,841	-	3,937	11,489	1.29
11	0.0%	0	60	12,780	-	-	12,780	**6,648**		51,000	4,000	2,648	-	3,977	10,625	1.32
12	0.0%	0	60	12,780	-	-	12,780	**7,456**		46,000	5,000	2,456	-	4,016	11,472	1.18
13	0.0%	0	60	12,780	-	-	12,780	**7,215**		41,000	5,000	2,215	-	4,057	11,271	1.21
14	0.0%	0	60	12,780	-	-	12,780	**6,974**		36,000	5,000	1,974	-	4,097	11,071	1.25
15	0.0%	0	60	12,780	-	-	12,780	**6,733**		31,000	5,000	1,733	-	4,138	10,872	1.28
16	0.0%	0	60	12,780	-	-	12,780	**7,493**		25,000	6,000	1,493	-	4,179	11,672	1.15
17	0.0%	0	60	12,780	-	-	12,780	**7,204**		19,000	6,000	1,204	-	4,221	11,425	1.19
18	0.0%	0	60	12,780	-	-	12,780	**6,915**		13,000	6,000	915	-	4,263	11,178	1.23
19	0.0%	0	60	12,780	-	-	12,780	**6,626**		7,000	6,000	626	-	4,306	10,932	1.28
20	0.0%	0	60	12,780	-	-	12,780	**7,337**		-	7,000	337	-	4,349	11,686	1.15
									Total Paid in Debt Service =		90,000	51,954				

Utah Department of Environmental Quality
Division of Drinking Water

Public Water System IPS Report

Run Date:
12/04/2013 11:52 am

UTAH03063 SHEEP CREEK COVE

PWS ID: UTAH03063 ***Name:*** SHEEP CREEK COVE

Legal Contact PREVEDEL, DAVID A
DAVID A PREVEDEL

Address: 4602 W. 4950 S.
HOOPER, UT 84315

Phone Number: 801-985-2437

City Served (Area):

County: CACHE COUNTY

Rating: Approved

Rating Date: 07/14/2003

Activity Status: A

Consumptive Use Zone
Irrigation Zone Number: 2 02/15/2013

System Type: Non-community

Population: 73

Last Inv Update: 06/05/2012

Last Snty Srv Dt: 10/24/2011

Surveyor: DONALD K LORE

Oper Period: 5/1 to 10/31

Total IPS Points: -10 **Rating Date:** 07/14/2003 **Rating: Approved**

Admin & Physical Facilities:	-10
*** Quality & Monitoring Violations:**	0
Operator Certification:	0

* Total Admin & Physical Facilities demerit points may not agree with the detail section. The detail section shows all 'open' physical deficiencies; the Total Admin & Physical Facilities value adjusts for duplicate deficiencies

Physical Facility, Administrative, & Source Protection Deficiencies from Site Visits

Facility Code	Facility Description	Activity Status	Severity	Date Determined	Point Not Effective	Point Effective
M001	CURRENT EMERGENCY RESPONSE PROGRAM					
			REC	5/12/2005		-10
	SHEEP CREEK COVE HAS DEVELOP AN EMERGENCY RESPONSE PLAN					

Total Admin & Physical Facility Deficiency -10

Operator Certification Points

	Distribution	*Treatment*
Level Required		
Highest Certificate on Record		
Points	**0**	**0**

Total Points **0**

5. FINANCIAL ASSISTANCE COMMITTEE

3) SRF APPLICATIONS
FEDERAL FUNDS

b) PLEASANT VIEW CITY –
Rich Peterson

Pleasant View City
Presented to the Drinking Water Board
January 17, 2014

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Pleasant View City is planning to drill a new culinary well and construct a 500,000 gallon storage tank. The cost of the project is estimated to be $2,327,000. The applicant is planning to contribute $350,000 in order to bring down their interest rate. Therefore they are requesting financial assistance in the amount of $1,977,000.

STAFF COMMENTS:

The local MAGI for Pleasant View is $65,452 (174% of the state MAGI). Their after project water bill is well under 1.75%. Therefore they do not qualify for principal forgiveness. However the city is willing to take advantage of the early repayment incentive and repay the loan within 15 years, which reduces their interest rate by 0.10%

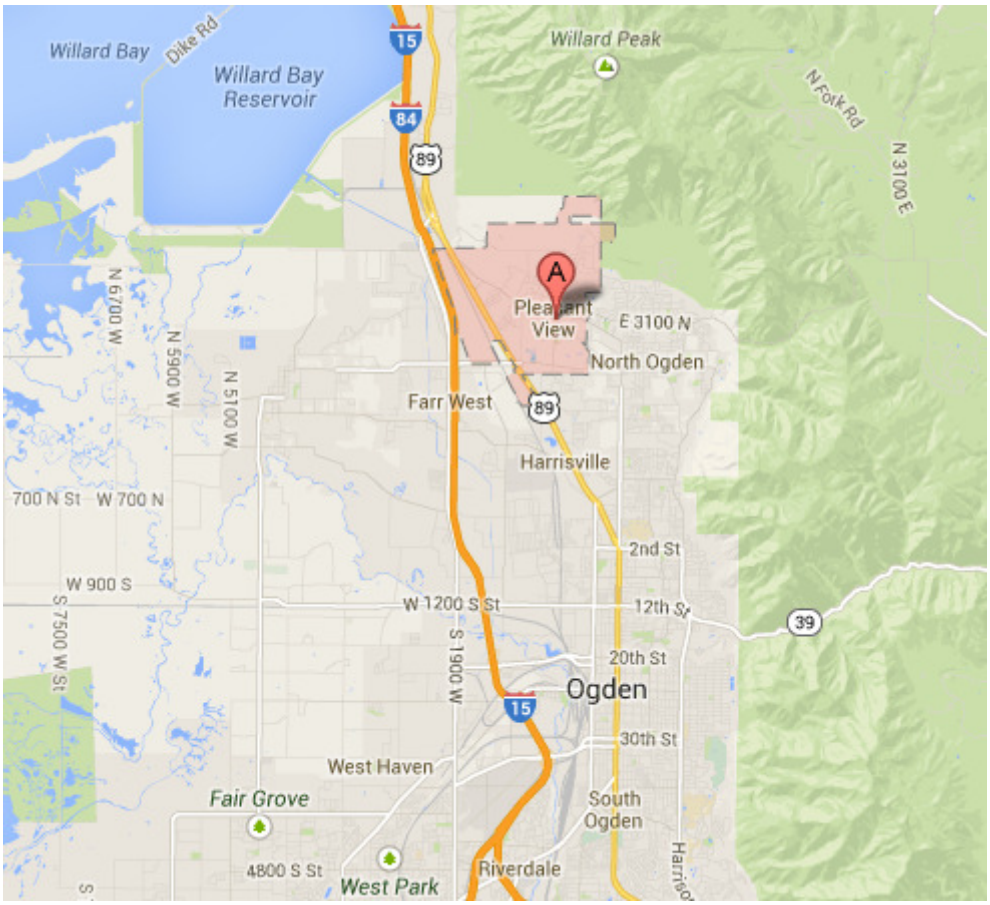
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize $1,977,000 loan to Pleasant View City with an interest rate of 3.65% for 15 years. Conditions include that they resolve all issues on their compliance report.

APPLICANT'S LOCATION:

Pleasant View is located in Weber County approximately 8 miles north of Ogden.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

The project consists of constructing a 500,000 gallon reservoir, installing a 12-inch diameter distribution line, and the construction of a 14-inch diameter drinking water well and well house.

POPULATION GROWTH:

Pleasant View City is expected to grow at an average annual rate of change of 3% through 2040. Projected populations and number of connections are shown in the table below:

Year	Population	Connections
2010	7386	1911
2015	8562	2216
2020	9926	2568
2025	11507	2978
2030	13339	3452
2035	15464	4002
2040	17642	4565

IMPLEMENTATION SCHEDULE:

FA Committee Conference Call:	Dec 2013
DWB Funding Authorization:	Jan 2014
Complete Design:	Mar 2014
Plan Approval:	Apr 2014
Advertise for Bids:	May 2014
Begin Construction:	Jun 2014
Complete Construction:	Jun 2015
Receive Operating Permit:	Jun 2015

COST ESTIMATE:

Legal – Bonding	$25,000
Engineering- Plan, Design, CMS	$140,000
Construction – Source	$1,200,000
Construction – Storage	$650,000
Construction – Distribution	$100,000
Contingency	$190,000
DDW Admin Fee	$19,770
Total Project Cost	**$2,326,770**

COST ALLOCATION:

The cost allocation proposed for the project is shown below:

Funding Source	Cost Sharing	Percent of Project
DWB Loan (3.65%, 15-yr)	$1,977,000	85%
Self-Contribution	$350,000	15%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance: $295,609
Existing DW Debt Service: $202,958
DDW Debt Service (3.65%, 15 yrs): $173,489
DDW Debt Reserve (10%): $17,349
DDW Coverage (15%): n/a
Replacement Reserve Account (5%): $42,463
Annual Cost/ERC: $346.59
Monthly Cost/ERC: $28.88
Cost as % MAGI: 0.53%

CONTACT INFORMATION:

APPLICANT:	Pleasant View 520 West Elberta Drive Pleasant View, UT 84414 Telephone: (801) 782-8529
PRESIDING OFFICIAL & CONTACT PERSON:	Melinda Brimhall-Greenwood, City Administrator 520 West Elberta Drive Pleasant View, UT 84414 Telephone: (801) 827-0466 Email: mbrimhall@pleasantviewcity.com
CONSULTING ENGINEER:	Matthew Hartvigsen Jones and Associates 1716 E 5600 South South Ogden, UT 84403 Telephone: (801) 476-9767 Email: matth@jonescivil.com
RECORDER:	Laurie Hellstrom Telephone: 801. 827.0452 eMail: lhellstrom@pleasantviewcity.com
FINANCIAL CONSULTANT:	Alan Westenskow Zions Bank Public Finance One South Main Street, 18th Floor Salt Lake City, UT 84133-1109 Telephone: 801. 844-7377 Email: alan.westenslow@zionsbank.com
CITY ATTORNEY:	Mike Houtz Helgesen, Houtz & Jones 5732 S 1475 East, Suite 200 South Ogden, UT 84403 Telephone: 801.479.4777 eMail: mike@utahattorneys.com
OTHER:	Fred Hellstrom Utilities Superintendent Telephone: (801) 827-0453 Email: fhellstrom@pleasantviewcity.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Pleasant View
COUNTY: Weber
PROJECT DESCRIPTION: new well and storage tank

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	6,500	NO. OF CONNECTIONS:	2258	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$26.00 *			PROJECT TOTAL:	$2,327,000
CURRENT % OF AGI:	0.48%	FINANCIAL PTS:	34	LOAN AMOUNT:	$1,977,000
ESTIMATED MEDIAN AGI:	$65,452			PRINC. FORGIVENESS:	$0
STATE AGI:	$37,718			TOTAL REQUEST:	$1,977,000
SYSTEM % OF STATE AGI:	174%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	5.23%		3.65%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	15	15		15
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	5.23%		3.65%
REQUIRED DEBT SERVICE:	$131,800.00	$193,441.26		$173,489.41
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$13,180.00	$19,344.13		$17,348.94
ANNUAL NEW DEBT PER CONNECTION:	$64.21	$94.24		$84.52
O & M + FUNDED DEPRECIATION:	$295,609.00	$295,609.00		$295,609.00
OTHER DEBT + COVERAGE:	$253,697.50	$253,697.50		$253,697.50
REPLACEMENT RESERVE ACCOUNT:	$40,379.00	$43,461.06		$42,463.47
ANNUAL EXPENSES PER CONNECTION:	$261.15	$262.52		$262.08
TOTAL SYSTEM EXPENSES	$734,665.50	$805,552.95		$782,608.32
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$27.11	$29.73		$28.88
% OF ADJUSTED GROSS INCOME:	0.50%	0.55%		0.53%

R309-700-5

Pleasant View
Weber
November 21, 2013

TABLE 2
FINANCIAL CONSIDERATIONS

		POINTS	
1. COST EFFECTIVENESS RATIO (SELECT ONE)			
A. Project cost $0 to $500 per benefitting connection		16	
B. $501 to $1,500		14	X
C. $1,501 to $2,000		11	
D. $2,001 to $3,000		8	
E. $3,001 to $5,000		4	
F. $5,001 to $10,000		1	
G. Over $10,000		0	
	$1,031		
2. CURRENT LOCAL MEDIAN ADJUSTED GROSS INCOME (AGI) (SELECT ONE)			
A. Less than 70% of State Median AGI		19	
B. 71 to 80% of State Median AGI		16	
C. 81 to 95% of State Median AGI		13	
D. 96 to 110% of State Median AGI		9	
E. 111 to 130% of State Median AGI		6	
E. 131 to 150% of State Median AGI		3	
F. Greater than 150% of State Median AGI		0	X
	174%		
3. PROJECT FUNDING CONTRIBUTED BY APPLICANT (SELECT ONE)			
a. Greater than 25% of project funds		17	
b. 15 to 25% of project funds		14	X
c. 10 to 15% of project funds		11	
c. 5 to 10% of project funds		8	
d. 2 to 5% of project funds		4	
e. Less than 2% of project funds		0	
	15.0%		
4. ABILITY TO REPAY LOAN			
4. WATER BILL (INCLUDING TAXES) AFTER PROJECT IS BUILT RELATIVE TO LOCAL MEDIAN ADJUSTED GROSS INCOME (SELECT ONE)			
a. Greater than 2.50% of local median AGI		16	
b. 2.01 to 2.50% of local median AGI		12	
c. 1.51 to 2.00% of local median AGI		8	
d. 1.01 to 1.50% of local median AGI		3	
e. 0 to 1.00% of local median AGI		0	X
	0.53%		
5. SPECIAL INCENTIVE POINTS Applicant: (Mark all that apply)			
A. has a replacement fund receiving annual deposits of 5% of the system's drinking water budget been established, and has already accumulated a minimum of 10% of said annual DW budget in this reserve fund.		5	
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		34	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Pleasant View

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$1,977,000.00	ANTICIPATED CLOSING DATE	15-Mar-14
INTEREST	3.65%	P&I PAYMT DUE	01-Jan-16
TERM	15	REVENUE BOND	
NOMIN. PAYMENT	$173,489.41	PRINC PREPAID:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$1,977,000.00		$57,327.51	*	$0.00	$57,327.51	$1,977,000.00	0
2016	$1,977,000.00		$173,160.50		$101,000.00	$72,160.50	$1,876,000.00	1
2017	$1,876,000.00		$173,474.00		$105,000.00	$68,474.00	$1,771,000.00	2
2018	$1,771,000.00		$173,641.50		$109,000.00	$64,641.50	$1,662,000.00	3
2019	$1,662,000.00		$173,663.00		$113,000.00	$60,663.00	$1,549,000.00	4
2020	$1,549,000.00		$173,538.50		$117,000.00	$56,538.50	$1,432,000.00	5
2021	$1,432,000.00		$173,268.00		$121,000.00	$52,268.00	$1,311,000.00	6
2022	$1,311,000.00		$173,851.50		$126,000.00	$47,851.50	$1,185,000.00	7
2023	$1,185,000.00		$173,252.50		$130,000.00	$43,252.50	$1,055,000.00	8
2024	$1,055,000.00		$173,507.50		$135,000.00	$38,507.50	$920,000.00	9
2025	$920,000.00		$173,580.00		$140,000.00	$33,580.00	$780,000.00	10
2026	$780,000.00		$173,470.00		$145,000.00	$28,470.00	$635,000.00	11
2027	$635,000.00		$173,177.50		$150,000.00	$23,177.50	$485,000.00	12
2028	$485,000.00		$173,702.50		$156,000.00	$17,702.50	$329,000.00	13
2029	$329,000.00		$174,008.50		$162,000.00	$12,008.50	$167,000.00	14
2030	$167,000.00		$173,095.50		$167,000.00	$6,095.50	$0.00	15
			$2,659,718.51		$1,977,000.00	$682,718.51		

*Interest Only Payment

Pleasant View

DWB Loan Terms		
Local Share (total):	$	350,000
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	1,977,000
DWB Loan Term:		15
DWB Loan Interest:		**3.65%**
DWB Loan Payment:	$	173,489

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	2,346,770
Existing Facility O&M Expense:	$	295,609
Proposed Facility O&M Expense:	$	295,609
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	202,958

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		2,258
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	3,000
Current Monthly User Charge:	$	26.00
Needed Average Monthly User Charge:	$	28.88

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	1.0%	23	2,258	704,460	69,000	-	773,460	**-**	**-**	1,977,000	-	-	202,958	295,609	498,567	-
1	1.0%	23	2,281	790,580	69,000	-	859,580	**173,161**	**17,349**	1,876,000	101,000	72,161	202,958	295,609	689,076	1.50
2	1.0%	22	2,303	798,205	66,000	-	864,205	**173,474**	**17,349**	1,771,000	105,000	68,474	202,958	298,565	692,346	1.50
3	1.0%	23	2,326	806,177	69,000	-	875,177	**173,642**	**17,349**	1,662,000	109,000	64,642	202,958	301,551	695,499	1.52
4	1.0%	24	2,350	814,495	72,000	-	886,495	**173,663**	**17,349**	1,549,000	113,000	60,663	202,958	304,566	698,536	1.55
5	1.0%	23	2,373	822,467	69,000	-	891,467	**173,539**	**17,349**	1,432,000	117,000	56,539	202,958	307,612	701,457	1.55
6	1.0%	24	2,397	830,785	72,000	-	902,785	**173,268**	**17,349**	1,311,000	121,000	52,268	202,958	310,688	704,263	1.57
7	1.0%	24	2,421	839,103	72,000	-	911,103	**173,852**	**17,349**	1,185,000	126,000	47,852	202,958	313,795	707,953	1.59
8	1.0%	24	2,445	847,421	72,000	-	919,421	**173,253**	**17,349**	1,055,000	130,000	43,253	202,958	316,933	710,492	1.60
9	1.0%	25	2,470	856,086	75,000	-	931,086	**173,508**	**17,349**	920,000	135,000	38,508	202,958	320,102	713,917	1.62
10	1.0%	24	2,494	864,404	72,000	-	936,404	**173,580**	**17,349**	780,000	140,000	33,580	202,958	323,303	717,190	1.63
11	1.0%	25	2,519	873,069	75,000	-	948,069	**173,470**		635,000	145,000	28,470	202,958	326,536	702,964	1.65
12	1.0%	25	2,544	881,734	75,000	-	956,734	**173,178**		485,000	150,000	23,178	202,958	329,802	705,937	1.67
13	1.0%	26	2,570	890,746	78,000	-	968,746	**173,703**		329,000	156,000	17,703	202,958	333,100	709,760	1.69
14	1.0%	26	2,596	899,757	78,000	-	977,757	**174,009**		167,000	162,000	12,009	202,958	336,431	713,397	1.70
15	1.0%	25	2,621	908,422	75,000	-	983,422	**173,096**		-	167,000	6,096	202,958	339,795	715,848	1.71
									Total Paid in Debt Service =		1,977,000	625,391				

29014 Pleasant View City Water System
Compliance Report
November 25, 2013

Administration:
See Attached IPS Report

Operator Certification:
See Attached IPS Report

Bacteriological Information:
See Attached IPS Report

Chemical Monitoring:
See Attached IPS Report

Lead/Copper:
See Attached IPS Report

Consumer Confidence Report
See Attached IPS Report

Physical Facilities:
See Attached IPS Report

Drinking Water Source Protection:
No issues

Plan Review:
Missing Operating Permit #8029
Missing Operating Permit #7313
Missing Operating Permit #7648
Missing Operating Permit #7130
Missing Operating Permit #5363

Utah Department of Environmental Quality
Division of Drinking Water

Public Water System IPS Report

UTAH29014 PLEASANT VIEW CULINARY WATER

Run Date:
11/20/2013 11:44 pm

PWS ID: UTAH29014 ***Name:*** PLEASANT VIEW CULINARY WATER

Legal Contact PLEASANT VIEW CULNRY WTR
FRED CLARENCE HELLSTROM

Address: 520 W ELBERTA DR
OGDEN, UT 84414

Phone Number:

City Served (Area):

County: WEBER COUNTY

Rating: Approved

Rating Date: 11/29/1988

Activity Status: A

Consumptive Use Zone
Irrigation Zone Number: 4 02/15/2013

System Type: Community

Population: 6,500

Last Inv Update: 10/02/2013

Last Snty Srv Dt: 07/11/2013

Surveyor: MARK BERTELSON

Oper Period: 1/1 to 12/31

Improvement Priority System

Total IPS Points: **-10** **Rating Date:** 11/29/1988 **Rating:** **Approved**

Admin & Physical Facilities:	0
*** Qualtiy & Monitoring Violations:**	0
Operator Certification:	-10

* Total Admin & Physical Facilities demerit points may not agree with the detail section. The detail section shows all 'open' physical deficiencies; the Total Admin & Physical Facilities value adjusts for duplicate deficiencies

Physical Facility, Administrative, & Source Protection Deficiencies from Site Visits

Facility Code	Facility Description	Activity Status	Severity	Date Determined	Point Not Effective	Point Effective
SSL2	NO VENT ON THE SPRING COLLECTION BOX		REC	10/23/2007		0

Total Admin & Physical Faciity Deficiency **0**

Operator Certification Points

	Distribution	*Treatment*
Level Required	**D3**	
Highest Certificate on Record	**D4**	
Points	**-10**	**0**

Total Points **-10**

Compliance Schedules

Type	Required Activities	Severity	Date Created	Due Date	Achieved Date
Submit Consumer Confidence Report	Submit Consumer Confidence Report		01/01/2013	07/01/2013	02/27/2013
Submit Consumer Confidence Report	Submit CCR Certification Letter		01/01/2013	10/01/2013	02/27/2013
Complete Lead Copper Notice	Submit Lead/Copper Certification Notice to DDW		06/01/2011	12/29/2011	

6. FINAL ADOPTION OF RULE REVISION's

a) R309-511 – HYDRAULIC MODELING REQUIREMENTS

RESPONSE TO COMMENTS
PROPOSED RULE MAKING

DIVISION OF DRINKING WATER
DEPARTMENT OF ENVIROMENTAL QUALITY
STATE OF UTAH

R309-511 Hydraulic Modeling Requirements and R309-515 Source Development

Published October 1, 2013 in Utah State Bulletin

Formal Comment Period: October 1, 2013 through October 31, 2013

Public Hearings: There were no formal public hearings.

COMMENT #1. I recommend removing ", extent of anticipated fire event" in R309-511-5 (8) and removing the last two sentences in R309-511-5 (10) or adding clarification. Currently the statements are confusing and contradict fire suppression requirements set forth in R309-510. (Steven C. Jones, P.E., Hansen, Allen, & Luce, Inc.)

RESPONSE: The Division of Drinking Water does not establish fire flow requirements, but defers to the fire demands established by the local fire authority. It would not be appropriate in this rule for the Division of Drinking Water to attempt to address the many varied fire flow demands that may exist. (See R309-510-8(3) Storage Sizing, R309-510-9(1) and (4) Distribution System Sizing, and R309-550-5(5) Fire Protection under Water Main Design.) Obviously, any hydraulic model needs to address higher fire demand situations, such as larger square footage homes, commercial buildings, schools, churches, etc., if the model is to realistically reflect actual conditions. The Division believes that the language "extent of anticipated fire event" in R309-511-5(8) and the language "For significant fire suppression demand, extended simulations must contain the run time for the period of anticipated fire event. In some cases, a steady state model may be sufficient for residential fire suppression demand" in R309-511-5(10) is needed for hydraulic models so they will adequately address fire flows in the modelling. The Division relies upon the qualifications, professional judgment, and expertise of the registered professional engineer who signs the certification for a hydraulic model that fire flows have adequately analyzed. The fire suppression requirements in R309-510 only set minimums in the absence of a determination by the local fire authority. The Division does not see where the language in R309-511-5 conflicts with the minimum requirements set forth in R309-510.

COMMENT #2. The language in R309-515-6(12)(d)(ix) Well House Piping states "if a pump to waste line exists, it shall not be connected to a sewer/storm drain without a minimum 12-inch clearance to the flood rim, and the discharge end of the pump-to-waste line shall be downturned and covered with a No. 4 mesh corrosion resistant screen." There may also be a problem with a pump-to-waste line freezing if the line is not free draining. (Nathan Lunstad, P.E., Utah Division of Drinking Water)

RESPONSE: If a pump-to-waste line goes outside the pump house and then is elevated in order to get the minimum 12-inch clearance to the flood rim, there certainly is the potential for the line to freeze. This is a design issue that should be addressed. Language has been added in a guidance paragraph following this rule requirement that recommends that a pump-to-waste line be free draining. There may be other ways to address line freezing such as heat tape, or a very small drain line for the pump-to-waste line that the pump house floor drain can handle.

RULE ADOPTION FOR
RULE REVISION OF *R309-511*

On August 28, 2013, the Drinking Water Board authorized the Division staff to initiate the rulemaking process to revise the engineering rule in *R309-511*. These rule revisions make two major clarifications:

- The full hydraulic modeling report is not required for the drinking water projects that meet the criteria in R309-511-4(1)(a)(i) through (iv), and
- Professional Engineer's certification of the hydraulic modeling results is required for any public drinking water project, except the projects listed in R309-511-4(1)(a)(i).

These rules revisions were substantive and were filed with the Division of Administrative Rules for publication in the October 1, 2013 Utah Bulletin. The 30-day formal comment period ended on October 31, 2013. One comment was received. But after review, the comment is not considered significant.

Staff Recommendation:

1. The staff recommends the Board adopt the rule revisions to *R309-511* and authorize staff to make this rule change effective on January 21, 2014.

R309-511. Hydraulic Modeling Requirements

Table of Contents

R309. Environmental Quality, Drinking Water.

R309-511. Hydraulic Modeling Requirements.

R309-511-1. Purpose.

The purpose of this rule is to ensure that the increased water demand created by new construction will not adversely affect existing or new water users. This will be accomplished by requiring the public water system or its agent to evaluate the water delivery system using a hydraulic model and by certifying to the Director that the project will not adversely impact the system. It is intended that the public water system or its agent will use the findings of the hydraulic model to design improvements providing satisfactory service to both existing and new water users. This rule requires the public water system or its agent to certify that the design meets minimum flow requirements of R309-510 and pressure requirements as set forth in rule R309-105-9.

R309-511-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104(1)(a)(ii) of the Utah Code and in accordance with Title 63G, Chapter 3 of the same, known as the Administrative Rulemaking Act.

R309-511-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110 but may be further clarified herein.

"The public water system or its agent" is the individual responsible for signing the certification and preparing the Hydraulic Modeling Design Elements Report. This individual shall be a registered professional engineer, licensed to practice in the State of Utah.

R309-511-4. General.

(1) Rule Applicability.

(a) This rule applies to public drinking water systems categorized as community water systems as defined by rule R309-100-4(2), and to non-transient non-community water systems that have system demands higher than required by R309-510 or with demands for fire suppression. All public drinking water systems are still required to comply with R309-550-5 with respect to water main design, which may require a hydraulic analysis. Submission of the Hydraulic

Model Report, as defined in R309-511-7 and 8, is not required for projects meeting one of the following criteria:

(i) public drinking water projects that will not result in negative hydraulic impact, such as, but not limited to;

(A) addition of new sources in accordance with R309-515;

(B) adding disinfection, fluoridation, or other treatment facilities that do not adversely impact flow, pressure or water quality;

(C) storage tank repair or recoating;

(D) water main additions with no expansion of service (e.g., looping lines);

(E) adding transmission lines to storage or sources without adding service connections;

(F) adding pump station(s) from source or storage upstream of distribution service connections; or,

(G) public drinking water projects that have negligible hydraulic impact as determined by the Director.

(ii) public drinking water projects that are a part of a planned phase of a master plan previously approved by the Director per R309-500-6(3)(a);

(iii) the water system maintains and updates a hydraulic model of the system, and has designated a professional engineer responsible for overseeing the hydraulic analysis in meeting the requirements of R309-511 in writing to the Director; or,

(iv) the water system has a means that is deemed acceptable by the Director to gather real-time data indicative of hydraulic conditions in model scenarios of R309-511-5(9), and the real-time data show the system is capable of meeting the flow and pressure requirements for the additional demands placed on the existing system.

(b) Professional Engineer's certification of the hydraulic modeling results, as defined in R309-511-4(2)(c) and R309-511-6(1), shall be part of the submission of plans for any public drinking water project as defined in R309-500-5(1) except for the projects listed under R309-511-4(1)(a)(i).

(c) A public water system must clearly identify the reason in the plan submittal if it wishes to demonstrate that R309-511 does not apply to a new construction project. In some cases, supporting documentation may be needed.

(d) If there are existing deficiencies in the water system, the Director may allow a new construction project to proceed in accordance with the plan review requirements in R309-500 through 550 as long as the public water system demonstrates that the new construction project is located in a hydraulically separated area and does not adversely impact the existing deficiencies, or does not create new deficiencies within the water system.

(2) Rule Elements.

The public water system or its agent, in connection with the submission of plans and specifications to the Director, shall perform the following:

(a) conduct a hydraulic modeling evaluation consistent with the requirements as set forth in this rule and R309-510. This model shall include either the entire public drinking water system or the specific areas affected by the new construction if hydraulically separated areas exist within the water system;

(b) calibrate the model using field measurements and observations;

(c) certify in writing to the Director that the design complies with the sizing requirements of R309-510 and the minimum water pressures of R309-105-9;

(d) prepare and submit a Hydraulic Model Design Elements Report (see R309-511-7); and,

(f) prepare a System Capacity and Expansion Report if required (see R309-511-8).

R309-511-5. Requirements for the Hydraulic Model.

The following minimum requirements must be incorporated into hydraulic models that are constructed to meet these requirements:

(1) include at least 80 percent of the total pipe lengths in the distribution system affected by the proposed project;

(2) account for 100 percent of the flow in the distribution system affected by the proposed project. Water demand allocation must account for at least 80 percent of the flow delivered by the distribution system affected by the proposed project if customer usage in the system is metered;

(3) include all 8-inch diameter and larger pipes. Pipes smaller than 8-inch diameter shall also be included if they connect pressure zones, storage facilities, major demand areas, pumps, and control valves, or if they are known or expected to be significant conveyers of water such as fire suppression demand. Model piping does not need to include service lateral piping;

(4) include all pipes serving areas at higher elevations, dead ends, remote areas of a distribution system, and areas with known under-sized pipelines;

(5) include all storage facilities and accompanying controls or settings applied to govern the open/closed status of the facility that reflect standard operations;

(6) if applicable, include all pump stations, drivers (constant or variable speed), and accompanying controls or settings applied to govern their on/off/speed status that reflect various operating conditions and drivers;

(7) include all control valves or other system features that could significantly affect the flow of water through the distribution system (e.g., interconnections with other systems and pressure reducing valves between pressure zones) reflecting various operating conditions;

(8) impose peak day and peak instantaneous demands to the water system's facilities. These demands may be peak day and peak instantaneous demands per R309-510, the reduced demand approved by the Director per R309-510-5, or the demands experienced by the water system that are higher than the values listed in R309-510. This may require multiple model simulations to account for the varying water demand conditions. In some cases, extended period simulations are needed to evaluate changes in operating conditions over time. This will depend on the complexity of the water system, extent of anticipated fire event and nature of the new expansion;

(9) calibrate the model to adequately represent the actual field conditions using field measurements and observations;

(10) if fire hydrants are connected to the distribution system, account for fire suppression requirements specified by local fire authority or use the default values stated in R309-510-9(4). For significant fire suppression demand, extended simulations must contain the run time for the period of the anticipated fire event. In some cases, a steady-state model may be sufficient for residential fire suppression demand; and,

(11) account for outdoor use, such as irrigation, if the drinking water system supplies water for outdoor use.

R309-511-6. Elements of the Public Water System or Its Agent's Certification.

(1) The public water system or its agent's certification.

The Director relies upon the professional judgment of the registered professional engineer who certifies that the hydraulic analysis and evaluation have been done properly and that the flow and pressure requirements have been met. The public water system or its agent shall, after a thorough review, submit a document to the Director certifying that the following requirements have been met:

(a) the hydraulic model requirements as set forth in rule R309-511-5;

(b) the appropriate demand requirements as specified in this rule and rule R309-510 have been used to evaluate various operating conditions of the public drinking water system;

(c) the hydraulic model predicts that new construction will not result in any service connection within the new expansion area not meeting the minimum distribution system pressures as specified in R309-105-9;

(d) the hydraulic model predicts that new construction will not decrease the pressures within the existing water system such that the minimum distribution system pressures are not met, as specified in R309-105-9;

(e) the calibration methodology is described and the model is sufficiently accurate to represent conditions likely to be experienced in the water delivery system; and,

(f) identify the hydraulic modeling method, and if computer software was used, the software name and version used.

(2) The format of the public water system or its agent's submission.

The public water system or its agent shall submit to the Director the following documentation:

(a) the certification as required in R309-511-6(1). The certification shall be signed, dated, and stamped by a registered professional engineer, licensed to practice in the State of Utah;

(b) a Hydraulic Model Design Elements Report (see R309-511-7). The document shall be signed, dated, and stamped by a registered professional engineer, licensed to practice in the State of Utah; and,

(c) for community public water systems, the water system management shall certify that they have received a copy of input and output data for the hydraulic model with the simulation showing the worst case results in terms of water system pressure and flow.

(3) The submission of supporting documentation.

The public water system or its agent shall submit a System Capacity and Expansion Report (see R309-511-8) if requested by the Director. The document shall be signed, dated, and stamped by a registered professional engineer, licensed to practice in the State of Utah.

R309-511-7. Hydraulic Model Design Elements Report.

The public water system or its agent shall prepare a Hydraulic Model Design Elements Report along with, and in support of, the certification stated in R309-511-6(1). The Hydraulic Model Design Elements Report shall contain, but is not limited to, the following elements:

(1) if the public drinking water system provides water for outdoor use, the report must describe the criteria used to estimate this demand. If the irrigation demand map in R309-510-7(3) is not used, the report shall provide justification for the alternative demands used in the model. If the irrigation demands are based on the map in R309-510-7(3) the report must identify the irrigation zone number, a statement and/or map of how the irrigated acreage is spatially distributed, and the total estimated irrigated acreage. The indicated irrigation demands must be used in the model simulations;

(2) the total number of connections served by the water system including existing connections and anticipated new connections served by the water system after completion of the construction of the project;

(3) the total number of equivalent residential connections (ERC) including both existing connections as well as anticipated new connections associated with the project. The number of ERCs must include high as well as low-volume water users. The determination of the ERCs shall be based on flow requirements using the anticipated demand as outlined in R309-510, or based on alternative sources of information that are deemed acceptable by the Director;

(4) the methodology used for calculating demand and allocating it to the model; a summary of pipe length by diameter; a hydraulic schematic of the distribution piping showing pressure zones, general pipe connectivity between facilities and pressure zones, storage, elevation and sources; and a list or ranges of values of the friction coefficient used in the hydraulic model according to pipe material and condition in the system. All coefficients of friction used in the hydraulic analysis shall be consistent with standard practices;

(5) a statement stating either "yes fire hydrants exist or will exist within the system" or "there are no fire hydrants connected to the system and there is no plan to add fire hydrants with this project." Either statement will require the identification of the local fire

authority's name, address, and contact information, as well as the fire flow quantity and duration if required;

(6) the locations of the lowest pressures within the distribution system, and areas identified by the hydraulic model as not meeting each scenario of the minimum pressure requirements in R309-105-9; and,

(7) calibration method and quantitative summary of the calibration results (e.g., comparison tables, graphs).

R309-511-8. System Capacity and Expansion Report.

The public water system or its agent may be required to prepare a System Capacity and Expansion Report along with a Hydraulic Model Design Elements Report, as specified above, in support of the certification. It is intended that the System Capacity and Expansion Report be prepared, maintained, and used by the public water system's management to make informed decisions about its capability to provide water service to future customers and need only be submitted to the Division if requested by the Director. The System Capacity and Expansion Report shall consist of the elements described in R309-110-4 under the definition of "Master Plan" and shall be updated if significant growth or changes to the water system have occurred.

KEY: drinking water, hydraulic modeling
Date of Enactment or Last Substantive Amendment: <u>January 21, 2014</u>
Authorizing, and Implemented or Interpreted Law: 19-4-104

6. FINAL ADOPTION OF RULE REVISION's

b) R309-515 – SOURCE PROTECTION

RULE ADOPTION FOR
RULE REVISION OF *R309-515*

On August 28, 2013, the Drinking Water Board authorized the Division staff to initiate the rulemaking process to revise the engineering rules in *R309-515*. These rule amendments include the following clarifications and revisions:

- Clarify evidence of a legal right to divert water for drinking water sources.
- Clarify standby power requirements for community water systems' well sources.
- Add well seal depth requirement for drinking water wells equipped with pitless adapter.
- Modify well gravel pack requirement to account for what is currently commercially available.
- Require well capping and abandonment be done in accordance with the Division of Water Right's Rules.
- Define the safe yield of a well.
- Restrict the well pump size to the pumping rate used for the constant-rate aquifer drawdown test.
- Clarify the required order of well head discharge components.
- Specify design requirement for the well pump-to-waste line.
- Outline the procedure for determining the safe yield of a spring.
- Correct numerous outdated and incorrect references.

These rules were substantive and were filed with the Division of Administrative Rules for publication in the October 1, 2013 Utah Bulletin. The 30-day formal comment period ended on October 31, 2013. One comment was received. Clarification in the guidance paragraph was made to address the comment.

Staff Recommendation:

1. The staff recommends the Board adopt the rule revisions to *R309-515* and authorize staff to make this rule change effective on January 21, 2014.

R309-515 Source Development

Table of Contents

R309. Environmental Quality, Drinking Water.

R309-515. Facility Design and Operation: Source Development.

R309-515-1. Purpose.

This rule specifies requirements for public drinking water sources. It is intended to be applied in conjunction with R309-500 through R309-550. Collectively, these rules govern the design, construction, operation, and maintenance of public drinking water system facilities. These rules are intended to assure that such facilities are reliably capable of supplying adequate quantities of water that consistently meet applicable drinking water quality requirements and do not pose a threat to general public health.

R309-515-2. Authority.

This rule is promulgated by the Drinking Water Board as authorized by Title 19, Environmental Quality Code, Chapter 4, Safe Drinking Water Act, Subsection 104(1)(a)(ii) of the Utah Code Annotated and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-515-3. Definitions.

Definitions for certain terms used in this rule are given in R309-110, but may be further clarified herein.

R309-515-4. General.

(1) Issues to be Considered.

The selection, development, and operation of a public drinking water source must be done in a manner that will protect public health and assure that all required water quality standards, as described in R309-200, are met.

Guidance: Among the issues which should be considered before source selection and any preparation of development plans are the following:

(2) Communication with the Division.

Because of the issues described above in (1), engineers are advised to work closely with the Division to help assure that sources are properly sited, developed, and operated.

(3) Number of Sources and Quantity Requirements.

Community water systems serving more than 100 connections shall have a minimum of two sources, except where served by a surface water treatment plant. For all systems, the total developed source capacity shall equal or exceed the peak day demand of the system. Refer to R309-510-7 of these rules for procedure to estimate the peak day demand.

(4) Quality Requirements.

In selecting a source of water for development, the designing engineer shall demonstrate to the satisfaction of the Director that the source(s) selected for use in public water systems are of satisfactory quality, or can be treated in a manner so that the quality requirements of R309-200 can be met.

(5) Initial Analyses.

All new drinking water sources, unless otherwise noted below, shall be analyzed for the following:

(a) all the primary and secondary inorganic contaminants listed in R309-200, Table 200-1 and Table 200-5 (excluding Asbestos unless it would be required by R309-205-5(2) ;

(b) Ammonia as N; Boron; Calcium; Copper; Lead; Magnesium; Potassium; Turbidity, as NTU; Specific Conductivity at 25 degrees Celsius, micro hos/cm; Bicarbonate; Carbon Dioxide; Carbonate; Hydroxide; Phosphorous, Ortho as P; Silica, dissolved as SiO2; Surfactant as MBAS; Total Hardness as CaCO3; and Alkalinity as CaCO3;

(c) pesticides, PCBs and SOCs as listed in R309-200-5(3)(a), Table 200-2 unless the system is a transient non-community PWS or, if a community PWS or non-transient non-community PWS, has received waivers in accordance with R309-205-6(1)(f). The following six constituents have been excused from monitoring in the State by the EPA, dibromochloropropane, ethylene dibromide, Diquat, Endothall, glyphosate and Dioxin;

(d) VOCs as listed in R309-200-5(3)(b), Table 200-3 unless the system is a transient non-community PWS; and,

(e) radiologic chemicals as listed in R309-200-5(4) unless the system is a non-transient non-community PWS or a transient non-community PWS.

All analyses shall be performed by a certified laboratory as required by R309-205-4 (Specially prepared sample bottles are required),

(6) Source Classification.

Subsection R309-505-7(1)(a)(i) provides information on the classification of water sources. The Director shall classify all existing or new sources as either:

(a) surface water or ground water under direct influence of surface water which requires conventional surface water treatment or an approved equivalent; or as,

(b) ground water not under the direct influence of surface water.

(7) Latitude and Longitude.

The latitude and longitude, to at least the nearest second, or the location by section, township, range, and course and distance from an established outside section corner or quarter corner of each point of diversion shall be submitted to the Director prior to source approval.

R309-515-5. Surface Water Sources.

(1) Definition.

A surface water source, as is defined in R309-110, shall include, but not be limited, to tributary systems, drainage basins, natural lakes, artificial reservoirs, impoundments and springs or wells that have been classified as being directly influenced by surface water. Surface water sources will not be considered for culinary use unless they can be rendered acceptable by conventional surface water treatment or other equivalent treatment techniques acceptable to the Director.

(2) Pre-design Submittal.

The following information must be submitted to the Director and approved in writing before commencement of design of diversion structures and/or water treatment facilities:

(a) a copy of the chemical analyses required by R309-200 and described in R309-515-4(5) above; and,

(b) a survey of the watershed tributary to the watercourse along which diversion structures are proposed. The survey shall include, but not be limited to:

(i) determining possible future uses of impoundments or reservoirs;

(ii) the present stream classification by the Division of Water Quality, any obstacles to having stream(s) reclassified 1C, and determining degree of watershed control by owner or other agencies;

(iii) assessing degree of hazard to the supply by accidental spillage of materials that may be toxic, harmful or detrimental to treatment processes;

(iv) obtaining samples over a sufficient period of time to assess the microbiological, physical, chemical and radiological characteristics and variations of the water;

(v) assessing the capability of the proposed treatment process to reduce contaminants to applicable standards; and,

(vi) consideration of currents, wind and ice conditions, and the effect of tributary streams at their confluence.

(3) Pre-construction Submittal.

Following approval of a surface water source, the following additional information must be submitted for review and approval prior to commencement of construction:

(a) acceptable evidence that the water system has a legal right to divert water for the proposed uses from the proposed sources;

(b) minimum quantity that the surface water source is capable of producing (see R309-515-5(4)(a) below); and,

(c) complete plans and specifications and supporting documentation for the proposed treatment facilities to ascertain compliance with R309-525 or R309-530.

(4) Quantity.

The quantity of water from surface sources shall:

(a) be assumed to be no greater than the low flow of a 25-year recurrence interval or the low flow of record for these sources when 25 years of records are not available;

(b) meet or exceed the anticipated peak day demand for water as estimated in R309-510-7 and provide a reasonable surplus for anticipated growth; and,

(c) be adequate to compensate for all losses such as silting, evaporation, seepage, and sludge disposal, which would be anticipated in the normal operation of the treatment facility.

(5) Diversion Structures.

Design of intake structures shall provide for:

(a) withdrawal of water from more than one level if quality varies with depth;

(b) intake of lowest withdrawal elevation located at sufficient depth to be kept submerged at the low water elevation of the reservoir;

(c) separate facilities for release of less desirable water held in storage;

(d) occasional cleaning of the inlet line;

(e) a diversion device capable of keeping large quantities of fish or debris from entering an intake structure; and,

(f) suitable protection of pumps where used to transfer diverted water (refer to R309-540-5).

(6) Impoundments.

The design of an impoundment reservoir shall provide for, where applicable:

(a) removal of brush and trees to the high water level;

(b) protection from floods during construction;

(c) abandonment of all wells, which may be inundated (refer to applicable requirements of the Division of Water Rights); and,

(d) adequate precautions to limit nutrient loads.

R309-515-6. Ground Water - Wells.

(1) Required Treatment.

If properly developed, water from wells may be suitable for culinary use without treatment. A determination concerning whether treatment may be required can only be made after the source has been developed and evaluated.

(2) Standby Power.

Water suppliers shall assess the capability of their system in the event of a power outage. If a community water system has no naturally flowing water sources such as springs or flowing wells, one or more of the system's sources shall be equipped for operation during power outages. In this event:

(a) to ensure continuous service when the primary power has been interrupted, a redundant power supply shall be provided. A redundant power supply may include a transfer switch for auxiliary power such as a generator or a power supply service with coverage from two independent substations.

(b) when automatic pre-lubrication of pump bearings is necessary, and an auxiliary power supply is provided, the pre-lubrication line shall be provided with a valved by-pass around the automatic control, or the automatic control shall be wired to the emergency power source.

(3) The Utah Division of Water Rights.

The Utah Division of Water Rights (State Engineer's Office) regulates the drilling of water wells. Before the drilling of a well commences, the well driller must receive a start card from the State Engineer's Office. For public drinking water supply wells, the rules of R655-4 apply and shall be followed in addition to these rules.

Guidance: The most current set of Administrative Rules for Water Well Drillers should be consulted for additional well drilling information. The engineer and driller should be aware that requirements governing the design of public drinking water wells, as described herein, are generally more stringent than requirements of the State Engineer's Office.

(4) Source Protection.

Public drinking water systems are responsible for protecting their sources from contamination. The selection of a well location shall only be made after consideration of the requirements of R309-600. Sources shall be located in an area that will minimize threats from existing or potential sources of pollution.

Generally, sewer lines may not be located within zone one and zone two of a public drinking water system's source protection zones. However, if the following precautions are taken, sewer lines may be permitted within a public drinking water system's source protection zone one and zone two. Sewer lines shall meet the conditions identified in R309-600-13(3), and shall be specially constructed as follows throughout zone one in aquifers classified as protected, and zones one and two, if the aquifer is classified as unprotected.

(a) Sewer lines shall be constructed to remain watertight. The lines shall be deflection-tested in accordance with the Division of Water Quality Rule R317-3. The lines shall be video-inspected for any defect following completion of construction and before being placed in service. The sewer pipe material shall be:

(i) high density polyethylene (HDPE) pipe with a PE3408 or PE4710 rating from the Plastic Pipe Institute and have a Dimension Ratio (DR) of 17 or less, and all joints shall be fusion-welded; or,

(ii) polyvinyl chloride (PVC) pipe meeting AWWA Specification C900 or C905 and have a DR of 18 or less. PVC pipe shall be either restrained gasketed joints or shall be fusion-welded. Solvent cement joints shall not be acceptable. The PVC pipe shall be clearly identified when installed, by marking tape or other means as a sanitary sewer line; or,

(iii) ductile iron pipe with ceramic epoxy lining, polyethylene encasement, restrained joints, and a minimum pressure class of 200.

(b) Procedures for leakage tests shall be specified and comply with Division of Water Quality Rule R317-3 requirements.

(c) Lateral to main connection shall be fusion-welded, shop-fabricated, or saddled with a mechanical clamping watertight device designed for the specific pipe.

(d) Inlet and outlet sewer pipes shall be joined to a manhole with a gasketed flexible watertight connection.

(e) The sewer pipe shall be laid with no greater than 2 percent deflection at any joint.

(f) Backfill shall be compacted to not less than 95 percent of maximum laboratory density as determined in accordance with ASTM Standard D-690.

(g) Sewer manholes shall meet the following requirements.

(i) The manholes shall be constructed of reinforced concrete.

(ii) Manhole base and walls, up to a point at least 12 inches above the top of the upper most sewer pipe entering the manhole, shall be fabricated in a single concrete pour without joints.

(iii) The manholes shall be air pressure tested after installation.

(h) In unprotected aquifers, an impermeable cutoff wall shall be constructed in all sewer trenches on the up-gradient edge of zone two. In protected aquifers, an impermeable cutoff wall shall be constructed in all sewer trenches on the up-gradient edge of zone one.

(5) Outline of Well Approval Process.

(a) Well drilling shall not commence until both of the following items are submitted and receive a favorable review:

(i) a Preliminary Evaluation Report on source protection issues as required by R309-600-13, and

(ii) engineering plans and specifications governing the well drilling, prepared by a licensed well driller holding a current Utah Well Drillers License or prepared, signed, and stamped by a licensed professional engineer or professional geologist licensed to practice in Utah.

(b) Inspection of Well Sealing During Construction.

(i) Authorized Individuals

(A) The following individuals are authorized to witness the well sealing procedure for a public drinking water well:

(I) an engineer or a geologist from the Division of Drinking Water;

(II) a district engineer of the Department of Environmental Quality;

(III) an authorized representative of the Division of Water Rights; or,

(IV) an individual having written authorization from the Director and meeting the below listed criteria.

(B) At the time of the well sealing an individual, who is authorized per (i)(A)(IV), shall present to the well driller a copy of the letter authorizing him or her to witness a well sealing on behalf of the Division of Drinking Water. A copy of this letter shall be appended to the witness certification letter.

(C) At least three days before the anticipated well sealing, the well driller shall arrange for an authorized witness listed in (i)(A) above to witness the procedure. (See R309-515-6(6)(i)).

(ii) Obtaining Authorization

(A) To be authorized per (i)(A)(IV) above to witness a well sealing procedure, an individual must have no relationship to the driller or the well's owner. The individual must have at least five years professional experience designing wells, supervising well drilling or other equivalent experience associated with well drilling or well sealing that is acceptable to the Director.

(B) Individuals, desiring the Director's authorization to witness a well sealing procedure, shall provide the following information to the Director for review over his or her signature attesting to the correctness of the information:

(I) a detailed description of the applicant's experience with well drilling projects, including number of years of experience and type of work. Three references confirming this professional experience are required.

(II) evidence of licensure as a professional engineer or professional geologist in Utah.

(III) no relationship may exist between a person authorized to witness well sealings and a well driller that would serve as the basis for suspicion of favoritism, leniency, or punitive action in the performance of this task. Examples of such relationships would be family; former long-term employment associations; business partnerships, either formal or informal; etc. The Director's decision, with right of appeal as provided in R305-7, shall be accepted relative to what constitutes a conflict of interest or a relationship sufficient to disqualify an applicant from all or specific witness opportunities.

(IV) An acknowledgement that he/she would not be acting as an agent or employee of the State of Utah and any losses

incurred while acting as a witness would not be covered by governmental immunity or Utah's insurance.

(V) Willingness to follow established protocols and attend such training events as may be required by the Director.

(VI) Complete with a minimum 75 percent passing grade, an examination on water well drilling rules, as offered by the Division of Water Rights.

(C) The Director may rescind the authorization if an individual fails to comply with the criteria or conditions of authorization listed above.

Guidance: A conflict of interest occurs whenever a duty, such as acting in the interest of the public, intersects with a personal desire (either positive or negative), such as monetary gain or a personal relationship, requiring a decision to be made between them. Each individual faced with a conflict between acting in the public's interest or acting for personal benefit is expected to act in the public's interest as it relates to sealing a well. Questions relating to possible conflicts may be referred to the Director.

(iii) Well Seal Certification

The individual witnessing the well sealing procedure shall provide a signed letter, including the following information, to the Director within 30 days of the well sealing:

(A) certification that the well sealing procedure met all the requirements of Rule R309-515-6(6)(i);

(B) the water right under which the well was drilled and the well driller's license number;

(C) the public water system name (if applicable);

(D) the latitude and longitude of the well and method used for its determination;

(E) the well head's approximate elevation;

(F) casing diameter(s), length(s), and material(s);

(G) the size of the annulus between the borehole and casing;

(H) a description of the sealing process including the sealing material used, its volume, density, method of placement, and depth from surface; and,

(I) the names and company affiliations of other individuals observing the sealing procedure including, but not limited to, the well driller, the well owner, and/or a consultant.

(c) After completion of the well drilling, the following information shall be submitted and receive a favorable review before water from the well can be introduced into a public water system:

(i) a copy of the "Report of Well Driller" as required by the State Engineer's Office which is complete in all aspects and has been stamped as received by the same;

(ii) a copy of the letter from the authorized individual described in R309-515-6(5)(b) above, indicating inspection and confirmation that the well was grouted in accordance with the well drilling specifications and the requirements of this rule;

(iii) a copy of the aquifer drawdown test data, as a minimum, including the yield versus drawdown test data, as described in R309-515-6(10)(b) along with comments and interpretation by a licensed professional engineer or licensed professional geologist of the graphic drawdown information required by R309-515-6(10)(b)(vi)(E);

(iv) a copy of the chemical analyses required by R309-515-4(5);

(v) acceptable evidence that the water system owner has a legal right to divert water for the proposed use(s) from the well source(s);

(vi) a copy of complete plans and specifications prepared, signed, and stamped by a licensed professional engineer covering the well housing, equipment, and diversion piping necessary to introduce water from the well into the distribution system; and

(vii) a bacteriological analysis of water obtained from the well after installation of permanent equipment, disinfection, and flushing.

(d) An Operation Permit shall be obtained in accordance with R309-500-9 before any water from the well is introduced into a public water system.

(6) Well Materials, Design, and Construction.

(a) ANSI/NSF Standards 60 and 61 Certification.

All interior surfaces must consist of products complying with ANSI/NSF Standard 61. This requirement applies to drop pipes, well screens, coatings, adhesives, solders, fluxes, pumps, switches, electrical wire, sensors, and all other equipment or surfaces which may contact the drinking water.

All substances introduced into the well during construction or development shall be certified to comply with ANSI/NSF Standard 60. This requirement applies to drilling fluids (biocides, clay thinners, defoamers, foamers, loss circulation materials, lubricants, oxygen scavengers, viscosifiers, weighting agents) and regenerants.

(b) Permanent Steel Casing Pipe shall:

(i) be new single steel casing pipe meeting AWWA Standard A-100, ASTM or API specifications and having a minimum weight and thickness as given in Table 6 found in R655-4-11.2.3 of the Utah Administrative Code (Administrative Rules for Water Well Drillers, adopted April 11, 2011, Division of Water Rights);

(ii) have additional thickness and weight, if minimum thickness is not considered sufficient to assure reasonable life expectancy of the well;

(iii) be capable of withstanding forces to which it is subjected;

(iv) be equipped with a drive shoe when driven;

(v) have full circumferential welds or threaded coupling joints; and

(vi) project at least 18 inches above the anticipated final ground surface and at least 12 inches above the anticipated pump house floor level. At sites subject to flooding, the top of the well casing shall terminate at least three feet above the 100-year flood level or the highest known flood elevation, whichever is higher.

(c) Non-Ferrous Casing Material.

The use of any non-ferrous material for a well casing shall receive prior approval of the Director based on the ability of the material to perform its desired function. Thermoplastic water well casing pipe shall meet AWWA Standard A100-06 and shall bear the logo NSF-wc indicating compliance with NSF Standard 14 for use as well casing.

Guidance: Approval for non-ferrous well casing will be determined considering well depth, formations, temperatures, corrosion potential, well seal material, and other pertinent information.

(d) Disposal of Cuttings.

Cuttings and waste from well drilling operations shall not be discharged into a waterway, lake, or reservoir. The rules of the Utah Division of Water Quality must be observed with respect to these discharges.

(e) Packers.

Packers, if used, shall be of material that will not impart taste, odor, toxic substances, or bacterial contamination to the well water. Lead or partial lead packers are specifically prohibited.

(f) Screens.

The use of well screens is recommended where appropriate and, if used, they shall:

(i) be constructed of material resistant to damage by chemical action of groundwater or cleaning operations;

(ii) have size of openings based on sieve analysis of formations or gravel pack materials;

(iii) have sufficient diameter to provide adequate specific capacity and low aperture entrance velocities;

Guidance: Usually the entrance velocities should not exceed 0.1 fps.

(iv) be installed so that the operating water level remains above the screen under all pumping conditions; and,

(v) be provided with a bottom plate or wash-down bottom fitting of the same material as the screen.

(g) Plumbness and Alignment Requirements.

Every well shall be tested for plumbness and vertical alignment in accordance with AWWA Standard A100. Plans and specifications submitted for review shall:

(i) have the test method and allowable tolerances clearly stated in the specifications; and,

(ii) clearly indicate any options the design engineer may have if the well fails to meet the requirements. Generally, wells may be accepted if the misalignment does not interfere with the installation or operation of the pump or uniform placement of grout.

(h) Casing Perforations.

The placement of perforations in the well casing shall:

(i) be located, as far as practical, to permit the uniform collection of water around the circumference of the well casing; and,

(ii) be of dimensions and size to restrain the water bearing soils from entrance into the well.

(i) Well Sealing Techniques and Requirements.

For all public drinking water wells, the annulus between the outermost well casing and the borehole wall shall be sealed with grout to a depth of at least 100 feet below the ground surface unless an "exception" is issued by the Director (see R309-500-4(1)). If more than one casing is used, including a conductor casing, the annulus between the outermost casing and the next inner casing shall be sealed with grout (meeting the sealing materials requirements of R309-515-6(6)(i)(ii) herein) or with a water tight steel ring having a thickness equal to that of the permanent well casing and continuously welded to both casings. If a public drinking water well will be equipped with a pitless adapter or unit, a well seal shall be installed to a minimum depth of 110 feet to take into account the top 10 feet of compromised seal interval.

Guidance: This is required in order to prevent the seepage of undesirable surface or shallow ground water along the casing into the water bearing aquifer. The Division of Water Rights Administrative Rules for Water Wells Rule R655-4-11.7.5, Pitless Adapters/Units states, "A cement grout seal shall not be allowed within the pitless unit or pitless adapter sealing interval. The pitless adapter or unit sealing interval shall be sealed with unhydrated bentonite. The pitless adapter or unit, including the cap or cover, pitless case and other attachments, shall be designed and constructed to be watertight to prevent the entrance of contaminants into the well from surface or near-surface sources." Therefore, a cement seal shall not be used in the future pitless interval as a cement seal would need to be chipped and broken away from the casing when the pitless area is excavated and installed which could lead to casing damage. A bentonite seal must be used in the future pitless interval.

The following shall apply to all drinking water wells:

(i) Consideration During Well Construction.

(A) Sufficient annular opening shall be provided to permit a minimum of two inches of grout between the outermost permanent casing and the drilled hole, taking into consideration any joint couplings.

(B) The casing(s) must be placed to permit unobstructed flow and uniform thickness of grout.

Guidance: For the purpose of determining the dimension of the annular opening between the drilled hole and or any carrier casing or permanent casing which may be used, the nominal pipe dimension of casing or hole can be used. Centralizers, casing spacers, or welded guides are recommended to center the casing and to provide uniform grout thickness.

(ii) Sealing Materials.

(A) Neat Cement Grout.

Cement, conforming to ASTM Standard C150, and water, with no more than six gallons of water per sack of cement, shall be used for two-inch openings. Additives may be used to increase fluidity subject to approval by the Director.

(B) Concrete Grout.

Equal parts of cement conforming to ASTM Standard C150, and sand, with not more than six gallons of water per sack of cement, may be used for openings larger than two inches.

(C) Clay Seal.

Where an annular opening greater than six inches is available, a seal of swelling bentonite meeting the requirements of R655-4-11.4.2 may be used when approved by the Director.

(iii) Application.

(A) When the annular opening is less than four inches, grout shall be installed under pressure, by means of a positive displacement grout pump, from the bottom of the annular opening to be filled.

(B) When the annular opening is four or more inches and 100 feet or less in depth, and concrete grout is used, it may be placed by gravity

through a grout pipe installed to the bottom of the annular opening in one continuous operation until the annular opening is filled.

(C) All temporary construction casings shall be removed prior to or during the well sealing operation. Any exceptions shall be approved by the State Engineer's Office, and evidence of State Engineer's Office's approval shall be submitted to the Director (see R655-4-11.4.3.1 for conditions concerning leaving temporary surface casing in place). A temporary construction casing is a casing not intended to be part of the permanent well.

(D) When a "well in a protected aquifer" classification is desired, the grout seal shall extend from the ground surface down to at least 100 feet below the surface, and through the protective clay layer (see R309-600-6(1)(x)).

(E) After cement grouting is applied, work on the well shall be discontinued until the cement or concrete grout has properly set, usually a period of 72 hours.

Guidance: "Public Water Supply Well Grouting Requirements and Procedures" is available on the Division's website as additional information for grout placement.

(j) Water Entered Into Well During Construction.

Any water entering a well during construction shall not be contaminated and should be obtained from a chlorinated municipal system. Where this is not possible, the water must be treated to produce a 100 mg/l free chlorine residual in accordance with R655-4-11.6.5.

(k) Gravel Pack Wells.

The following shall apply to gravel packed wells:

(i) the gravel pack material shall be of well-rounded particles, at least 90 percent siliceous material, no more than five percent acid solubility, smooth and uniform, free of foreign material, properly sized, washed, and then disinfected immediately prior to or during placement;

(ii) the gravel pack shall be placed in one uniform continuous operation;

(iii) refill pipes, when used, shall be Schedule 40 steel pipe incorporated within the pump foundation and terminated with screwed or welded caps at least 12 inches above the pump house floor or concrete apron;

(iv) refill pipes located in the grouted annular opening shall be surrounded by a minimum of 1.5 inches of grout;

(v) protection shall be provided to prevent leakage of grout into the gravel pack or screen; and,

(vi) any casings not withdrawn entirely shall meet requirements of R309-515-6(6)(b) or R309-515-6(6)(c).

(7) Well Development.

(a) Every well shall be developed to remove the native silts and clays, drilling mud, or finer fraction of the gravel pack.

(b) Development should continue until the maximum specific capacity is obtained from the completed well.

(c) Where chemical conditioning is required, the specifications shall include provisions for the method, equipment, chemicals, testing for residual chemicals, and disposal of waste and inhibitors.

(d) Where blasting procedures may be used, the specifications shall include the provisions for blasting and cleaning. Special attention shall be given to assure that the grouting and casing are not damaged by the blasting.

(8) Capping Requirements.

(a) The well shall be securely capped in accordance with R655-4-14.1 until permanent equipment can be installed.

(b) At all times during the progress of work, the contractor shall provide protection to prevent tampering with the well or entrance of foreign materials.

Guidance: A welded metal plate or a threaded cap is the preferred method for capping a completed well until permanent equipment is installed.

(9) Well Abandonment.

(a) Test wells and groundwater sources, which will be permanently abandoned, shall be abandoned in accordance with R655-4-14.

(b) Wells to be abandoned shall be sealed to prevent undesirable exchange of water from one aquifer to another. Preference shall be given to using a neat cement grout. Where fill materials are used, which are other than cement grout or concrete, they shall be disinfected and free of foreign materials. When an abandoned well is filled with cement-grout or concrete, these materials shall be applied to the well- hole through a pipe, tremie, or bailer.

(10) Well Assessment.

(a) Step Drawdown Test.

Preliminary to the constant-rate test required below, it is recommended that a step-drawdown test (uniform increases in pumping rates over uniform time intervals with single drawdown measurements taken at the end of the intervals) be conducted to determine the maximum pumping rate for the desired intake setting.

(b) Constant-Rate Test.

A "constant-rate" yield and drawdown test shall:

(i) be performed on every production well after well development and prior to placement of the permanent pump;

(ii) have the test methods clearly indicated in the specifications;

(iii) have a test pump with sufficient capacity that when pumped against the maximum anticipated drawdown, it will be capable of pumping in excess of the desired design discharge rate;

(iv) provide for continuous pumping for at least 24 hours or until stabilized drawdown has continued for at least six hours when test pumped at a "constant-rate" equal to the desired design discharge rate,

(v) provide the following data:

(A) capacity vs. head characteristics for the test pump (manufacturer's pump curve);

(B) static water level (in feet to the nearest tenth, as measured from an identified datum; usually the top of casing);

(C) depth of test pump intake; and,

(D) time and date of starting and ending test(s);

Guidance: It is recommended to monitor any existing wells in the area during the pump test to perform a more useful aquifer test and determine if there will be interference from other wells.

(vi) For the "constant-rate" test, provide the following at time intervals sufficient for at least ten essentially uniform intervals for each log cycle of the graphic evaluation required below:

(A) record the time since starting test (in minutes);

(B) record the actual pumping rate;

(C) record the pumping water level (in feet to the nearest tenth, as measured from the same datum used for the static water level;

(D) record the drawdown (pumping water level minus static water level in feet to the nearest tenth);

(E) provide graphic evaluation on semi-logarithmic graph paper by plotting the drawdown measurements on the arithmetic scale at locations corresponding to time since starting test on the logarithmic scale; and,

(vii) Immediately after termination of the constant-rate test, and for a period of time until there are no changes in depth to water level measurements for at least six hours, record the following at time intervals similar to those used during the constant-rate pump test:

(A) time since stopping pump test (in minutes),

(B) depth to water level (in feet to the nearest tenth, as measured from the same datum used for the pumping water level).

(c) Safe Yield.

If the aquifer drawdown test data shows that the drawdown has stabilized, the Director will consider 2/3 of the pumping rate used in the constant-rate test as the safe yield to determine the number of permanent residential connections or ERCs that a well source can support.

(11) Well Disinfection.

Every new, modified, or reconditioned well including pumping equipment shall be disinfected before being placed into service for drinking water use. These shall be disinfected according to AWWA Standards C654-03 and A100-06 as modified to incorporate the following as a minimum standard:

(i) the well shall be disinfected with a chlorine solution of sufficient volume and strength and so applied that a concentration of at least 50 parts per million is obtained in all parts of the well and the equipment installed in the well. This solution shall remain in the well for a period of at least eight hours; and,

(ii) a satisfactory bacteriologic water sample analysis shall be obtained prior to the use of water from the well in a public water system.

(12) Well Equipping.

(a) Naturally Flowing Wells.

Naturally flowing wells shall:

(i) have the discharge controlled by valves;

(ii) be provided with permanent casing and sealed by grout; and,

(iii) if erosion of the confining bed adjacent to the well appears likely, special protective construction may be required by the Director.

(b) Well Pumps.

(i) The design discharge rate of the well pump shall not exceed the rate used during the constant-rate aquifer drawdown test.

(ii) Wells equipped with line shaft pumps shall:

(A) have the casing firmly connected to the pump structure or have the casing inserted into the recess extending at least 0.5 inches into the pump base;

(B) have the pump foundation and base designed to prevent fluids from coming into contact with joints between the pump base and the casing;

(C) be designed such that the intake of the well pump is at least ten feet below the maximum anticipated drawdown elevation; and,

(D) avoid the use of oil lubrication for pumps with intake screens set at depths less than 400 feet (see R309-105-10(7) and/or R309-515-8(2)for additional requirements of lubricants).

(iii) Where a submersible pump is used:

(A) the top of the casing shall be effectively sealed against the entrance of water under all conditions of vibration or movement of conductors or cables;

(B) the electrical cable shall be firmly attached to the riser pipe at 20-foot intervals or less; and,

(C) the intake of the well pump must be at least ten feet below the maximum anticipated drawdown elevation.

(c) Pitless Well Units and Adapters.

If the excavation surrounding the well casing allowing installation of the pitless unit compromises the surface seal, the competency of the surface seal shall be restored. Torch-cut holes in the well casing shall be to neat lines closely following the outline of the pitless adapter and completely filled with a competent weld with burrs and fins removed prior to the installation of the pitless unit and adapter.

Pitless well units and adapters shall:

(i) be used to make a connection to a water well casing that is made below the ground. A below-the-ground connection shall not be submerged in water during installation;

(ii) terminate at least 18 inches above final ground elevation or three feet above the highest known flood elevation, whichever is greater;

(iii) contain a label or have a certification indicating compliance with the Water Systems Council Pitless Adapter Standard (PAS-97);

(iv) have suitable access to the interior of the casing in order to disinfect the well;

(v) have a suitable sanitary seal or cover at the upper terminal of the casing that will prevent the entrance of any fluids or contamination, especially at the connection point of the electrical cables;

(vi) have suitable access so that measurements of static and pumped water levels in the well can be obtained;

(vii) allow at least one check valve within the well casing;

(viii) be furnished with a cover that is lockable or otherwise protected against vandalism or sabotage;

(ix) be shop-fabricated from the point of connection with the well casing to the unit cap or cover;

(x) be of watertight construction throughout;

(xi) be constructed of materials at least equivalent to and having wall thickness compatible to the casing;

(xii) have field connection to the lateral discharge from the pitless unit of threaded, flanged, or mechanical joint connection;

(xiii) be threaded or welded to the well casing. If the connection to the casing is by field weld, the shop-assembled unit must be designed specifically for field welding to the casing. The only field welding permitted on the pitless unit is to connect the pitless unit to the casing; and,

(xiv) have an inside diameter as great as that of the well casing, up to and including casing diameters of 12 inches, to facilitate work and repair on the well, pump, or well screen.

(d) Well Discharge Piping.

The discharge piping shall:

(i) be designed so that the friction loss will be low;

(ii) have control valves and appurtenances located above the pump house floor when an above-ground discharge is provided;

(iii) be protected against the entrance of contamination;

(iv) be equipped with a smooth-nosed sampling tap, a check valve, a pressure gauge, a means of measuring flow, and a shutoff valve (with the smooth-nosed sampling tap being the first item from the well head and the shut-off valve as the last item), unless it is a naturally flowing well which may need an alternative design;

(v) where a well pumps directly into a distribution system, be equipped with an air release vacuum relief valve located upstream from the check valve, with exhaust/relief piping terminating in a down-turned position at least six inches above the well house floor and covered with a No. 14 mesh corrosion resistant

screen. An air release vacuum relief valve is not required if the specific proposed well head valve and piping design includes provisions for pumping to waste all trapped air before water is introduced into the distribution system;

(vi) have all exposed piping valves and appurtenances protected against physical damage and freezing;

(vii) be properly anchored to prevent movement;

(viii) be properly protected against surge or water hammer; and,

(ix) if a pump to waste line exists, it shall not be connected to a sewer/storm drain without a minimum 12-inch clearance to the flood rim, and the discharge end of the pump-to-waste line shall be downturned and covered with a No. 4 mesh corrosion resistant screen (refer to R309-545-10(1)).

Guidance: It is recommended that discharge piping be provided with a means of pumping to waste. All pump-to-waste discharge lines should be designed for complete drainage to minimize freezing and unprotected cross connection problems.

Guidance: Provisions should be made for venting the well casing to atmosphere, particularly if a large or sudden water drawdown is expected. The vent shall terminate in a down turned position, at or above the top of the casing or pitless unit in a minimum 1.5 inch diameter opening covered with a No. 14 mesh, corrosion resistant screen (refer to section R309-545-15). The pipe connecting the casing to the vent shall be of adequate size to provide rapid venting of the casing.

(e) Water Level Measurement.

(i) Provisions shall be made to permit periodic measurement of water levels in the completed well.

(ii) Where permanent water level measuring equipment is installed, it shall be made using corrosion resistant materials attached firmly to the drop pipe or pump column and installed to prevent entrance of foreign materials.

(f) Observation Wells.

Observation wells shall be:

(i) constructed in accordance with the requirements for permanent wells if they are to remain in service after completion of a water supply well; and,

(ii) protected at the upper terminal to preclude entrance of foreign materials.

(g) Electrical Protection.

Sufficient electrical controls shall be placed on all pump motors to eliminate electrical problems due to phase shifts, surges, lightning, etc.

(13) Well House Construction.

The use of a well house is strongly recommended, particularly in installations utilizing above ground motors.

In addition to applicable provisions of R309-540, well pump houses shall conform to the following:

(a) Casing Projection Above Floor.

The permanent casing for all ground water wells shall project at least 12 inches above the pump house floor or concrete apron surface and at least 18 inches above the final ground surface. However, casings terminated in underground vaults may be permitted if the vault is provided with a “drain-to-daylight” sized to handle in excess of the well flow and surface runoff is directed away from the vault access.

(b) Floor Drain.

Where a well house is constructed, the floor surface shall be at least six inches above the final ground elevation and shall be sloped to provide drainage. A "drain-to-daylight" shall be provided unless highly impractical.

(c) Earth Berm.

Sites subject to flooding shall be provided with an earth berm terminating at an elevation at least two feet above the highest known flood elevation or other suitable protection as determined by the Director.

(d) Well Casing Termination at Flood Sites.

The top of the well casing at sites subject to flooding shall terminate at least three feet above the 100-year flood level or the highest known flood elevation, whichever is higher (refer to R309-515-6(6)(b)(vi)).

(e) Miscellaneous.

The well house shall be ventilated, heated, and lighted in such a manner as to assure adequate protection of the equipment (refer to R309-540-5(2) (a) through (h)).

(f) Fencing.

Where necessary to protect the quality of the well water, the Director may require that certain wells be fenced in a manner similar to fencing required around spring areas.

(g) Access.

An access shall be provided either through the well house roof or sidewalls in the event the pump must be pulled for replacement or servicing the well.

R309-515-7. Ground Water - Springs.

(1) General.

Springs vary greatly in their characteristics and they should be observed for some time prior to development to determine any flow and quality variations. Springs determined to be under the direct influence of surface water shall comply with surface water treatment requirements.

(2) Source Protection.

Public drinking water systems are responsible for protecting their spring sources from contamination. The selection of a spring shall only be made after consideration of the requirements of R309-515-4. Springs must be located in an area that shall minimize threats from existing or potential sources of pollution. A Preliminary Evaluation Report on source protection issues is required by R309-600-13(2). If certain precautions are taken, sewer lines may be permitted within a public drinking water system's source protection zones at the discretion of the Director. When sewer lines are permitted in protection zones both sewer lines and manholes shall be specially constructed as described in R309-515-6(4).

(3) Surface Water Influence.

Some springs yield water that has been filtered underground for years; other springs yield water that has been filtered underground only a matter of hours. Even with proper development, the untreated water from certain springs may exhibit turbidity and high coliform counts. This indicates that the spring water is not being sufficiently filtered in underground travel. If a spring is determined to be under the direct influence of surface

water, it shall be treated to meet the surface water treatment requirements specified in R309-505-6.

(4) Pre-construction Submittal

Before beginning spring development construction, the following information shall be submitted to the Director and approved in writing:

(a) detailed plans and specifications covering the development work;

(b) if available, a copy of an engineer's or geologist's statement indicating:

(i) the historical record of spring flow variation;

(ii) expected minimum flow and the time of year it will occur;

(iii) expected maximum flow and the time of year it will occur;

(iv) expected average flow; and,

(v) the behavior of the spring during drought conditions;

(c) acceptable evidence that the water system has a legal right to divert water for the proposed use(s) from the spring source(s);

(d) a Preliminary Evaluation Report on source protection issues as required by R309-600-13;

Guidance: The public water system management and the design engineer should refer to R309-505-7(1) before considering a spring as a source for a public water system.

(e) a copy of the chemical analyses required by R309-515-4(5); and,

(f) an assessment of whether the spring is under the direct influence of surface water (refer to R309-505-7(1)(a)).

Guidance: This assessment can be based on site inspection, known geological conditions, or specific water analysis, such as Microscopic Particulate Analysis (MPA) and chemical analysis.

(5) Information Required after Spring Development.

After development of a spring as a drinking water source, the following information shall be submitted to the Director for review.

(a) proof of satisfactory bacteriologic quality ;

(b) information on the rate of flow developed from the spring.

Immediately after spring development, the water system shall collect monthly spring flow data during operating seasons when the spring is reasonably accessible, as a minimum, for three years, and submit spring flow data to the Director for determination of spring yield. After evaluating the spring flow information including seasonal and annual variations, the Director will determine a spring yield, which will be used in assessing the number of and type of connections that can be served by the spring. The spring yield typically is set at the 25th percentile of the spring flow data. If the spring exhibits significant seasonal or annual variations, the spring yield may be assessed on a case-by-case basis.

(c) Record drawings of spring development.

(6) Operating Permit Required.

Water from the spring can be introduced into a public water system only after it has been approved for use, in writing, as evidenced by the issuance of an Operating Permit by the Director (see R309-500-9).

(7) Spring Development.

The development of springs for drinking water purposes shall comply with the following requirements.

(a) The spring collection device, whether it be collection tile, perforated pipe, imported gravel, infiltration boxes, or tunnels must be covered with a minimum of 10 feet of relatively impervious soil cover. Such cover must extend a minimum of 15 feet in all horizontal directions from the spring collection device. Clean, inert, non-organic material shall be placed in the vicinity of the collection device(s).

(b) Where it is impossible to achieve the 10 feet of relatively impervious soil cover, an acceptable alternate will be the use of an impermeable liner provided that:

(i) the liner has a minimum thickness of at least 40 mils;

(ii) all seams in the liner are folded or welded to prevent leakage;

(iii) the liner is certified as complying with ANSI/NSF Standard 61. This requirement is waived if certain that the drinking water will not contact the liner;

(iv) the liner is installed in such a manner as to assure its integrity. No stones, two inch or larger or sharp edged, shall be located within two inches of the liner;

(v) a minimum of two feet of relatively impervious soil cover is placed over the impermeable liner; and,

(vi) the soil and liner cover are extended a minimum of 15 feet in all horizontal directions from the collection devices.

(c) Each spring collection area shall be provided with at least one collection box to permit spring inspection and testing.

(d) All junction boxes and collection boxes, must comply with R309-545 with respect to access openings, venting, and tank overflow. Lids for these spring boxes shall be gasketed and the box adequately vented.

(e) The spring collection area shall be surrounded by a fence located a distance of 50 feet (preferably 100 feet if conditions allow) from all collection devices on land at an elevation equal to or higher than the collection device, and a distance of 15 feet from all collection devices on land at an elevation lower than the collection device. The elevation datum to be used is the surface elevation at the point of collection. The fence shall be at least "stock tight" (see R309-110). In remote areas where no grazing or public access is possible, an exception to the fencing requirement may be granted by the Director. In populated areas, a six-foot high chain link fence with three strands of barbed wire may be required.

(f) Within the fenced area all vegetation having deep roots shall be removed by a means not negatively affecting water quality.

(g) A diversion channel, or berm, capable of diverting all anticipated surface water runoff away from the spring collection area shall be constructed immediately inside the fenced area.

(h) A permanent flow-measuring device shall be installed. Flow measurement devices such as critical depth meters or weirs shall be properly housed and otherwise protected.

(i) The spring shall be developed as thoroughly as possible to minimize the possibility of excess spring water ponding within the collection area. Where the ponding of spring water is unavoidable, the excess shall be collected by shallow

piping or french drain, and be routed beyond and down grade of the fenced area required above, whether or not a fence is in place.

R309-515-8. Operation and Maintenance.

(1) Spring Collection Area Maintenance.

(a) Spring collection areas shall be periodically (preferably annually) cleared of deep-rooted vegetation to prevent root growth from clogging collection lines. Frequent hand or mechanical clearing of spring collection areas and diversion channel is strongly recommended. It is advantageous to encourage the growth of grasses and other shallow rooted vegetation for erosion control and to inhibit the growth of more detrimental flora.

(b) No pesticide (e.g., herbicide) may be applied on a spring collection area without the prior written approval of the Director. Such approval can be granted only when:

(i) acceptable pesticides are proposed;

(ii) the pesticide product manufacturer certifies that no harmful substance will be imparted to the water; and,

(iii) spring development construction meets the requirements of these rules.

(2) Pump Lubricants.

The U.S. Food and Drug Administration (FDA) has approved propylene glycol and certain types of mineral oil for occasional contact with or for addition to food products. These oils are commonly referred to as "food-grade mineral oils". All oil lubricated pumps shall utilize food grade mineral oil suitable for human consumption as determined by the Director.

(3) Algicide Treatment.

No algicide shall be applied to a drinking water source unless specific approval is obtained from the Director. Such approval will be given only if the algicide is certified as meeting the requirements of ANSI/NSF Standard 60, Water Treatment Chemicals - Health Effects.

KEY: drinking water, source development, source maintenance
Date of Enactment or Last Substantive Amendment: January 21, 2014
Notice of Continuation: March 22, 2010
Authorizing, and Implemented or Interpreted Law: 19-4-104

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10. DIRECTOR's REPORT

b) DRINKING WATER BOARD's 2014 MEETING SCHEDULE – FINAL

DRINKING WATER BOARD
2014 MEETING SCHEDULE

DATE	NEED PACKET BY	PLACE	TOUR/WORK MEETING	NOTES
January 17, 2014	December 25, 2013	Salt Lake City		
February 27, 2014 (Thursday)	February 5, 2014	St. George	Rural Water Annual Conference	
May 9, 2014	April 16, 2014	Salt Lake City		
July 18, 2014	June 25, 2014	Salt Lake City		
August 27, 2014 (Wednesday)	August 6, 2014	Layton, Utah	Rural Water North Conference	
November 7, 2014	October 17, 2014	Salt Lake City		
January 9, 2015	December 17, 2014	Salt Lake City		

DRINKING WATER BOARD
FINANCIAL ASSISTANCE SUBMITTAL SCHEDULE
2014

APPLICATION CUT-OFF DATE	SRF PACKET	SRF CONF CALL DATE	DWB PACKET DEADLINE DATE	DWB MEETING DATE
November 6, 2013	November 27, 2013	December 4, 2013 Wednesday 9:00 AM	December 18, 2013 Wednesday BY NOON	**January 17, 2014**
January 2, 2014	January 15, 2014	January 22, 2014 Wednesday 9:00 AM	February 5, 2014 Wednesday BY NOON	**February 27, 2014**
March 5, 2014	March 26, 2014	April 2, 2014 Wednesday 9:00 AM	April 23, 2014 Wednesday BY NOON	**May 9, 2014**
May 15, 2014	June 4, 2014	June 11, 2014 Wednesday 9:00 AM	June 25, 2014 Wednesday BY NOON	**July 18, 2014**
July 2, 2014	July 23, 2014	July 30, 2014 Wednesday 9:00 AM	August 6, 2014 Wednesday BY NOON	**August 27, 2014**
September 10, 2014	October 1, 2014	October 8, 2014 Wednesday 9:00 AM	October 17, 2014 Wednesday BY NOON	**November 7, 2014**
November 12, 2014	December 3, 2014	December 10, 2014 Wednesday 9:00 AM	December 17, 2014 Wednesday BY NOON	**January 9, 2015**

10. DIRECTOR's REPORT

c. RURAL WATER ASSOCIATION OF UTAH's 2014 ANNUAL MEETING

Rural Water Association of Utah
76 Red Pine Dr. | Alpine, UT 84004
801-756-5123 | www.rwau.net

MISSION: Possible

RWAU

2014 ANNUAL CONFERENCE

The Dixie Center · 1835 Convention Center Dr.
St. George, Utah · Feb. 24—28, 2014

WELCOME

To the 2014 Annual Conference!

RWAU

We would like to extend a hearty invite and a warm welcome to everyone involved in the water and wastewater industry: come on out to the 2014 Rural Water Association of Utah Annual Conference! Most of the time what we do in this industry is taken for granted—but that doesn't stop you! Your hard work, day-in and day-out, make getting clean drinking water and effective wastewater removal for Utah's citizens Mission: Possible!

That's why we love Conference time—it's a time to focus on and highlight what YOU do!! The Conference is all for YOU: excellent training for CEUs, great networking opportunities, CCR completion, visiting with the Division of Drinking Water, and a chance to see the latest and greatest wares brought in by the best companies in our industry are just a few of the things we will have this year to help you accomplish your mission. That's also why we encourage the participation of everyone in the industry: from water and wastewater operators, to managers, elected officials and office personnel. Every role is important to make this mission succeed, and there is something there for everyone.

So use the form at the back of this booklet or use our NEW ONLINE REGISTRATION SYSTEM available on our website at www.rwau.net to register to attend. And while you are registering, be sure to take advantage of the awesome networking events we have this year. These include the golf scramble, the skeet shoot, the partner's program, and especially the Awards Banquet on Wednesday. This highlight of the Conference is where we recognize you and your peers for doing outstanding work in the industry and going above and beyond for your customers. After the awards, Chris Voth, a finalist on NBC's "Last Comic Standing," will top off the evening's entertainment.

Another must-not-miss is the Voting Membership Meeting on Thursday at 10:30 in the Garden Room—your presence is a must! Come get the scoop on what's been happening in YOUR ASSOCIATION! And don't forget: EVERY SYSTEM needs to bring a sample of your water for the **Best Water in Utah contest.** You owe it to yourself to bring your water and give the contest a chance—you never know what could happen!

We look forward to seeing you in St. George for a week full of good food, good friends, and good learnin'! We'll see you there!

Sincerely,

Paul Fulgham
RWAU Board President

MISSION: Possible

This Conference is brought to you in partnership with the Dixie Applied Technology College.

DXATC
Dixie Applied Technology College

TABLE OF Contents

CONFERENCE Schedule

MONDAY, FEBRUARY 24

12:00 p.m.	Operator Certification Registration Opens
1:00 – 5:00 p.m.	**Water & Wastewater Operator Certification CLASSES BEGIN**

TUESDAY, FEBRUARY 25

7:00 – 5:00 p.m.	Exhibitor Set-up
7:30 – 11:00 a.m.	Registration
7:30 – 8:30 a.m.	Donut / Juice / Coffee *(North Lobby)*
8:30 – 10:00 a.m.	In-Depth Training / Water & Wastewater Operator Certification
9:00 – 4:00 p.m.	**Golf Scramble** *(Sunbrook Golf Course)*
10:15 – 11:45 a.m.	In-Depth Training / Water & Wastewater Operator Certification
11:45 – 1:00 p.m.	Lunch *(North Lobby)*
1:00 – 2:30 p.m.	In-Depth Training / Water & Wastewater Operator Certification
2:45 – 4:15 p.m.	In-Depth Training / Water & Wastewater Operator Certification

WEDNESDAY, FEBRUARY 26

7:30 – 5:00 p.m.	Registration
7:30 a.m.	Exhibit Hall OPENS
7:30 – 9:00 a.m.	Donut/Juice/Coffee *(Exhibit Hall)*
9:00 –10:00 a.m.	Training / Water & WW Op. Cert.
10:30–11:30 a.m.	Training / Water & WW Op. Cert.
11:30 –1:00 p.m.	Lunch / Exhibit Hall
1:00 – 2:00 p.m.	General Session *(Garden Room)*
2:00 – 2:15 p.m.	Break
2:15 – 4:15 p.m.	Training
7:00 – 9:00 P.M.	**AWARDS BANQUET (BALLROOMS)**

CEUS

ATTEND & EARN:

.6 for In-Depth Training *(Tues)*
1.0 for Conference *(Wed/Thurs/Fri)*
1.75 for Water Op. Cert. *(Mon-Fri)*
1.75 for WW Op. Cert. *(Mon-Fri)*

CEUs & CONFERENCES:

WATER: All of your CEU credits can be earned from conferences or trainings.
WASTEWATER: Half of your CEU credits can be earned from conferences.

THURSDAY, FEBRUARY 27

7:30 – 5:00 p.m.	Registration
7:30 a.m.	Exhibit Hall OPENS
7:30 – 9:00 a.m.	Donut / Juice / Coffee *(Exhibit Hall)*
9:00 –10:00 a.m.	Training / Water & Wastewater Op. Cert Classes
10:30 –12:00 P.M.	**VOTING MEMBERSHIP MEETING / WATER TASTE FINALS**
11:30 – 1:00 p.m.	Lunch / Exhibits *(Exhibit Hall)*
1:00 p.m.	Exhibit Hall CLOSED / Exhibit Take-down
1:00 – 2:00 p.m.	Training / Water & Wastewater Op. Cert Classes
2:00 – 5:00 p.m.	Drinking Water Board Meeting *(Garden Room)*
2:15 – 3:45 p.m.	Training / Water & Wastewater Op. Cert Classes
2:15 – 3:45 p.m.	Partner's Craft
3:00 P.M.	**SKEET SHOOT**

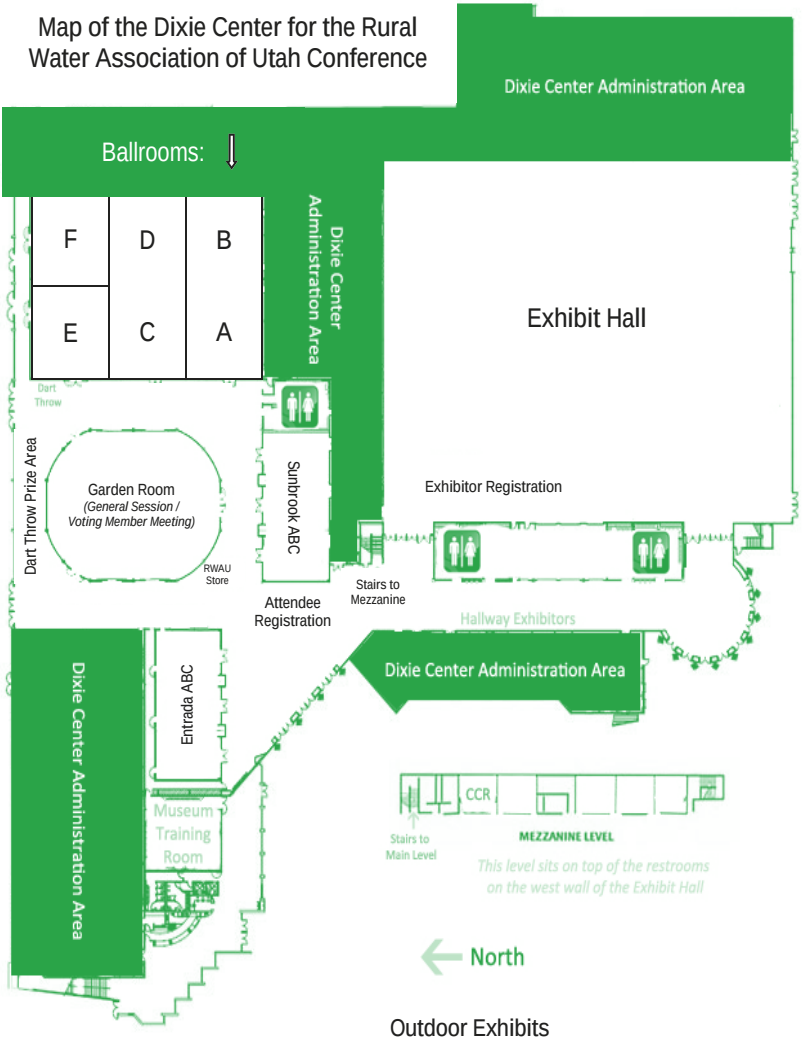
FRIDAY, FEBRUARY 28

7:30 – 8:30 a.m.	Registration / Donuts / Juice / Coffee *(North Lobby)*
8:45 – 12:00 p.m.	Water & Wastewater Operator Certification Exam
8:30 – 9:30 a.m.	Training Sessions
9:45 –10:45 a.m.	Training Sessions
11:00 –12:00 p.m.	Training Sessions
12:00 P.M.	**EVALUATION FORM & DART THROW PRIZE DRAWINGS (GARDEN ROOM)**
12:45 p.m.	Adjourn

DIXIE CENTER Layout

The Dixie Center | 1835 Convention Center Drive | St. George, UT 84790

Map of the Dixie Center for the Rural Water Association of Utah Conference



Thank you to the dedicated staff at the Dixie Center for their excellent service in hosting this Conference! We appreciate you!

WATER OPERATOR Certification

FIRST:

Register for the Certification CLASS

- Use the Conference Registration form to register for the Water Operator Cert. Class.
- The certification class is designed to train operators testing on all levels of certification for water treatment & distribution.
- Training sessions will run from Mon, Feb. 24—Thurs, Feb 27
- Sessions held in the Sunbrook conference rooms
- PLEASE NOTE: The Operator Certification fee on the registration form pays for BOTH the certification

THEN:

Register for the Certification EXAM

- The exam will be offered to all grade levels in DISTRIBUTION & TREATMENT
- Contact Shantell at the RWAU office to register to take the exam (801-756-5123 or shantell.cummins@rwau.net)
- The exam registration DEADLINE is *February 7th at 5:00 pm!* *(Please NOTE: The exam registration deadline is EARLIER than the deadline to register for the CLASS. The exam registration must be received NO LATER THAN 5:00 pm on Feb. 7th!)*
- To take the exam, you MUST fill out a proof of citizenship form and have it NOTARIZED. This form must be submitted with your test application.
- The State will offer the exam during the Rural Water Conference on Friday, February 28, 8:45 am— Noon

THE EXAM REGISTRATION DEADLINE IS FEB. 7TH! IF YOU PLAN ON TAKING THE CERTIFICATION EXAM AT THE CONFERENCE, YOU MUST REGISTER FOR IT (separately from your conference registration) by contacting Shantell before FEBRUARY 7th!

Exam Details:

THE EXAM WILL BE HELD:

FRIDAY, FEBRUARY 28, 2014 | 8:45 AM—12:00 NOON

You will need:

- Photo ID
- Notarized proof of citizenship form
- Two sharp #2 pencils
- A good eraser
- A nonprogrammable calculator
  - No programmable / text capable calculators or PDAs will be allowed
  - Solar-powered only calculators often do not work in the conference center lighting

There will be NO on-site registration for this test. Those not registered by the Feb. 7th deadline must wait for the next testing date to take the test or call RWAU (801-756-5123) to take the exam online at a later date.

WASTEWATER Certification

Monday, February 24—Friday, February 28, 2014

FIRST:

Register for the Certification CLASS

- Use the Conference Registration form to register for the Wastewater Operator Certification Class.
- The certification class will cover Lagoons and Levels I & II for Treatment & Collections.
- Training sessions will run from Mon, Feb. 24—Thurs, Feb 27
- Sessions held in the Entrada rooms at the Conference
- PLEASE NOTE: The certification class fee covers the class costs ONLY and is payable to Rural Water. **The class fee and the state exam fee are SEPARATE fees. Pay the exam fee to the state. Pay the certification class fee to Rural Water.*

THEN:

Register for the Certification EXAM

- Download an exam application from www.waterquality.utah.gov/OpCert or contact Judy Etherington at (801) 536-4344 to register & pay for the exam.
- The exam registration DEADLINE is *January 31st at 5:00 pm!* *(Please NOTE: The exam registration deadline is EARLIER than the deadline to register for the CLASS. The exam registration & exam fee must be received by the Division of Water Quality NO LATER THAN 5:00 pm on Jan. 31!)*
- A NOTARIZED proof of citizenship form must be on file with DWQ PRIOR to taking the exam.
- The State will offer every level of the Wastewater Certification Exam during the Conference on Friday, Feb. 28th, 8:45 am—Noon

Exam Details:

Exams will be offered to ALL GRADE LEVELS in COLLECTION, TREATMENT & LAGOONS.

THE EXAM WILL BE HELD:

FRIDAY, FEBRUARY 28, 2014 | 8:45 AM—12:00 NOON

You will need:

- Photo ID
- Two sharp #2 pencils
- A good eraser
- Battery-operated, nonprogrammable calculator (No programmable / text capable calculators or PDAs will be allowed. Solar-powered-only calculators often do not work in the conference center lighting.)

This testing opportunity is considered part of the regular Spring testing session. You will not be allowed to take the same exam again in May.

GOLF Scramble

Scramble Details:

- 9:00 am Shotgun Start at the Sunbrook Golf Course
- 4-Person Scramble
- Entry fee is $80 per golfer
- Entry Fee includes:
  - Continental Breakfast
  - Tee Time
  - Cart
  - Lunch
  - Giveaways
  - Prizes

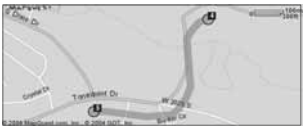
- Winners awarded prizes immediately following tournament
- Hole-in-One prize on every par 3, including a 4-wheeler hole!
- Email Vern Steel *(steel@rwau.net)* with team preferences or for sponsorship opportunities. If you are a single golfer, you will be placed on a team.

Driving Directions from the Dixie Center to the Sunbrook Golf Course (2336 West Sunbrook Drive):

1. From Dixie Center, go N. on S. Convention Center Dr. toward 1670 S.

2. Turn left onto S Bluff St/ Riverside Dr. Continue to follow S Bluff St.

3. Turn left onto Hilton Dr.



4. Hilton Dr. becomes Tonaquint Dr.

5. Turn right onto S Dixie Dr.

6. Turn left onto W Sunbrook Dr.

PARTNER'S Program

Wednesday, Thursday, Friday

The Partner's Program provides activities for the wife/spouse/partner/significant other of attendees at the Annual Conference. Registration includes access to the Exhibit Hall and all the training sessions, plus **coffee/juice/donut each morning, & lunch on Wed. & Thursday.**

Plus...the Partner's Program features door prizes just for you!

WEDNESDAY, FEBRUARY 26:

2:15—4:15 pm | Garden Room

This is Your Brain...
This is Your Brain on STRESS!
Fred Schafer, Motivational Speaker

Join us for an enlightening, entertaining session where humorist and motivational speaker Fred Schafer will help us navigate stress and turn it from a negative to a positive influence in our lives.

(See page 16 for full session description.)

DOOR PRIZES

Drawings for all door prizes for the Partner's Program will be held during our Thursday craft session using your activity admission ticket.

You Must Be Present To Win!

THURSDAY, FEBRUARY 18:

Craft Workshop

2:15—3:45 pm | Entrada A

Come join us and assemble a unique night light using a Mason jar. This is an easy-to-assemble craft available in many colors to match any room. If you would like to add personal embellishments to your craft feel free to bring them along! These lights are great for leaving out in a hallway or bathroom at night (saving you money on your power bill!) And the best part is—no painting is required! Come join us for a fun afternoon and bring home one of your own! (Bonus: If you'd like to make more than one night light, additional kits will be available onsite for $6 a piece.)

Presented by Vondakay Lofley, Elmo, Utah

CONSUMER CONFIDENCE Reports

GET YOUR 2013 CONSUMER CONFIDENCE REPORT COMPLETED ONSITE!

For your convenience, Rural Water and the Division of Drinking Water will be available throughout the conference to help you complete your Consumer Confidence Reports for the 2013 calendar year. CCR appointments will be scheduled at the following times:

Tuesday, February 25 — 8:00 a.m. to 4:30 p.m.

Wednesday, February 26— 9:00 a.m. to 4:30 p.m.

Thursday, February 27 — 8:00 a.m. to 4:30 p.m.

Friday, February 28 — 8:30 a.m. to 11:00 a.m.

IMPORTANT: You must make an appointment in advance to complete your CCR at the Conference. Contact Shantell Cummins in the RWAU office (801-756-5123) **before February 15th** to make an appointment. *(If time permits, walk-ins may be accommodated, but those with appointments take precedence.)*

WHAT YOU NEED TO BRING:

- Last year's Consumer Confidence Report—on a USB flash drive if possible *(Word & WordPerfect both supported—paper copy OK if necessary)*
- Your 2013 sampling records (the monitoring data needed for your CCR will be made available where possible by the Division of Drinking Water at the workshop.)
- *PLEASE NOTE: If the Division of Drinking Water has not received all of your monitoring data for 2013, we will need to rely on your monitoring results to complete the report.*

CCR Completion Location:

The Snow Canyon Room

(This is a Mezzanine Room overlooking the Exhibit Hall.)

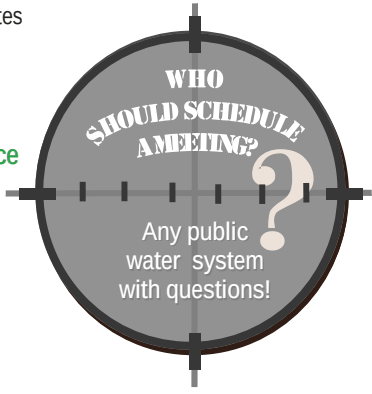
DDW Workshops

Division of Drinking Water Workshops

SYSTEM REPORT UPDATES & DIVISION CONSULTATION

Division staff will be available in the **Bryce Mezzanine Room** to meet one-on-one with system staff for anything you may need. Possible topics for consultation include, but are not limited to, the following:

- **Compliance Issues**
  - Stage 2 DBP Rule for all remaining systems who disinfect or receive disinfected water on Oct 1, 2013. Please consult with DDW staff if you have not submitted an IDSE report or Stage 2 sample site plan.
  - IPS Report review and deficiency corrections
  - Monitoring Schedule reviews and updates
  - System Inventory reviews and updates
  - Operator Certification issues
  - Significant Deficiencies
  - Corrective Action Plan assistance
  - CEU updates, etc.
- **Engineering & Construction Assistance**
  - System Infrastructure reviews
  - Capacity reviews
  - Plan review issues
  - Funding assistance, etc.
- **Source Protection Assistance**
  - Status of source protection updates
  - PER status for new sources
  - Source protection plans, etc.



UPDATING SOURCE PROTECTION PLANS

The Division will be at the conference in the **Zion Mezzanine room** this year to help those systems whose updated plans are overdue to complete and submit their updates. There is some preparation before we can complete the updated plan, so contact Mark Jensen at 801-536-4199 or mjensen@utah.gov to get things started.

CROSS CONNECTION

The Division will be available in the **Silver Reef Mezzanine room** beginning Wednesday morning for a Cross Connection 101 classroom training from 9:00 am to noon. Then, Wednesday afternoon—Friday at noon in the same room, they will be hosting an open house Cross Connection Control workshop where you can stop by and work on all 5 components of your cross connection control program one-on-one with a Division of Drinking Water staff member. Walk-ins welcome.

WORKSHOP TIMES

Tuesday, Feb. 25:
1:00—4:30 pm

Wednesday, Feb. 26:
9:00 am—4:30 pm

Thursday, Feb. 27:
8:00 am—4:30 pm

TO SCHEDULE A MEETING, CALL:

Compliance Issues: Dallin Frank 801-536-4210

Engineering & Construction: Heather Bobb 536-0093

Source Protection: Mark Jensen 801-536-4199

Cross Connection: Mike Moss 801-536-0089

(Or visit the Division of Drinking Water booth during the Conference to schedule a time to meet With the DDW staff.)

SKEET Shoot

Purgatory Clay Sports

Southern Utah Shooting Sports Park

Hurricane, Utah (Near fairgrounds in Hurricane—see map below.)

- Skeet Shoot will be held Thursday, February 27, 2014
- 3:00 pm: shooting starts—continues until dark
- $30 per shooter for the first round, $9 for each additional round
- You must bring your OWN Gun & Shells *(Limited amounts of 12 & 20 gauge shoot guns are available for rent for $10 onsite, first-come, first-served. Ammunition can also be purchased on site if needed.)*
- Entry Fee includes Safety Glasses, Ear Protection & 50 Targets of either: Sporting Clays, 5-Stand, Trap or Skeet
- Shooting prizes will be awarded

Sign up for the Skeet Shoot on the Conference Registration form

- You can register two shooters on the hard copy registration form—one Conference attendee and one "Skeet Shooter only" where applicable. Only one shooter can be registered at a time when using the online registration.
- Anyone attending the conference should register for the skeet shoot on his/her own registration form.
- Additional shooting rounds can be purchased on-site.

Driving Directions from St. George:

- Take I-15 North to Exit 16
- Go south on SR-9 to the 2nd set of stoplights
- Turn right (south) & follow the Southern Utah Shooting Sports Park signs

Map:

TUESDAY

In-Depth Training - Feb. 25

ENGINEERS *(BALLROOM F)*

GROUNDWATER MANAGEMENT & SUSTAINABILITY (8:30—10:00 am)

Water Management continues to become more central in the state of Utah as water resources are stretched to meet the growing population. Groundwater management is of critical concern as the majority of cities rely heavily on groundwater sources. This presentation will explore key insights into conjunctive use, balancing surface and groundwater resources within the State, planning for future sources of drinking water and the role that wise groundwater management will play.

Mark Chandler | *CRS Engineers*

PUBLIC WATER SYSTEM DESIGN/CONSTRUCTION STANDARDS, & RULE UPDATES (10:15—11:45 am)

Utah has 12 rules governing the design & construction of public drinking water facilities. The DDW is in the process of significantly revising & updating these rules, a process that will take several years to complete. Come learn about these changes & how you can provide feedback during the rule-making process. We'll also touch on the new federal requirement for lead-free components in distribution systems going into effect January 2014 & its potential impact on systems.

Tammy North | *Division of Drinking Water*

BEAVER DAM WATER IMPROVEMENT PROJECT

(1:00—2:30 pm) The water system serving Beaver Dam in Box Elder County was a chronic member of the DDW's significant non-compliers list for over 10 years. Sources and tanks were unapproved due to poor spring development, high arsenic, leaks & inadequate capacity. The system was unmetered, undersized, leaking & located on private property without easements. The cost to correct the deficiencies was almost insurmountable. Come hear the lessons learned as the system went from unapproved status to full compliance.

Bill Bigelow | *Hansen, Allen & Luce*

IRON BACTERIA AND BIO-FOULING IN WELLS

(2:45—4:15 pm) The loss of water production in a well is a major concern for water professionals and public health officials. This presentation looks at iron bacteria and biofouling factors causing contamination and lost well production, and helps operators diagnose and correctly treat the problem. Diagnosis and treatment methods will cover both physical and chemical cleaning applications. The methods of successful disinfection will be explained along with the reasons conventional disinfection fails 50% of the time.

LeRoy Palmer | *AmeriWest Water Services*

WASTEWATER *(BALLROOM CD)*

JORDAN BASIN WATER RECLAMATION FACILITY: THE UPS & DOWNS OF STARTUP (8:30—10:00 am)

South Valley's Jordan Basin Water Reclamation Facility is a state of the art membrane bioreactor wastewater treatment plant. It started operation on July 8, 2012 and since its first day has been able to meet its UPDES permit. We will discuss the plant's operation and some of the things that were necessary to bring it on line as well as some of the issues that were encountered with bringing a new facility on line & how we were able to overcome the issues and continue to produce a quality effluent. Jordan Basin is a highly sophisticated treatment requiring special skills & attention to operate as it does.

Gordon Evans | *South Valley Sewer District*

PIGGY POOP POWER (10:15—11:45 am)

Come learn about a project completed in Milford Utah called the Blue Mountain Bio-Gas project, a system that takes pig manure produced by Circle Four Farms out of Milford Utah and, using biodigesters, pulls methane off of the degrading manure and uses it to power generators making 3.2 Mega Watts of "green energy" This is a complex system of wastewater piping, biodigesters, effluent ponds, methane treatment and compression, and water treatment. The presentation will cover the overall project, engineering, installation and project benefits.

Dustin Langston | *WL Plastics*

DON'T DIE IN A DITCH! CONFINED SPACE AND TRENCH SAFETY (1:00—2:30 pm)

Why do people keep getting killed or injured in trench collapses? You may have something to say about that question, and the reality is each year dozens of people in Utah are injured or killed in trenches. This presentation takes a new look at trenching safety, confined spaces and how to be compliant, efficient & safe when dealing with either.

Jason Watterson | *Utah Local Governments Trust*

THE COPS ARE AT THE DOOR! HOW TO HANDLE A REGULATORY AGENCY VISIT

(2:45—4:15 pm) We live in a regulatory world. If we fail a regulatory audit, we stand to lose a lot. Citations, fines and potential jail time are all at risk. How do you turn a possible disaster into a triumph for your organization? This presentation provides the formula to make the most of a regulatory agency visit. We will give best practices on what to do before, during and after an OSHA, EPA/DEQ, FAA or other regulatory agency visit and what to do if you receive a citation.

Jason Watterson | *Utah Local Governments Trust*

TUESDAY

In-Depth Training - Feb. 25

WATER *(BALLROOM AB)*

WATER WELLS & PUMPS: MAXIMIZING THE LIFE EXPECTANCY OF YOUR WELL

(8:30—10:00 am, 10:15—11:45 am, 1:00—2:30 & 2:45—4:15 pm)

As water wells and water well pumps age, their life expectancy and efficiency diminishes. This full day, in-depth presentation will cover methodologies of enhancing life expediencies of the same. Additionally we will discuss methodologies of rebuild/ restoration. Presenters will include regulators, engineers, contractors, and suppliers.

Jason Lamb | *Utah Groundwater Association*

MANAGEMENT / ELECTED OFFICIALS *(MUSEUM AUDITORIUM)*

ORDINANCES, BYLAWS & RESOLUTIONS

(8:30—10:00 am)

Ordinances, Bylaws, and Resolutions govern the operations of your Council, Board or District, but how much do you really know about them? Why do you need them? How do you go about adopting or changing them? Attend this informative session to learn about the reason behind the rules. Come learn: when (and why) Ordinances, Bylaws and Resolutions are necessary, who can change or alter them and what needs to be in a water ordinance.

Dave Church | *Blaisdell & Church*

FIDUCIARY RESPONSIBILITIES

(10:15—11:45 am)

How does the term "Fiduciary Responsibilities" apply to you? What are YOUR fiduciary responsibilities? Is it your job to make sure you have a good policy in place concerning bank deposits, collections, check writing and signing, bookkeeping, and reconciliation, etc.? Remember that Fiduciary Responsibility means to be legally responsible for what belongs to another...attend this session to make sure you are covering your bases!

Dave Church | *Blaisdell & Church*

BUDGETING 101: HOW SWEET IT IS!

(1:00—2:30 pm)

Come learn how the "sweet" process of BUDGETING can, in fact, be a pleasant experience in life. Yes, it can!!! This session will cover the issues involved with preparing, presenting, adopting a budget etc.—and show you how you can maybe even enjoy the process while you're at it! With a few treats to sweeten up this session, you will leave with a smile on your face!

Ken Bassett | *Vernal City*

CAN'T WE ALL JUST GET ALONG?

WATER / WASTEWATER SYSTEM BASICS & COMMUNICATION BETWEEN DECISION MAKERS & STAFF (2:45—4:15 pm)

Ever wonder why your water/wastewater system makes what sometimes seems like unreasonable requests? What do they really need? Come hear an overview of the laws and demands on your water/WW system. Find out ways you can work together to make everyone's jobs easier and meet the needs of all parties involved.

Paul Fulgham | *Tremonton City & RWAU Board*

SPECIAL SESSION *(BALLROOM E)*

CAN YOU CUT YOUR ENERGY BILL IN HALF?

(8:30—10:00, 10:15—11:45, 1:00—2:30 & 2:45—4:15)

This informative full-day seminar will examine in detail many methods to save significantly on your energy bills from simple operation techniques to system tune-ups and major improvements. We will examine ways to computer model your system using simple free software and to check for water losses and inefficiencies in pumping systems. Learn how to run pumps at different times and on different rate schedules and find out about Rocky Mountain Power programs available to assist you in the expenses of upgrades. We will also learn about State Energy efficiency programs, and demonstrate ways to finance major system improvements, where the loan payback can be solely based on your energy savings. Energy is often the largest part of our water costs, and savings realized could fund your deserved pay raise and more. Water is power, so become more empowered!

Doug Evans | *Mountain Regional;* Steve Jones | *Hansen, Allen & Luce;*
Raenee Bugarske, *Utah Office of Energy Development;* Mark Cram, *Siemens Industry*

OPERATOR CERTIFICATION *(SUNBROOK / ENTRADA)*

Operator Certification Classes will begin **Monday, February 24th at 1:00 pm** & run throughout the week. Breaks, Special Sessions, Exhibit Hall time, etc. will occur with the rest of the Conference.

Certification instruction topics will be announced in your class on Monday at Conference

WEDNESDAY

9:00 - 10:00 Session - Feb. 26

Ballroom CD

Chlorine Gas—A Fresh Perspective

There is considerable misinformation regarding the safety of gas chlorine. As a result, many operations feel pressure to change to alternative forms of disinfection. Later, and after considerable startup cost, higher operating cost and sometimes difficult management problems, they wish they had stayed with gas chlorine. The fact is that 100% pure chlorine gas has the best safety record based on data reported by the American Association of Poison Control Centers. This session offers facts to gain a fresh perspective on gas chlorine.

Curtis Smith | *Gas Chlorine Education Committee*

Ballroom AB

Refining Public Water System (PWS) Definition & Managing System Growth

The Division of Drinking Water (DDW) is working on fine-tuning the definition of Public Water Systems (PWS) in Utah's regulations.

Come learn about this rule amendment, how it will affect your water system and the subdivisions you serve, as well as the key factors to consider in managing water system expansions.

Ying-Ying Macauley
Division of Drinking Water

Ballroom F

Electronic CCRs

This presentation will be a review of the Consumer Confidence Rule (CCR) Requirements including FAQs (Frequently Asked Questions) about CCRs and the allowing of electronic distribution of CCRs.

In addition, this presentation will cover the purpose behind the CCR Rule and how to make the annual CCR Report a more effective means of communication between water system and customer.

Colt Smith
Division of Drinking Water

Museum Auditorium

Water Projects and Public Support

How do you work with and involve your customers in the decision-making process of a water project? Woods Cross City provided citizens information and an opportunity to give feedback on a needed project. Come learn how the process involved our customers not just once but twice and the results of what it accomplished. We will also discuss why it was important to enlist outside help to accomplish this.

Scott Anderson
Woods Cross City

Ballroom E

Fire Hydrants & Valves

Attend this new and revised presentation demonstrating the production process, history, proper installation, maintenance, & operation of fire hydrants and valves.

If you've attended Kirk's classes in the past, you know what a treat you are in for with this updated and expanded session on these topics. Bring your questions and prepare to learn!

Kirk Stoltzner
EJ

Operator Certification

Topics To Be Announced in Session

NOTE: This track is ONLY for those enrolled to take the Water or Wastewater Certification test.

THE EXAMS WILL BE HELD
FRIDAY, FEBRUARY 28, 2014

8:45 am—12:00 pm

Water Classes Held in: Sunbrook
Wastewater Classes Held in: Entrada

WEDNESDAY

10:30 - 11:30 Session - Feb. 26

Ballroom CD

Extending the Service Life of Concrete Structures

Concrete structures will deteriorate over time. When designed, they are give a projected service life. In this presentation we will discuss the leading causes of early deterioration in concrete structures: from tanks and clarifiers to manholes and concrete irrigation channels. We will also discuss various methods for extending the life of your structures and learn how to protect them from early deterioration.

Justin Mellen
IMX Technologies

Ballroom AB

Resolving Your IPS Deficiencies

Have some IPS points you need to get resolved but you aren't sure the best way to go about it? This unique and informative session will cover the best way to navigate this process from both sides of the fence: resolving your IPS deficiencies from a State perspective, and the most efficient and effective ways to tackle this problem from a system point of view, including a great way to document your deficiency corrections. If you have a few (or a lot!) of IPS points to resolve, this session is a do not miss!

Paul Fulgham / John Oakeson
Tremonton City / Division of Drinking Water

Ballroom F

Maximizing Your State Retirement Benefits

Come discuss the state pension plan (defined benefit plan) that provides a lifetime guaranteed monthly income at retirement, explaining how the benefit formula works, when workers are eligible to retire, and what your payout options are. We also describe how the 401k, 457, traditional IRA and Roth IRAs work, including the idea of tax-deferred saving, contribution limits, and tax consequences of saving for retirement (or spending retirement money early and the tax penalties that ensue!) We also explain how our 11 mutual funds work (pros and cons, risks and returns).

Michael Wilson | *Utah Retirement Systems*

Museum Auditorium

Go Mobile! Real Time Technology for Utilities

Managing utility locate requests and other field work is traditionally cumbersome and inefficient: from piles of paperwork and filing, inaccurate mapping, and incomplete documentation to wasted time and fuel spent on trips to and from the office. In this session, discover the benefits of a web-based technology solution and mobile app to manage and complete utility locate tickets and work orders like never before. Go paperless! Bundle and digitally archive notes, photos, and files in real-time as work is completed in the field. Utah Customer Case Studies will be showcased.

Matt Hirst | *BlueReview*

Ballroom E

Public Water System Capacity Evaluation 101

Come learn about the basics of evaluating whether a water system has sufficient source and storage capacity.

We will use a handy spreadsheet and the state sizing requirement tables to show how DDW determines the required capacity for various types of public water systems.

Not sure about your system capacity? Come find out!

Nathan Lunstad
Division of Drinking Water

Operator Certification

Topics To Be Announced in Session

NOTE: This track is ONLY for those enrolled to take the Water or Wastewater Certification test.

THE EXAMS WILL BE HELD
FRIDAY, FEBRUARY 28, 2014

8:45 am—12:00 pm

Water Classes Held in: Sunbrook
Wastewater Classes Held in: Entrada

GENERAL SESSION

Garden Room | 1:00 pm | Feb. 26

AGENDA

- Presentation of Colors & National Anthem
- Welcome Address
  Paul Fulgham, RWAU President
- National Rural Water Update
  Steve Fletcher, National Rural Water Executive Committee Vice-President
- Keynote Address
  Fred Schafer, Motivational Speaker

KEYNOTE ADDRESS

KEYNOTE ADDRESS

Striking Back at Mediocrity:

It is Time to Boldly Get Better Results Than You Have Ever Experienced Before

Let's face it. These are challenging times. The economy is struggling, budgets are shrinking, restrictions are increasing and competition is as tough as we have ever seen it. Yet some people, somewhere and somehow are going to make it. In fact, some will succeed to a greater degree than ever before, despite the overwhelming obstacles we all face.

Fred Schafer

Why is it that a "lucky" few are still succeeding despite incredible challenges? Are they lucky? Or is it a matter of pluck over luck, knowing what to do, and having the determination to do it? In this dynamic, humorous, inspiring keynote speech you will discover how to strengthen your five pillars of high performance by avoiding the "Mistakes of Mediocrity" too many working people make, and replacing them with Fred Schafer's proven "Strike Back Solutions" to fortify your pillars of high performance. Don't miss it!

WEDNESDAY

2:15 - 4:15 Session - Feb. 26

GARDEN ROOM

THIS IS YOUR BRAIN...THIS IS YOUR BRAIN ON STRESS!

Today's stress forecast? A torrential downpour of deadlines, demands and lack of resources. America is the most emotionally overstressed culture in history. This dilemma leads to a deteriorating of our physical, mental and emotional resources and health, including the health of our all-important brains.

Never fear, because help and hope is here with High Performance Specialist Fred Schafer's stress crushing "Strike Back Solutions" that will equip you to use the forces of stress to propel you into greater productivity, prosperity, peacefulness and passion in your career and life. In this fast paced, humorous and information packed session you will learn:

- Why you rarely hear a young child say they are "stressed"
- That most people ask "self-destruct" questions that can create greater stress
- How to grow the "Hardiness Factor" to thrive in adverse conditions
- Why self and shared leadership are essential to success
- How to fortify yourself against the high demands of leadership
- Designing "Positive activating challenges" versus negative is the key to power
- Understand the emotion and mindset that adds to feeling of stress
- How to operate under an "umbrella" that deflects stress

Fred Schafer
Motivational Speaker / High Performance Specialist

MUSEUM AUDITORIUM

UTAH FUNDING: AGENCIES & OPTIONS

Need to do a project but have no idea where to get the money? Come to this session! Our specialized team of panelists from each of Utah's funding agencies will present the options they have available to you and what you need to do to qualify. You can ask them your questions and get them answered, as well as learn what you need to know for your funding needs. Don't miss it!

Funding Panelists & Agencies:

Michael Grange ..... *Div. of Drinking Water*
Jonathon Cook ..... *Div. of Water Quality*
Val Anderson ..... *Div. of Water Resources*
Debra Meyer ..... *Rural Development*
Candace Powers ..... *Community Impact Board*
Jonathon Jones ..... *Bureau of Reclamation*
Jon Bronson ..... *Zion Public Finance*

AWARDS Banquet

Wednesday, February 26 | 7:00 pm | Dixie Center Ballrooms

Don't miss your chance to attend the highlight of the Conference—the Awards Banquet! Enjoy a fabulous Dixie Center dinner, watch as your peers (or you!) are awarded for jobs well done in 2013, then enjoy the awesome entertainment provided by NBC's "Last Comic Standing" finalist Chris Voth!

FEATURING:

Chris Voth

Teacher by day, Stand Up Comedian By Night!!

Chris Voth appeared in three seasons of NBC's "Last Comic Standing" and was chosen for the prestigious Great American Comedy Festival in 2009.

A 10-year comedy veteran, Voth is also a past winner of the Denver Comedy Works Competition and has worked with everyone from Dave Chappelle to Linda Ronstadt.

Called "a name to watch" and "a very funny guy" by the Rocky Mountain News, Voth released his first comedy CD in 2008 entitled "Never Mind the Jim J Bullocks, Here's the Chris Voth."

Using smart, clever material he has become hugely popular at corporate and private shows across the country.

THURSDAY

9:00 - 10:00 Session - Feb. 27

Ballroom CD

How Can We Afford Not To?

A common question is heard as we travel around Utah to rural water and wastewater systems: "How can we afford to do that project?" Helper City was faced with just this dilemma. Over $20M later and the City is on their way to answering a different question: "How could we afford not to do this project?" As the infrastructure ages within these small communities, the operation and maintenance costs continually increase. At some point, it makes economic sense to assume some debt, replace the aging infrastructure, & as a result reduce the escalating operation & maintenance costs.

Eric Franson | *Franson Civil Engineers*

Ballroom AB

Flange and Valves Bolting Seminar

The most misunderstood specifications that are written in water and wastewater industry are around flange bolting. What do you use above ground? What do you use on buried application? What do you use for submerged? What about around chemicals? What do you use on meters and specify on valves? How do you write a bolt specification that clearly describes what you want to specify? These are a few of the questions commonly asked. This seminar will review these questions and the most common ASTM steel bolts, stainless steel bolts and coatings specified and identify various coatings used for corrosion protection in water and wastewater and more!

Alex Roman | *Tripac Fasteners*

Ballroom F

A Case for Business Preparedness

This presentation is an overview on what business owners, managers and supervisors need to do in order to prepare their companies for business interruptions. Unlike the private individual that needs to focus on the large-scale disaster, businesses need to prepare for the daily disruptions that can truly put them out of business: power outage, pipe burst, computer issues and supply chain challenges just to name a few. Planning for them now will strengthen your chances for recovery later.

Tony Wilde
Utah Disaster Kleenup

Museum Auditorium

Drinking Water SRF 101

Are you planning a drinking water system improvement project? Do you have questions about how your system can afford it? The Drinking Water State Revolving Fund (DWSRF) financial assistance program is there to help. Come learn the basics of the DWSRF program and how it can help your system get funding for improvement projects.

This presentation will provide an overview as well as step-by-step instructions for obtaining SRF funding from the Drinking Water Board. Real-life examples will be used to illustrate the process.

Michael Grange
Division of Drinking Water

Ballroom E

Grill the Division (It's a Roast!)

Have questions or complaints for the Divisions? Come to this open forum session, and bring your questions, complaints, suggestions etc. Representatives from all five of the Division of Drinking Water sections will be on hand to answer your questions or take your complaints directly. The session will be moderated by DDW Director Ken Bousfield. Come join us!

Ken Bousfield & DDW Staff
Division of Drinking

Operator Certification

Topics To Be Announced in Session

NOTE: This track is ONLY for those enrolled to take the Water or Wastewater Certification test.

THE EXAMS WILL BE HELD
FRIDAY, FEBRUARY 28, 2014

8:45 am—12:00 pm

Water Classes Held in: Sunbrook
Wastewater Classes Held in: Entrada

VOTING
Membership Meeting

RWAU Annual Meeting | 10:30 am—Noon

FOR THE VOTING MEMBERS (GARDEN ROOM)

The 2014 Annual Voting Membership Meeting will be held:

Thursday, February 27, 2014 ~ 10:30 am—12 pm
Garden Room

It is vital that you attend this meeting if you are a representative, employee, or member of one of the Rural Water Voting Member systems. (If you are not from a voting member system, you are still welcome to attend, you just cannot vote.) Come see what is in store for the Association in 2014 & watch as a panel of judges selects Utah's best tasting water—it could be yours!

AGENDA:

A. Call to Order
B. Determination of a Quorum
C. Secretary's Report
D. Treasurer's Report
E. Reports of Committees / Directors
F. Unfinished Business
G. New Business
   1. Water Taste Test Conducted
   2. Scholarship Winners

TOPICS TO COVER:

- The Legislative Report
  - The Utah State Legislature
  - U.S. Congress
- RWAU Activity Update
- Research & Education Com.
  - Scholarship Winners

FOR THE LARGER, NON-VOTING SYSTEMS (MUSEUM)

(These sessions are geared toward larger systems not eligible to vote in the Membership Meeting.)

LARGE DIAMETER GATE VALVES (10:30—11:15)

This session, geared toward the larger systems, will present an overview and evolution of common valving in water systems. We will start off discussing double disc gate valves, then move on to butterfly valves and finally resilient wedge gate valves. A comparison between the valves will be presented, showing the advantages and disadvantages of the different valve groups. Handouts will be provided. John Susie | *American Flow Control*

OGDEN CANYON TRANSMISSION LINE REPLACEMENT PROJECT (11:15—12:00)

For several years, Ogden City has been assessed significant deficiencies related to cross connections and failure to meet minimum pressure requirements due to service connections tapping a major transmission line located in the narrow confines of Ogden Canyon. This waterline replacement project involved engineering ingenuity and contractor tenacity (as well as lots of hand warmers, electric socks, and hot beverages) to continue construction through the winter months. Come learn about this interesting project and how DDW's SRF funding helped Ogden City resolve these significant deficiencies. Michael Grange | *Div. of Drinking Water*

THURSDAY

1:00 - 2:00 Session - Feb. 27

Ballroom CD

Dirty Movies in High Def

Traditional CCTV systems operate at 30ft/minute & require the operator to stop, pan, tilt & log each observation. Today's high definition scanning systems operate at 70ft/minute without stopping, producing a high-definition capture of 100% of the pipeline interior in high definition quality and viewable in a viewer that enables the recipient to self pan/tilt anywhere and from any angle post inspection. The viewer and data can be incorporated into a GIS spatial deliverable which further improves data access and organization. Several municipalities across the U.S. have gone to this new media...should you be one of them?

Jason Walborn | *High-Definition Scanning / PRO-PIPE*

Ballroom AB

A SCADA System That Pays for Itself

Come take a look at how to utilize SCADA systems to save money and energy through a variety of different control methodologies.

Implementation of power and energy control methods can enable your SCADA system to do more than simply fill your tanks.

Join us as we discuss ways to take your SCADA to the next level and make it pay for itself.

Mark Jeppsen
SKM

Ballroom F

Hiring, Firing and Not Getting Burned

Dealing with employees can be the most challenging part of any manager's job. And working for a public entity can make it even worse.

Attend this presentation which covers the ins and outs of hiring, firing and disciplining employees, how to avoid common pitfalls and lawsuits involving employment.

Doug Folsom
Utah Local Governments Trust

Museum Auditorium

Skyline Mountain Resort Water Project: A Small System With Big Challenges

The Skyline Mountain Special Service District, near Fairview, has struggled for over a decade to figure out how to make critically-needed improvements to its water system. In 2011 they received a notice of pending treatment technique violation from the Div. of Drinking Water. That letter set in motion a series of events that will now allow the District to have an essentially brand-new water system. Construction of the system will be completed by November 2013. Although the design and construction of the system are fairly straightforward, there have been numerous challenges associated with the project - primarily from a public relations/public involvement standpoint. Lessons learned from this project could benefit you as you make improvements to your facilities.

Richard Noble | *Hansen, Allen & Luce*

Ballroom E

Source Protection Through Conservation and the Conservation Reserve Program (CRP)

Come learn how to enhance your source protection using FSA Farm Programs available to the farmers and ranchers in Utah. Specifically, we will discuss the Conservation Reserve Program (CRP), including a brief history of how CRP came to be and how it has evolved into what it is today. We will look at different practices and how they can be implemented into various farming operations. We will also talk about the Grassland Reserve Program.

Lori Jones
USDA-Farm Services

Operator Certification

Topics To Be Announced in Session

NOTE: This track is ONLY for those enrolled to take the Water or Wastewater Certification test.

THE EXAMS WILL BE HELD
FRIDAY, FEBRUARY 28, 2014

8:45 am—12:00 pm

Water Classes Held in: Sunbrook
Wastewater Classes Held in: Entrada

THURSDAY

2:15 - 3:45 Session - Feb. 27

Ballroom CD

Emerging Wastewater Technologies

The city of Dawson Creek, located in northeastern British Columbia, gets its water from the Kiskatinaw River, which is a tributary of the Peace River. This source is often plagued by high turbidity during the spring and low water levels in the summer. Recent growth in the oil/gas sector has led to increased pressure on the available water supply. To address the demand for potable water, the city decided to build a reclamation water treatment plant to produce a minimum of 4000m3/day of treated wastewater that meets the province's standards. The wastewater also had to meet BC's municipal sewage regulations for reclaimed water (similar to California title 22) year round and which is challenging in extreme climate conditions. A SAGR (Submerged Attached Growth Reactor) was chosen to provide year-round BOD and TSS polishing among other things. Come hear all about it!

Todd Latchaw | *Nelson Environmental Inc.*

Ballroom AB

Maintaining Water Quality in the Distribution System: Making Marginal Water Systems Good, & Good Systems Better

Distribution system water quality can be improved by understanding the factors that affect water quality and then developing a comprehensive water quality program, including programs for system flushing, valve maintenance, monitoring water tanks, cross-connection control, construction and repairs, periodic well maintenance & cleaning and handling customer complaints. Come learn it all!

LeRoy Palmer
AmeriWest Water Services Inc.

Ballroom F

Understanding Financial Uncertainty

A master plan/general plan alone will not guide you to full financial capacity. Without a clear plan for financing capital facilities, it is easy to miss where your community is headed and whether or not you have arrived at your optimal destination.

Matt Millis, Vice President of Zions Bank Municipal Consulting Group, will lay out eight components to developing a CFFP which will enable you to see your financial future with greater clarity, keep pace with costs, prevent costly capital and financial planning errors, and address tomorrow's capital and financial needs today to plan for the future with confidence.

Matt Millis
Zions Bank Public Finance

Museum Auditorium

GIS in Water Utilities

North Line GIS and Esri will show the new tools which are available for use in the water and wastewater industry.

Among other things, this session will cover asset management tracking, linking field inspections to the GIS, and use of online tools. We will also demonstrate how to create a mobile inspection form for use on mobile devices to collect data in the field.

Trip McLaughlin
North Line GIS/Esri

Ballroom E

Choosing the Right Product for Your Needs: Polyethylene or PVC Pipe

This presentation is for water and wastewater users to help determine which piping system, Polyethylene or PVC, is right for their projects.

It will be an overview presentation of the history and types of pipe available, and the advantages to both Polyethylene and PVC Pipe. Come join us!

Scott Bates
JM Eagle

Partner's Program *(Entrada A)*

Craft Workshop

Come get your artistic juices flowing at our Make-and-Take Workshop! (See page 8 for more details.) *Door Prize drawings will be held during the activity using your activity ticket.*

Operator Certification

Topics To Be Announced in Session

NOTE: This track is ONLY for those enrolled to take the Water or Wastewater Certification test.

Water Classes Held in: Sunbrook
Wastewater Classes Held in: Entrada

FRIDAY

8:30 - 9:30 Session - Feb. 28

Ballroom CD

SSMP

The State of Utah has implemented regulations requiring all wastewater systems to develop Sanitary Sewer Management Plans (SSMP). These plans aid in ensuring adequate operations & maintenance of sewer systems. In addition, the full implementation of an SSMP ensures that adequate capacity is maintained to avoid sanitary sewer overflows & associated environmental harm. Attend this double session to see what is involved in the process, how it affects you and learn about a template that could help you comply with this regulation.

Jennifer Robinson
Division of Water Quality

Ballroom AB

Seasonal System Operations Start-Up and Shut-Down

Do you operate a seasonal drinking water system? The new Revised Total Coliform Rule (RTCR) has specific start-up & shut-down requirements affecting all seasonal systems. A system, such as campground, summer home development, resort, etc., that is shut down for part of the year is considered a seasonal system. We will be discussing the RTCR, start up and shut down procedures & the required documentation associated with the rule. DDW will introduce an application that will assist in the documentation process. If you operate a seasonal system come find out how this rule will affect you.

John Oakeson | *Division of Drinking Water*

Ballroom F

Windows 8 and Cloud Computing

Imagine a world where you can turn on any computer connected to the internet, put in a password, and have immediate access to all, or most of your files and documents.

That is the concept behind cloud computing and Windows 8 makes it extremely easy and takes that to a great new level. Come to this class to find out how this magic happens!

Staff
Dixie Applied Technology College

Museum Auditorium

How the Public Trust Doctrine Affects the Water Community

The Public Trust Doctrine may be employed to reduce or eliminate water rights, without additional legislation or compensation. The Doctrine is not well understood or well known but is being fleshed out in Utah court rulings over stream access. Water users need to understand how the Doctrine may affect them and their water rights and what can be done to protect the water rights they hold.

Craig Smith
Smith Hartvigsen

Ballroom E

Cross Connection Control: Jump Starting Your Program!

Your water system has just completed its sanitary survey, the surveyor has asked you a lot of Cross Connection Control program questions, and hopefully this has given you some inspiration to jump-start or take your program to the next level. I will discuss the five basic required elements of a CCC program, and what has worked well and what has not as I have administered this program for my water system. Partnerships created within your organization and others which will be beneficial to your program will be discussed. These fresh ideas will be beneficial to all water systems, large and small.

Brian Pattee | *Utah ABPA / Logan City Water*

Entrada A—Treatment Sessions

Surface Water Treatment for Small Transient Systems

The Church of Jesus Christ of Latter-day Saints has recently installed small filtration and disinfection plants at youth camps in order to treat surface water, or groundwater that has been designated as being under the influence of surface water. This presentation will discuss the lessons we have learned from designing and operating these small plants. Specifically, we will discuss the methods we are using to obtain 4-log removal of viruses, and 3-log removal of Giardia, automation of the system, and recording the parameters to determine the effectiveness of the treatment.

Roy McDaniel
LDS Church

FRIDAY

9:45 - 10:45 Session - Feb. 28

Ballroom CD

SSMP (Continued)

THIS SESSION IS
A CONTINUATION
of the 8:30—9:30
SSMP Session taught by the
Division of Water Quality.

Enjoy your break then come join us
for more information on this
timely topic!

Jennifer Robinson
Division of Water Quality

Ballroom AB

Online Monitoring & Reporting

Are you taking full advantage of the online documents, record requests, reports and reporting available to you on the Division of Drinking Water website? Did you even know you could submit your reports or do things like renew your Operator Certification online? And what about using Social Media as a better, more efficient way to communicate with each other? Come learn how these things (and more!) can make working with the DDW MUCH simpler and easier for everyone involved.

Colt Smith & Rich Peterson | *Div. of Drinking Water*

Ballroom F

Basic Web Design

Where would we be these days without the internet? Yet, many water & wastewater systems still do not have a web presence. Where are you going to put your eCCR? It is a great communications & customer service tool. Come to this class to find out just how easy it is to put have a basic web site:

- How much does it cost?
- How much time will it take?
- How much training do you need?

Staff
Dixie Applied Technology College

Museum Auditorium

New Technologies for Managing Water Quality in the Distribution System

Learn to think of the distribution system in a new way – as an asset and an opportunity for intervention, instead of solely as a place to distribute and store water. Operators, engineers, and regulators will learn the risks involved with managing distribution systems, large and small, as well as new tools to make daily operations safer and more reliable. Learn how new regulations are affecting the distribution system, and the latest on using aeration technology to combat THMs and other volatile components unwelcome in drinking water.

Keely Nelson | *PAX Water Technologies*

Ballroom E

Boil Orders: Not If, When!

Hopefully a boil order will never happen to you. But, sometimes, even when you are doing your part, bad things can happen to good operators. So what then? Come to this session and learn about the steps you need to take in case you are ever in that situation—because odds are, you probably will be. Come join the Division of Drinking water and learn how to handle a boil order BEFORE you have to deal with one!

Pete Keers
Division of Drinking Water

Entrada A—Treatment Sessions

Developing Water Quality Goals:
A Goal Not Written Is Only a Wish

The key for any utility to improve and optimize performance is to develop well defined goals and provide staff training to meet those goals and objectives. Come to this session to learn how goal setting, training, and the implementation of both has led to the Utah Valley Treatment Plant being nationally recognized for its performance. Learn how these principles can assist any organization in improving upon current levels of performance.

Dave Hardy / Eva Nieminski
Central Utah WCD / Division of Drinking Water

FRIDAY

11:00 - 12:00 Session - Feb. 28

Ballroom CD

Is Your Lagoon Toast? Nutrient Impact on Lagoons

Excess nitrogen and phosphorous in Utah's waters threaten the state's water quality, economic viability, and quality of life. The good news is that Utah has the tools, the foresight, and the leadership to address nutrient pollution now so future generations will enjoy clean water, world-class recreation, a thriving economy, and an excellent quality of life. Come find out if and how this problem affects you, and what to do about it!

Paul Krauth
Division of Water Quality

Ballroom AB

Disinfection Byproducts: What Now?

In this session you will learn the basics of the Disinfection Byproducts Rules and how Stage 2 changed parts of Stage 1 and also what parts of Stage 1 are still effective.

You will also find out if you are all set with the new requirements for Stage 2. Don't let confusion over the requirements cause a monitoring violation!

Brad Holdaway
Division of Drinking Water

Ballroom F

Microsoft Office: Is It Time To Switch?

Who could ever get tired of the old reliable MS office programs? The new versions are as user friendly and powerful as ever, but are there other options? Microsoft has come up with the Office 360 program and there is always google docs to consider:

- Which option would work best for my system?
- Which is most cost effective?
- What might I be missing by not updating regularly?

Staff | *Dixie Applied Technology College*

Museum Auditorium

Water Rights

Have questions about your water right? Need to know how to navigate the system, or just want to stay up to date on the latest in water rights? What about this new Water Right Certification Program you have been hearing about? Sounds like you had better drop in and get the latest on today's hot issues, hear what has happened in our recent legislative session that could affect you, and find out what you need to know to protect your water for the future.

Kent Jones
Division of Water Rights

Ballroom E

Disinfection After an Incident & the Steps You Can Take to Make it Easier

We will talk about setting up a preventative plan so "IF THAT DAY EVER COMES" you will be ready. We will have a discussion of what works and what you can do beforehand to help minimize your headache. We will talk about what works for getting a disinfecting product to the problem area and what steps it takes to do this. During class I hope to have some input from water systems and also help you set up some steps to make the headache go away faster. But most important of all, we will be out early so you can get your seats for the Shannon hour!

Mike Carlson | *Centerville City*

Entrada A—Treatment Sessions

Low Maintenance Turbidity Meters: The Next Generation

State-of-the-art turbidity meters are based on the nephelometric measurement principle as described in Standard Methods and EPA standards. Turbidity is determined by the measurement of light, scattered at an angle of 90° to the incident beam. Readings are obtained from a calibration curve established with a primary standard (i.e., Formazine) expressed in NTU. The focus is clearly on achieving a low maintenance apparatus with a noncontact set-up: The optical windows are not in direct contact with the sample, which means there is no fouling and hence no cleaning is required. Come hear the many aspects of modern instrumentation.

Randy Turner | *Swan Analytical USA*

DART Throw

Prize Giveaway (Runs Tuesday—Friday)

Don't miss out on the 2014 Research and Education Fund Dart Throw! We will have some GREAT prizes up for grabs this year—stop by on the outskirts of the Garden Room at the Conference and check it out!

(ALL PROCEEDS FROM THE DART THROW GO TOWARD THE RWAU RESEARCH AND EDUCATION FUND AND ARE TAX DEDUCTIBLE.)

Prize Preview:

- 4 Wheeler
- Flat Screen TV
- GPS Unit
- Cabelas
- Hunting Gear
- Guns
- Sporting Goods
- Camping Gear

And much more!

DRAWING HELD FRIDAY AT NOON!

HOW TO PLAY

Throw a Dart:
Visit the north hallway behind the Garden Room at the Conference Tuesday through Friday to check out the prizes and buy a dart to throw for tickets. OR...

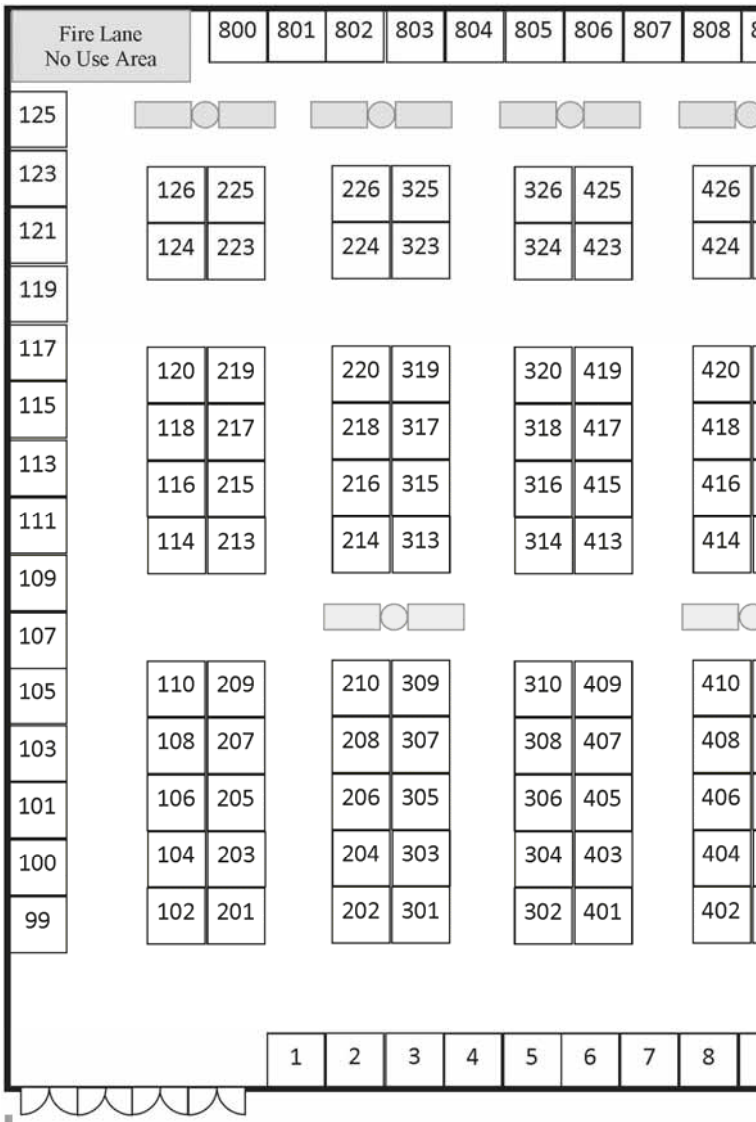
Shoot a Ball:
Head in to the Exhibit Hall on Wednesday or Thursday and shoot hoops for your tickets.

Win a Prize!:
Put your ticket stubs in the prize buckets in the Garden Room hallway and show up on Friday at noon to see if you won!

SPONSOR INFORMATION

To sponsor a Dart Throw Prize call the Rural Water Office at 801-756-5123 or visit the RWAU website at www.rwau.net!

EXHIBIT


Fire Lane
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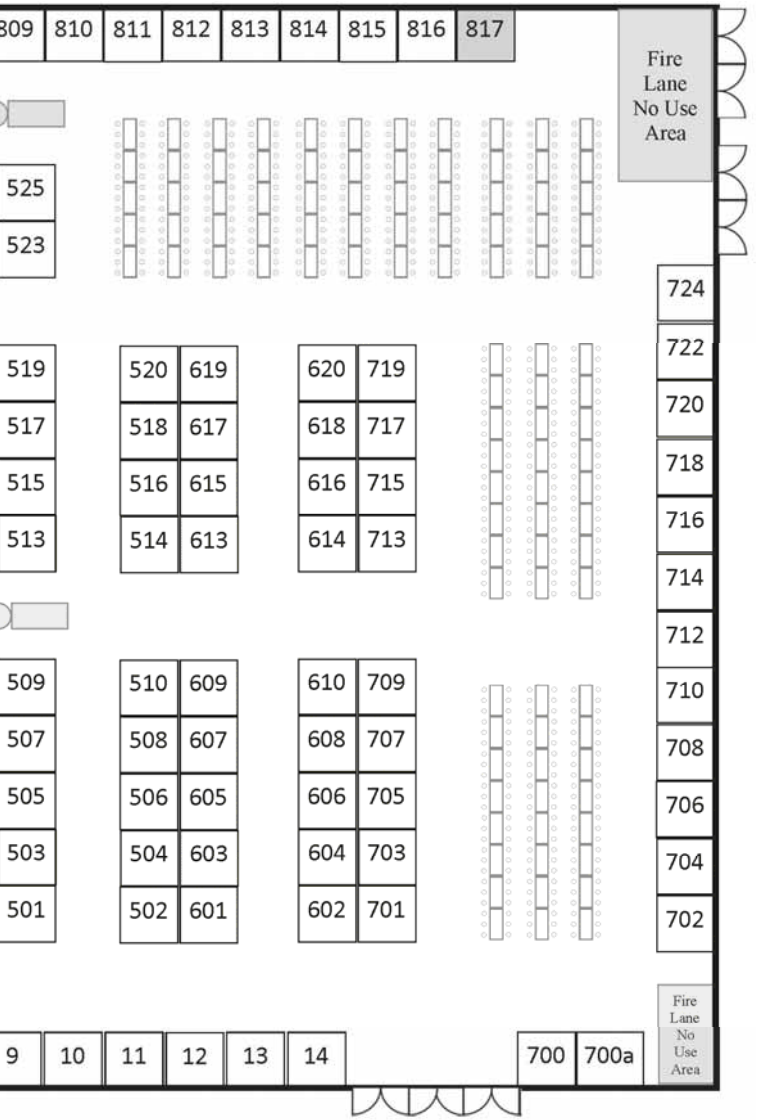
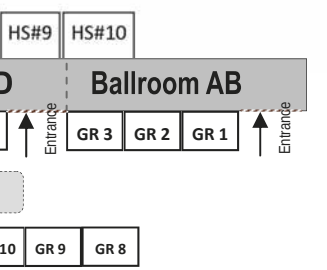
HS#1 HS#2 HS#3 HS#4 HS#5 HS#6 HS#7 HS#8
Ballroom E
Ballroom CD
RWAU Dart
Throw Area
Entrance
GR 7 GR 6 GR 5 GR 4
Garden Room
GR 13 GR 12 GR 11

HALL Layout

Weds: 7:30 am—4:00 pm Thurs: 7:30 am—2:30 pm





2014

Copies of finalized map / booth locations will be given out at the Conference

EXHIBITOR DIRECTORY

2014

EXHIBIT HOURS:

Wednesday, February 26: 7:30 – 4:00

Thursday, February 27: 7:30–2:30

Booth	Exhibitor
HS 9	ABPA - Utah Chapter 801-536-0089
117	AIRVAC 574-527-1157
523	Allchem Performance Prod. 352-213-0121
309	Ambiente H2O 801-532-4812
609	AmeriWest Water Services 208-861-3410
506	Aqua Engineering 801-299-1327
508	Aqua Environmental Svcs. 801-209-6382
310	Aries Industries 800-234-7205
404	AVI Rocky Mountain 435-671-9583
111	AY McDonald Mfg. 435-760-0703
425	BioLynceus, llc. 970 586 3391
603	Blake Sales 801-231-5660
226	Blue Stakes of Utah 801-208-2115
520	Bowen, Collins & Assoc. 801-495-2224
4, 5	C.H. Spencer 801-830-7425
216	Castings Inc. 970-243-2032
712	Chemtech-Ford Labs 801-262-7299
402	Concrete Stabilization Tech. 303-306-9191 X 124
806	CUES 707-449-1034
414, 513, 515	Delco Western 801-972-0900
802	DEWCO Pumps & Equipment 303-232-6861
203 + Outside	Ditch Witch of the Rockies 801-974-9600
HS 3 4 5	Division of Drinking Water 801-536-4200
HS 7	Division of Water Quality 801-536-4300
418	DN Tanks 619-440-8181
314	Dorsett Technologies 801-430-3443
10	Draeger Safety, Inc 801-928-1777
608	EarthFax Eng. 801-561-1555
406, 408	Eco-Energy Systems 801-542-9610
405	ECT Sales & Service 801-417-5733
316, 318, 320	EJ 801-698-3078
GR 5	Engineering America 970-962-9400
413, 415	Epic Engineering 801-420-3727
410, 509	Ferguson Ent. 435-673-6896
407	Filter Tech Systems 970-254-2855
2, 3	Fisher Epoxy Solutions 801-404-4317
105	Flexamat 801-244-8212
223	Ford Meter Box Company 801-458-6124
700 700a	Franson Civil Engineers 801-756-0309
707, 709	G & S Sales 801-972-0659
519	Geneva Pipe and Precast 801-225-2416

Booth	Exhibitor
116	GF Piping Systems 714-368-4112
503	Gobibot Industrial Cleaning 208-866-5186
324, 326	Goble Sampson 801-268-8790
424	Hach 801-599-5852
807	HARCO Fittings 434-845-7094
102, 201, 202, 301	HD Supply Waterworks 801-628-7970
305	High Country Fusion 208-764-2000
713	Holland Equipment 801-808-7476
525	Horrocks Engineers 801-763-5279
302, 401	HyDec 415-302-1883
502, 601	Hydro Specialties 801-562-9130
722	Ice Xcavator 435-671-3265
518	Inman Interwest 801-557-4959
419	Intermountain Bobcat 801-209-2579
420 + Outside	Intermountain Sales 303-762-1070
809	Intermountain Traffic Safety 801-972-6515
325	International Water Screen 661-979-7206
109	ISCO Ind. 801-209-9420
GR 6, GR 7	ISIWEST 801-718-6518
504	Itron, Inc. 509-995-2485
99	Jones & DeMille Eng. 435-896-8266
113, 115	JUB Engineers 435-713-9514

Booth	Exhibitor
11, 12	Ken Garff Ford 801-763-6800
804 + Outside	Komatsu Equipment 801-952-4747
805	Legacy Equipment 801-975-0400
205	Loughlin Water Associates 435-649-4005
423	Majestic Glove 801-558-9676
507	Master Meter 801-643-5891
800, 801	Meter Works 801-292-7900
607	Midco Diving & Marine Svcs 970-532-2128
120	Monsen Engineering 801-531-6505
213, 215, 217, 219	Mountainland/Mtn States 801-224-6050
409	Mueller Co. 704-314-5861
304, 306	Nickerson Co. 801-973-8888
617	NKD Technologies 801-819-9430
614	Northtown Company 714-897-0700
323	Pall Corporation 516-801-5830
616	PAX Water Technologies 510-681-7410
106	Pollardwater.com 800-437-1146 x 207
225	Professional Pipe Services 801-908-8581
417	Protection Engineering 801-836-2042
724	Red Flint Sand & Gravel 715-855-7600
308	Rocky Mountain Undrgrnd. 435-655-2797
218, 220, 317, 319	Rocky Mountain Valve 801-438-1038

Booth	Exhibitor
207	Romac Industries 801-458-5360
114	RS Technical Services 801-964-5328
119	Rush Truck Centers of Utah 801-633-7798
124, 126	Safety Supply & Sign 801-973-2266
501	Safety West 801-972-5800
307	Salt Lake Windustrial 801.268-0093
604, 602, 703, 701	Scholzen Products 435-635-1234
13, 14	Semi Service 801-521-0360
510	SKM Inc. 801-677-0011 x 12
416	Smith Hartvigsen 801-413-1600 x 339
209, 110	Southwest Plumbing 435-691-5031
313, 315	Sunrise Engineering 435-743-6151
104	Sunstate Equipment 801-364-4408
606	Ted D Miller Associates 801-423-2013
1	The Water Title Guy 801 300-0755
103	Tnemec / Call Coating 801-518-6802
610	Tripac Fasteners 951-660-1327
618, 620 Outside	Twin "D" Inc. 801-771-3038
214	Tyler-Union 720-480-6688
702	Underground Solutions 724-353-3000
605	USABlueBook 847-377-5162
HS 6	USDA RD 435-835-4111x27
HS 8	UT League of C & T 800-852-8528
GR 3	Utah Disaster Kleenup 801-448-1433
619	Utah Local Govts. Trust 800-748-4440
615	Utah Retirement Systems 801-366-7491
505	Utility Management Systems 801-486-7700
123, 125	Val Kotter & Sons 435-734-9598
9	Vehicle Lighting Solutions 801-676-4983
719	Vermeer Rocky Mtn. 801-975-1216
8, 403	VFC Controls 801-292-2956
108	VSL 303-456-9887
517	Wasatch Barricade 801-773-8390
118	Water Control Corporation 435-659-7199
303	Water Remediation Tech. 303-424-5355, x 112
715, 717	Water Services Inc 8017054567
514, 516, 613	Waterford Systems 801-463-9900
TBD	Weidner & Associates 801-565-9595
107	Western Engineering 801-268-3333
6, 7	Western Water Works Supply 909-630-6083
100, 101	William H. Reilly 801-201-3121
426	Wise Safety & Environmental 801-978-3755
803	WL Plastics 817-807-2236
224	Worldwide Rental Services 801-978-3300
204, 206, 208, 210 & 816	WR White Supply 801-381-2591
HS 1&2	Zions Bank Public Finance 801-844-8369

HOTEL Accommodations

All reservations are handled directly with the hotel

There are many hotels to choose from in the St. George area. ALL OF THE HOTELS LISTED HERE HAVE OFFERED OUR ATTENDEES A DISCOUNTED RATE. Unless otherwise noted, when making your reservations with these hotels, mention "Rural Water" to get the specialty rate. And remember, most discounted rates expire a month before the Conference so make your reservations early!

HOTELS/ MOTELS

America's Best Value Inn (Ask for Tammie)	435-628-4251
Best Inn & Suites	435-652-3030
Best Western Abbey Inn	435-652-1234
Best Western Coral Hills	435-673-4844
Clarion Suites	800-245-8602
Comfort Inn	435-628-8544
Crystal Inn	435-688-7477
Days Inn	435-673-6123
Fairfield Inn by Marriott	435-673-6066
Hampton Inn	435-652-1200
Hilton Garden Inn	435-634-4100
Howard Johnson Inn & Suites	435-628-8000
La Quinta	435-674-2664
Lexington Hotel	800-457-9800
Quality Inn	435-628-4481
Ramada	435-628-2828
St. George Inn and Suites	435-673-6661
Wingate by Wyndham	435-673-9608

RWAU Board

RWAU President
NRWA Board
Paul Fulgham
Tremonton
District 1
Term Expires 2015

RWAU Vice-President
Ken Snook
Price River Water
District 5
Term Expires 2015

RWAU Sec/Treas
Scott Anderson
Woods Cross
District 2
Term Expires 2017

Past President
Gary Larsen
Millville
District 1
Term Expires 2017

Brett Chynoweth
Tropic
District 6
Term Expires 2015

Boyd Workman
Ashley Valley W&S ID
District 3
Term Expires 2015

David Gardner
WaterPro
District 2
Term Expires 2015

Rick Wixom
Springdale
District 6
Term Expires 2017

Alan Riding
Delta City
District 4
Term Expires 2015

Nathan Langston
Monticello
District 5
Term Expires 2017

Kent Barton
Manti
District 4
Term Expires 2017

Rauni Guffey
Mountain Regional SSD
District 3
Term Expires 2017

RWAU Staff

Executive Director
Dale Pierson

Compliance Circuit Rider
Charles Jeffs

Wastewater Tech
Terral Dunn

Membership/Seminar Services
Ellen Copfer

Chief Financial Officer
Vern Steel

Management Tech.
Curtis Ludvigson

Development Specialist
Clyde Watkins

Event Planner
Shannon Rasmussen

Training Specialist
Kcris Hunter

Onsite Trainer
Terry Smith

Circuit Rider
Greg Johnson

Source Water Tech.
Mike Osborn

Executive Assistant
Shantell Cummins

Circuit Rider
Dave Pugsley

COME JOIN US
at the
Rural Water
Annual Conference
~ St. George, UT ~
Feb. 24—28, 2014

CONFERENCE Notes

REGISTER ONLINE!

Send or Fax this registration form with payment to:

Rural Water Association of Utah
76 East Red Pine Drive
Alpine, Utah 84004-1557

Fax: (801) 756-5036

Questions? Call or E-mail:
(801) 756-5123
rwau@rwau.net

USE OUR NEW ONLINE REGISTRATION SYSTEM!

REGISTER ONLINE AT WWW.RWAU.NET!

Rural Water
33rd Annual Conference
February 24—28, 2014
ADVANCED REGISTRATION FORM

Name:_____ System/Company:_____
Address:_____ City: _____
State: ____ Zip: _____ Ph:_____ E-mail:_____

Type of Registration:	Member	Nonmember
FULL CONFERENCE (1 Registration) INCLUDES: Tuesday's In-Depth Training; All Regular Conf. Sessions; Awards Banquet; Exhibit Hall. *3 lunches, 1 banquet*	❑ $340	❑ $440
REGULAR CONFERENCE (1 Registration) INCLUDES: All Regular Conf. Sessions; Exhibit Hall. DOES NOT Include Tuesday's In-Depth Training or Awards Banquet. *2 lunches*	❑ $210	❑ $310
WATER OPERATOR CERTIFICATION REVIEW CLASS* (Begins Feb. 24 @ 1 pm) INCLUDES: Certification Classes; Test Fee; Review Book; Exhibit Hall; Awards Banquet *3 lunches, 1 banquet*	❑ $440	❑ $540
*You MUST contact RWAU by Feb. 7, 2014 to register to take the certification test! To register for the TEST contact Shantell Cummins @ 801-756-5123		
WASTEWATER OPERATOR CERTIFICATION REVIEW CLASS** (Begins Feb. 24 @ 1 pm) INCLUDES: Certification Classes; Review Book; Exhibit Hall; Awards Banquet *3 lunches, 1 banquet*	❑ $340	❑ $440
**Test registration & fee must be sent directly to DWQ NO LATER THAN Jan 31, 2014! To register & pay for the TEST contact Judy Etherington @ 801-536-4344		
TUESDAY'S IN-DEPTH TRAINING (1 Registration) INCLUDES: In-Depth Training. *1 lunch*	❑ $105	❑ $155
WEDNESDAY ONLY DOES NOT include Awards Banquet. *1 lunch*	❑ $105	❑ $155
THURSDAY ONLY *1 lunch*	❑ $105	❑ $155
FRIDAY ONLY *No lunch*	❑ $80	❑ $105
PARTNER'S PROGRAM (1 Registration) Includes: Partner's Craft; Access to Training Sessions; Exhibit Hall. DOES NOT include Awards Banquet. *2 lunches* Partner Name:_____	❑ $90	❑ $115
AWARDS BANQUET Includes: Dinner; Awards Ceremony; Entertainment.	❑ $40 X ____	
GOLF SCRAMBLE Tuesday, Feb. 25 *(Email Vern Steel steel@rwau.net with questions or to sponsor.)*	❑ $80	
SKEET SHOOT Thursday Skeet Shoot—3:00 pm until dark. Additional Shooter Name:_____	❑ Attendee Shooter: $30 ❑ Additional Shooter: $30	
ADDITIONAL MEALS Mark each day you will need extra lunch(es), and how many needed.	❑ Wednesday Lunch $20 x ___ ❑ Thursday Lunch $20 x ___	
LATE FEE (Applies if you are registering after February 14, 2014)	❑ $25	

Payment Total: _____

- ☐ Bill me
- ☐ Enclosed is my check: Check # _____
- ☐ Please charge my:

__Master Card __Visa __Am. Ex. __Discover

Card Number: _____
Expiation Date: _____ Security Code: _____
Billing Zip: _____
Cardholder Name: _____
Email Address for Receipt: _____

REFUNDS: *Before* February 14, 2014: Refund of full amount less $25 admin. fee. *After February 14, 2014: NO REFUND*

WATER TASTE TEST Contest

Wednesday (Prelim Judging) & Thursday (Finals)

Rural Water is looking for the BEST WATER IN THE STATE!

To Compete: Bring one quart of cooled water in a glass canning jar to the Annual Conference Taste Test registration desk by 12:00 pm, Wed., Feb. 26, 2014.

Final Judging: Final judging will occur during the Voting Membership Meeting on Thursday, Feb. 27th at approx. 11:30 am. Samples will be judged *based on* TASTE, SMELL & CLARITY

The winner of the Best Water in Utah will go on to compete at the National Taste Test in Washington DC!

RULES:

- Samples must be in a glass canning jar
- Each applicant is responsible for keeping their water cooled until the Weds. deposit
- Systems of all sizes are eligible to enter
- All entries must meet state standards

FINAL JUDGING

will be held Thurs. February 27 at 10:30 am during the Voting Member Meeting

Driving Directions to the Dixie Center:

FROM THE NORTH:

- Take I-15 South to St. George. Exit at Bluff Street (Exit 6)
- Turn left on Bluff Street at stoplight
- Pass through the first stoplight on Riverside Drive
- Turn right at the second stoplight onto Convention Center Drive
- Drive 2 blocks
- The Dixie Center is located on the left-hand side of the street

FROM THE SOUTH:

- Take I-15 North to St. George. Exit at Bluff Street (Exit 6)
- Turn right on Bluff Street
- At the stop light, turn right on Convention Center Drive
- Drive 2 blocks
- The Dixie Center is located on the left-hand side of the street

2014 ANNUAL CONFERENCE

Rural Water Association
of Utah
76 East Red Pine Drive
Alpine, Utah 84004-1557