Drinking Water Board Packet

July 14, 2017

Agenda

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF DRINKING WATER
Marie E. Owens, P.E.
Director

DRINKING WATER BOARD MEETING
July 14, 2017 – 1:00 pm
Multi Agency State Office Building
Board Room
195 North 1950 West
Salt Lake City, Utah 84116

Marie Owens' Cell Phone #: (801) 505-1973

1. Call to Order

2. Roll Call

3. Approval of the Minutes:
   A. May 12, 2017

4. Recognition of Mayor David Sakrison

5. Financial Assistance Committee Report
   A. Status Report – Michael Grange
   B. Project Priority List – Michael Grange
   C. SRF Applications
      i. STATE:
         a) Eagle Mountain De-Authorization – Rich Peterson
      ii. FEDERAL:
         a) Moab City – Sam Grenlie
         b) Woodland Mutual – Sam Grenlie
         c) Hanksville – Julie Cobleigh
      iii. Other:
         a)

6. Notice of August request to Begin Rulemaking to Amend
   A. R309-500, Plan Review Draft Language – Bernie Clark
   B. R309-100, 105, & 600, Plan Review Authorization – Marie Owens
   C. R309-300, Removal of "Specialist" designation – Kim Dyches
   D. R309-220, Public Notification Draft Language – Colt Smith

7. Rural Water Association Report – Dale Pierson

8. Directors Report
   A. Fee Review
   B. Septic Tanks in Source Protection Zones
   C. Lead in School Sampling Update

9. Development Specialist Contract

10. Other

11. Next Board Meeting:

Date:	Tuesday, August 29, 2017
Time:	1:30 pm
Place:	Davis Conference Center Zephyr Room 1651 North 700 West Layton, Utah 84041

12. Adjourn

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Larene Wyss, Office of Human Resources, at: (801) 297-3828, TDD (801) 903-3978, at least five working days prior to the scheduled meeting.

Agenda Item 3(A)

State of Utah
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DIVISION OF DRINKING WATER
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DRINKING WATER BOARD MEETING
May 12, 2017 – 1:00 pm
Multi Agency State Office Building
Board Room
195 North 1950 West
Salt Lake City, Utah 84116

DRAFT MINUTES

1. Call to Order – Chairman Hansen

Paul Hansen, Board Chairman, called the meeting to order at 1:00 pm.

2. Roll Call

Board Members present: Paul Hansen, Betty Naylor, Roger Fridal, Brad Johnson, David Sakrison, and David Stevens.

Board Members excused: Brett Chynoweth, Tage Flint, and Mark Stevens

Division Staff present: Marie Owens, Sandy Pett, Julie Cobleigh, Rich Peterson, Lisa Nelson, Heather Bobb, and Marianne Booth

3. Approval of the Minutes:

A. March 2, 2017

Betty Naylor noted that she had notified Marianne Booth that the following typographical error needed to be fixed on the March 2, 2017 minutes:

- Page 5, Item 4(C)(iii)(a)-Hanksville, line 3
  '…contacted ~~to~~ the Division to begin a request for additional…'

- Betty Naylor moved to approve the minutes as amended. David Sakrison seconded. The motion was carried unanimously by the Board.

4. Board Re-appointment Report – Chairman Recognition – Marie Owens

Marie Owens, Division Director of the Division of Drinking Water (DDW, the Division), informed the Board of the following appointment expirations:

- Roger Fridal, ending First Appointment
- David Sakrison, ending First Appointment
- Paul Hansen, ending Second Appointment
- Mark Stevens, ending Mid-Term Appointment

Marie stated that Paul Hansen is at the end of his final appointment, both Roger Fridal and David Sakrison had reapplied, and 3 other applications had been received for the other two positions. She noted that she has submitted her recommendations to the Governor's office and new appointments should be made in June.

On behalf of the Department of Environmental Quality and the Division, Marie then took a moment to recognize Paul Hansen and his contributions to the Board, the Division, and the drinking water community over the past 11 years.

5. Financial Assistance Committee Report

A. Status Report – Sandy Pett

Sandy Pett, Contract/Grant Analyst with the Division, reported that currently there is roughly $6 million in the State SRF Fund and over the course of the next year the Division is expecting an additional $4.5 million to come into the fund for a total of approximately $10.4 million for project allocation. Sandy noted that if approved, after today's de-authorizations that number will be closer to $12.7 million. She also informed the Board that the Fillmore loan closed on April 13, 2017 for $2.1 million and that project is underway.

Sandy then reported that currently there is $26.9 million in the Federal SRF Fund and over the course of the next year the Division is anticipating $16.7 million to come into the fund for a total of $39.6 million for project allocation. She also noted that this is a little less than has been expected due to the grant award coming in at $8.5 million.

B. Project Priority List – Julie Cobleigh

Julie Cobleigh, Environmental Engineer with the Division, proposed that the following projects be added to the project priority list:

- Community Water Company with 24.1 points, and a project consisting of water line replacement and treatment plant upgrades.
- Koosharem Town with 8.7 points, and a project consisting of a tank liner.
- Big Plains Water and Sewer District with 0 points as there is no construction but a loan to purchase a private water company and integrate it into their system.

The Financial Assistance Committee (FAC) recommends that the Board approve the updated project priority list.

- David Stevens moved to approve the updated project priority list. Roger Fridal seconded. <u>The motion was carried unanimously by the Board.</u>

C. SRF Applications

i. STATE:

a) North Fork – De-authorization – Rich Peterson

Rich Peterson, Environmental Engineer with the Division, reminded the Board that North Fork was authorized a loan of $2,199,000 at 2.0% interest for 20 years to construct a new well and new tank on March 3, 2016. Since that time the North Fork has secured other funding. The FAC recommends that the Board de-authorize the $2,199,000 construction loan to North Fork Special Service District.

- Paul Hansen moved to de-authorize the $2,199,000 construction loan to North Fork Special Service District. David Sakrison seconded. The motion was carried unanimously by the Board.

ii. FEDERAL:

a) Central Iron County WCD – De-authorization – Julie Cobleigh

Julie Cobleigh reminded the Board that Central Iron County Water Conservancy District (Central Iron County) was authorized a planning advance of $100,000 with $50,000 in principal forgiveness for an aquifer balance study on November 7, 2014. Since that time Central Iron County's priorities have changed. Division staff recommends that the Board de-authorize the $100,000 planning loan at 0% interest for 5 years with $50,000 in principal forgiveness to Central Iron County Water Conservancy District.

- Roger Fridal moved to de-authorize the $100,000 planning load at 0% interest for 5 years with $50,000 in principal forgiveness to Central Iron County Water Conservancy District. David Sakrison seconded. The motion was carried unanimously by the Board.

b) Juab County – Lisa Nelson

Lisa Nelson, Environmental Engineer with the Division, reminded the Board that Juab County was authorized a $27,270,000 construction loan on March 3, 2016 with the caveat that funding may be withdrawn if stated project requirements were not completed by March 3, 2017. She then informed the Board that due to unforeseen circumstances Juab County has been unable to meet those requirements and are now requesting an extension. Division staff recommends that the Board extend the original funding authorization to March 3, 2018.

There was discussion between the Board and Lisa confirming that all other aspects of the project and funding would remain the same.

- David Stevens moved to extend the original funding authorization stated project requirement completion date to March 3, 2018 for Juab County. Roger Fridal seconded. The motion was carried unanimously by the Board.

c) Torrey Town – Lisa Nelson

As an information item, Lisa Nelson reminded the Board that Torrey Town (Torrey) was authorized funding which included refinancing of an existing drinking water loan on March 2, 2017. Lisa then informed the Board that Torrey would like to clarify that the "drinking water loan" referenced previously is in fact a loan from the Permanent Community Impact Board (CIB). She then noted that Division staff had pulled the bond language and it is eligible to refinance under Federal SRF funding and no action is needed.

d) Koosharem – Rich Peterson

Representing Koosharem was Harlow Brown, Mayor; and Lynn Wall, P.E. of Wall Engineering.

Rich Peterson informed the Board that Koosharem is requesting $45,000 in funding to install a liner in an existing concrete tank. The local MAGI for Koosharem is $37,570, which is 87% of the State MAGI, and their estimated water bill will be $20.79, which is 0.68% of the local MAGI. Rich also noted that there is $6,000 remaining in Koosharem's escrow account from funding authorized in September 2016, and Koosharem will also contribute $42,000 toward this project. The FAC recommends that the Board authorize a loan of $45,000 at 2.09% interest for 20 years to the Town of Koosharem for the installation of a storage tank liner.

After much discussion between the Board, Division Staff, and those representing Koosharem regarding the current water bill, after project water bill, nature of the project, and the last minute request to have a full grant, it was determined that item be tabled to allow for further review.

- Paul Hansen moved to table this item to allow the Town of Koosharem and Division Staff to review it further. Roger Fridal seconded. The motion was carried unanimously by the Board.

e) West Erda – Julie Cobleigh

Representing West Erda Improvement District (WIED, West Erda) was Jerry Houghton, Tooele County Recorder/Surveyor; Darrin Robinson of Jones & DeMille Engineering; Brett Palmer, Stansbury Park Improvement District (SPID, Stansbury Park), and Brendon Thorpe with Ward Engineer for Stansbury Park.

Julie Cobleigh began by reminding the Board of the history for West Erda, noting that in January 2015 they were authorized a total loan of $1,622,600 at 0% interest for 30 years with $811,600 in principal forgiveness to regionalize their water system with that of SPID. WEID, SPID, and Tooele County are now coming to the Board together to propose the WEID, SPID, and Tooele County enter into an interlocal agreement whereby SPID would incorporate WEID, request that the Board substitute SPID as the borrower on the previously authorized loan, and authorize and additional $78,000 in funding to cover an increase in pipe diameter and additional piping. Julie also noted that the increased costs are approximately $301,000; however Stansbury Park, Tooele County, and the Church of Jesus Christ of Latter Day Saints, which will make a connection along the proposed transmission line, will contribute the additional needed funding. The local MAGI for WEID is $29,797,

which is 79% of the State MAGI. The current water bill for the 18 connections is $79, which is 3.18% of the local MAGI; therefore WEID does qualify for additional subsidization. Julie also noted that there will be two distinct after project water bills, $105 for those customers connected to the water line, and $20 a month for those who live in the WEID boundaries and who will benefit from the installation of fire suppression. She also confirmed that there have been public hearings and a formal vote in support of the proposed project and water rate increases has been demonstrated. Division Staff recommends that the Board amend the original authorization to a loan of $1,700,600 at 0% interest for 30 years to Stansbury Park Improvement District with $850,600 in principal forgiveness with a graduated repayment schedule as proposed in the packet.

There was discussion between the Board, Division Staff, and those representing WEID, SPID, and Tooele County regarding the history of WEID and struggles that WEID has had in the past, SPID's willingness to incorporate and become responsible for WEID once the project is completed, if the project costs will affect current SPID customers, and the interlocal agreement that is currently in negotiation.

- David Stevens moved to amend the original West Erda Improvement District authorization to now be a $1,700,600 loan at 0% interest for 30 years with $850,000 in principal forgiveness and a graduated repayment schedule as proposed in the Board packet to Stansbury Park Improvement District. Paul Hansen seconded. The motion was carried unanimously by the Board.

f) Big Plains – Julie Cobleigh

Representing Big Plains Water and Sewer Special Service District (Big Plains) was Richard Moser, Mayor of Apple Valley Town; Harold Merritt, Chairman of Big Plains; and Rod Mills of Ensign Engineering & Land Surveying.

Julie Cobleigh informed the Board that Big Plains is requesting $517,125 in funding to purchase the Canaan Springs Water Company (Canaan) including all water rights and existing water system infrastructure. She then informed the Board that Canaan is currently a non-public privately owned water system with 13 connections and that Big Plains is also applying for funding from Rural Development for a project to connect the two systems as well as upgrade existing Big Plains infrastructure. The local MAGI for Big Plains is $35,993, which is 83% of the State MAGI. The estimated water bill is $101, which is 3.36% of their local MAGI; therefore they do qualify for additional subsidization. The FAC recommends that the Board authorize a $517,125 loan at 1.0% interest or fee per annum for 30 years with $155,125 in principal forgiveness to Big Plains Water and Sewer Special Service District.

There was discussion between the Board, Division Staff, and those representing Big Plains regarding the water rights, how much water flows from the springs, and future development in the area.

- Paul Hansen moved to authorize a $517,125 loan at 1% interest or fee per annum for 30 years with $155,125 in principal forgiveness to Big Plains Water and Sewer Special Service District. David Sakrison seconded. The motion was carried unanimously by the Board.

g) Community Water – Julie Cobleigh

Representing Community Water Company (Community Water, CWC) was Dave Fuller, Andy Garland, and Mike Folkman, from Summit Water Distribution Company (Summit); and Emily Lewis of the law firm of Clyde, Snow & Sessions.

Julie Cobleigh informed the Board that CWC is requesting $3,662,000 in financial assistance to replace and upgrade portions of their existing distribution system and transmission lines, install meters, upgrade their water treatment plant, and add and interconnection with Summit which will increase their efficiency, redundancy, and water quality; noting that after completion of this project Summit intends to take over ownership of CWC and assume responsibility for the loan. The local MAGI for CWC is $78,670, which is 182% of the State MAGI. The estimated water bill is $94, which is 1.44% of their local MAGI. The FAC recommends that the Board authorize a $3,662,000 construction loan at 3.39% interest or fee per annum for 20 years to Community Water Company.

There was discussion between the Board, Division Staff, and those representing CWC and Summit regarding the state of CWC, the Federal SRF loan requirements, and the seemingly high amount of contingency funding. It was explained that Division Staff will adjust that contingency once actual bids for the project come in. There was also discussion regarding a memorandum of agreement stating Summit's current role as the care takers of; and their intention to, take over; CWC.

- Roger Fridal moved to authorize a $$3,662,000 construction loan at 3.39% interest or fee per annum for 20 years to Community Water Company. David Sakrison seconded. <u>The motion was carried unanimously by the Board.</u>

h) Cedarview Montwell – Lisa Nelson

Representing Cedarview Montwell Special Service District (Cedarview, CMSSD) was Bobby Drake, Board Chair; Mondi Taylor, Public Relations; and Aaron Averett with Sunrise Engineering.

Lisa Nelson reminded the Board that in January CMSSD had presented a funding request but due to a last minute change to the request and concerns over revenue stream it was deferred. Lisa then informed the Board that today CMSSD is requesting $2,309,000 in financial assistance to obtain numerous easements on Native American (Tribal) land and to refinance a 2013 bond from the Board. She then informed the Board that since January Division Staff has verified that 75% of CMSSD's revenue comes from a distinct line item on resident's property taxes, therefore Division Staff based today's request on their stated ability to repay. Lisa noted that CMSSD has also been authorized a $165,000 grant from CIB, contingent upon todays request being authorized. The FAC recommends that the Board authorize a $2,309,000 loan at 0.25% for 28 years and no loan origination fee.

There was discussion between the Board, Division Staff, and those representing CMSSD regarding the Native American Business Committee's willingness to work with CMSSD on the easements, how this project would give other water systems in the area the option to

regionalize, and how having these easements would allow residents in those areas who are currently on wells to connect into the system.

- Paul Hansen moved to authorize a $2,309,000 loan at 0.25% interest for 28 years and no loan origination fee to Cedarview Montwell Special service District. David Stevens seconded. The motion was carried unanimously by the Board.

iii. Other:

a) Plymouth Town – Lisa Nelson

Lisa Nelson reminded the Board that on May 8, 2015 Plymouth Town (Plymouth) was authorized a $880,000 loan at 3.49% interest for 30 years for construction of a new 500,000 gallon tank, storage, and fire protection. Plymouth has completed that project and is now requesting a change in scope to be able to use the remaining $176,000 in funding to redevelop their springs. Division Staff recommends that the Board authorize a change to the project scope for Plymouth Town to include spring redevelopment.

There was discussion between the Board and Division Staff regarding which spring they were going to redevelop and the need to resolve all issues on their compliance report.

- Betty Naylor moved to authorize a change to the project scope to include spring redevelopment for the remaining funds that were authorized on May 8, 2105 to Plymouth Town. David Sakrison seconded. The motion was carried unanimously by the Board.

6. Rural Water Association Report – Dale Pierson

Dale Pierson, Executive Director of the Rural Water Association of Utah (RWAU), thanked Paul Hansen for his service and leadership on the Board over the last 11 years.

Terry Smith, Management Specialist with RWAU, updated the Board on some of the work he has been doing, including:

- Board training and certification for Harmony Heights Water who are privately owned.
- Flood response preparation classes.
- Water Certification training.
- Water Rate study for Toquerville.

Brian Pattee, Compliance Circuit Rider with RWAU, updated the Board on some of the work he has been doing, including:

- Cross Connection Control training.
- Lead in Schools initiative

Curt Ludvigson, Development Specialist with RWAU, gave his thanks to Paul for his service on the Board. Curt also thanked the Board and those working on the West Erda project. Curt then informed the Board that he has been asked to give a detailed report on the work he has been doing at the following Board meeting so won't go into that today.

7. Directors Report

A. Lead in School Initiative

Marie Owens, Division Director of DDW, informed the Board that based on a letter received from the Environmental Protection Agency (EPA) which state that "there is no safe level of lead exposure for children", the Division that started an initiative to obtain water samples from all the schools in the State. She noted that these samples need to be taken while the schools are in service and as we are nearing the end of the school year, the Division has contacted Salt Lake, Summit, and Bear River School Districts, and then as school resumes this fall they will reach out to the remaining school districts. Marie informed the Board that the Division is also including the Local Health Departments and water systems, and has offered the use of their account at the State Lab for these samples to the school districts, so there should be no cost to them. Marie also reminded that though the Division has a lead and copper rule in effect, that exceedance level for lead is not health based.

B. Public Notice Rule Changes

Marie informed the Board that the Division will be initiating rule changes to include public notification be made when a water system becomes "not approved".

C. Water Use Data Update

Marie updated the Board on the status of the water use study, noting that the Division having received no additional funding to conduct their own study, has instead been reaching out to those larger water agencies in the State to acquire data. She then noted that even so, the Division has not been able to collect the needed data for Peak day use to reset that standard yet.

D. Sanitary Survey Season

Marie then updated the Board on the Sanitary Survey season, noting that the Division has made some minor changes to the way they are assigned and are working closely with the Local Health Departments. She also noted that the Division does do sanitary survey training, but it is not required.

8. Other

9. Next Board Meeting:

Date: Friday, July 14, 2017
Time: 1:00 pm
Place: Multi Agency State Office Building
Board Room
195 North 1950 West
Salt Lake City, Utah 84116

10. Adjourn

- Paul Hansen moved to adjourn the meeting. Betty Naylor seconded. The motion was carried unanimously by the Board.

The meeting adjourned at 3:30 pm.

Agenda Item 5(A)

DIVISION OF DRINKING WATER

STATE LOAN FUNDS

AS OF June 30, 2017

	SUMMARY		
	Total State Fund:	$10,883,971	
	Total State Hardship Fund:	$521,601	
	Subtotal:	$11,405,572	
LESS AUTHORIZED	Less:		
	Authorized Loans & Closed loans in construction:	$2,246,000	*(see Page 2 for details)*
	Authorized Hardship:	$515,600	
	Subtotal:	$2,761,600	
	Total available after Authorized deducted	**$8,643,972**	
PROPOSED	**Proposed Loan Project(s):**	**-$1,800,000**	*(see Page 2 for details)*
	Proposed Hardship Project(s):	**$0**	
	Subtotal:	**-$1,800,000**	
AS OF:			
June 30, 2017	**TOTAL REMAINING STATE LOAN FUNDS:**	**$10,437,971**	
	TOTAL REMAINING STATE HARDSHIP FUNDS:	**$6,001**	

Total Balance of ALL Funds: **$10,443,972**

Projected Receipts Next Twelve Months:			
and Sales Tax Revenue			
Annual Maximum Sales Tax Projection	**$3,587,500**		
Less State Match for 2017 Federal Grant	($1,720,000)		
Less Appropriation to DDW	($800,000)		
Less Wtr Use Study Appropriation	$0		
Less Administration Fees	($153,700)		
SUBTOTAL Sales Tax Revenue including adjustments:		$913,800	
Payment:			
Interest on Investments (Both Loan and Hardship Accounts)		$138,000	
Principal payments		$2,958,754	**Receive 80% in January**
Interest payments		$826,009	
Total Projections:		$4,836,563	

Total Estimated State SRF Funds Available through 6-30-2018	**$15,280,535**

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF June 30, 2017

Community	Loan #	Cost Estimate	Date Authorized	Date Closed/Anticipated	Authorized Funding		
					Loan	Grant	Total
Sterling City 2.52% int, 20 yrs	3S239	300,000	May-16		258,000		258,000
Big Plains (Cedar Point) 0%, 20yrs	3S240	176,000	Jul-16		88,000	88,000	176,000
Eagle Mountain 1.4% int 20 yrs (LOF)	3S244	2,300,000	Nov-16		1,800,000		1,800,000
Subtotal Loans and Grants Authorized					2,146,000	88,000	2,234,000
PLANNING LOANS / GRANTS IN PROCESS							
Eagle Mountain	3S228P	30,000	Aug-15		30,000		30,000
LaVerkin City	3S223P	40,000	Jun-15	Jun-15		19,955	19,955
Springdale	3S214P	40,000	Jan-15	Mar-15		22,645	22,645
Weber County General	3S225P	40,000	Jun-15	Sep-15		20,000	20,000
Tropic Town 0% for 5 yrs master plan	3S246P	70,000	Mar-17	May-17	70,000		
					100,000	62,600	92,600
CLOSED LOANS (partially disbursed)							
Daggett Co - Dutch John 0% int 30 yrs	3S216	1,020,000	Jan-15	Feb-16	0	120,000	120,000
Henrieville	3S241	345,000	Aug-16	Nov-16		245,000	245,000
							0
							0
Subtotal Planning Loans/Grants Auth					0	365,000	365,000
Total authorized or closed but not yet funded					$2,246,000	$515,600	$2,691,600
PROPOSED PROJECTS for JULY 2017							
Eagle Mountain deauthorization request	3S244	2,300,000	Nov-16		(1,800,000)		(1,800,000)
							0
							0
Total Proposed Projects					(1,800,000)	0	(1,800,000)

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
AS OF June 30, 2017

	5235 Loan Funds	5240 Interest (use for Grants)	Total
Cash:	$10,883,971	$521,601	$11,405,572
Less:			
Loans & Grants authorized but not yet closed (schedule attached)	(2,246,000)	(150,600)	(2,396,600)
Loans & Grants closed but not fully disbursed (schedule attached)	0	(365,000)	(365,000)
Proposed loans & grants	1,800,000	0	1,800,000
Administrative quarterly charge for entire year	(153,700)		(153,700)
Appropriation to DDW	(800,000)		(800,000)
Appropriation to DDW - Wtr Use Study	0		0
FY 2017 Federal SRF 20% match of $???	(1,720,000)		(1,720,000)
	7,764,271	**6,001**	**7,770,272**
Projected repayments during the next twelve months			
Thru 06-30-2018			
Principal	2,958,754		2,958,754
Interest		826,009	826,009
Projected annual investment earnings on invested cash balance		138,000	138,000
Sales Tax allocation thru Jun-30-2018	3,587,500		3,587,500
Total	**$14,310,525**	**$970,010**	**$15,280,535**
* All interest is added to the Hardship Fee account.			

DIVISION OF DRINKING WATER
FEDERAL SRF
AS OF June 30, 2017

FIRST ROUND FUND	
1997 thru 2016 SRF Grants	
Net Federal SRF Grants:	$157,144,401
Total State Matches:	$35,108,900
Closed Loans:	-$190,792,241
Total Grant Dollars:	**$1,461,060**

FEDERAL SECOND ROUND FUND	
Principal Repayments	
Principal (P):	$48,865,205
Interest (I):	$14,022,043
Total P & I:	**$62,887,248**

Earnings on Invested Cash Balance	
Total:	**$1,174,221**

Hardship Fund	
Total:	**$472,466**

SUMMARY	
Total Federal State Revolving Fund:	$65,522,529
Total Federal Hardship Fund:	$472,466
Subtotal:	$65,994,995

LESS AUTHORIZED & PARTIALLY DISBURSED		
Less:		
Authorized & Partially Disbursed Closed Loans:	$44,674,000	*(see Page 2 for details)*
Authorized Federal Hardship:	$574,126	
Subtotal:	$45,248,126	

PROPOSED		
Proposed Federal Project(s):	**$3,811,725**	*(see Page 2 for details)*
Proposed Federal Hardship Project(s):	**$0**	
Subtotal:	**$3,811,725**	

AS OF:	**June 30, 2017**		
		TOTAL REMAINING LOAN FUNDS:	**$17,036,804**
		TOTAL REMAINING HARDSHIP FUNDS:	**-$101,660**

Total Balance of ALL Funds after deducting proposed actions: $16,935,144

Projected Receipts thru July 1, 2018		
2017 Fed SRF Grant	$5,800,000	
2017 State Match	$2,800,000	
Interest on Investments	$823,200	
Principal Payments	$6,689,800	**Receive 60% in January**
Interest	$1,563,010	
Hardship & Technical Assistance fees	$321,803	
Total:	$17,997,813	

Total Estimated Federal SRF Funds Available through: 07/01/2018 **$34,932,957**

DIVISION OF DRINKING WATER
FEDERAL STATE REVOVING FUND
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF June 30, 2017

COMMUNITY	Project			Authorized Date	Closing Date Scheduled	Authorized From Loan Funds (1st or 2nd Round)			Hardship Fund
	Total Project	Terms	Loan #			Loan	Forgiveness	Total	
West Erda Improvement District	1,622,600	0% int, 30 yr	3F233	Nov-14	Jul-17	850,000	850,600	1,700,600	
Juab County	27,210,000	2.5% int/hgf, 30 yrs	3F259	Mar-16		21,210,000		21,210,000	
Springdale	5,654,000	1.25% int/hgf, 30 yrs	3F264	May-16	Aug-17	3,856,000	1,652,350	5,508,350	
Virgin Town	1,120,000	0% int, 30 yrs	3F272	Jul-16		1,120,000		1,120,000	
Iron Town Propery Owners Assn	474,000	0% int, 30 yrs	3F271	Jul-16	Jul-17	379,000	95,000	474,000	
San Juan Spanish Valley SSD	5,100,000	0% int, 30yrs (combined w/CIB)	3F275	Aug-16		1,785,000	765,000	2,550,000	
Bridge Hollow Water Assoc	225,000	1.0% int, 30 yrs	3F280	Nov-16	Aug-17	158,000	67,000	225,000	
Hanksville Town	601,548	0% int, 30 yrs	3F279	Nov-16	Aug-17	421,000	180,548	601,548	
Monticello	39,000	Eng study 10 yr 0% int	3F281P	Nov-16		39,000		39,000	
Cove SSD	1,085,000	0% int, 30 yrs	3F285	Mar-17		600,000	485,000	1,085,000	
Rocky Ridge Town	1,011,000	2.45% int/hgf, 30 yrs	3F286	Mar-17		606,000	405,000	1,011,000	
Torrey Town	1,700,000	.75% int/hgf, 30 yrs	3F287	Mar-17		1,700,000		1,700,000	
Community Water Company	3,662,000	3.39% int/hgf, 20 yrs	3F291	May-17		3,662,000		3,662,000	
Big Plains SW SSD - Cedar Point	517,125	1% int/hgf, 30 yrs	3F290	May-17		362,000	155,125	517,125	
Cedarview Montwell SSD	2,309,000	.25% int, 28 yrs	3F282	May-17		2,309,000		2,309,000	
Greenwich Water Company	130,000	65K loan at 0%, 30 yrs/ 65K pf hg	3F258	Mar-16				0	65,000
					TOTAL CONSTRUCTION AUTHORIZED:	**$ 39,057,000**	**$ 4,655,623**	**$ 43,712,623**	**$ 65,000**
COMMITTED ADVANCES / AGREEMENTS or PARTIALLY DISBURSED CLOSED 2ND ROUND AGREEMENTS:									
					Date Closed				
								0	0
Rural Water Assn of Utah	124,758	5 yr contract for Development Specialist	Ongoing	Nov-12	Jan-13			0	147,626
Bluffdale City	40,000	pl 100% pf hg	3F242P	Sep-15	Nov-15			0	40,000
Elsinore Town	45,000	pl 100% pf hg	3F243P	Nov-15	Jun-16			0	6,500
Greenwich Water Company	130,000	65K loan at 0%, 30 yrs/ 65K pf hg	3F258	Mar-16	Jun-16			0	65,000
Water Use Study	1,000,000	Legislature Appropriated for FY 2017	n/a	Mar-16	Jul-16			0	250,000
Forest Glen Plat A HOA	1,438,986	0% int, 30 yrs	3F222	Feb-14	Dec-14	114,000	55,986	169,986	
Taylor West Weber Water Improvement Dis	7,636,391	2.26% int, 30 yr	3F234	Feb-15	Apr-15	629,000	162,391	791,391	
					TOTAL PLANNING AUTHORIZED:	**$743,000**	**$218,377**	**$961,377**	**$509,126**
				TOTAL CONSTRUCTION & PLANNING:				**$44,674,000**	**$574,126**
					AVAILABLE PROJECT FUNDS:				**$20,848,529**
					AVAILABLE HARDSHIP FUNDS:				**-$101,660**
PROPOSED PROJECTS FOR JUL 2017:									
Hanksville	467,225	0% int, 30 yrs additional funding	3F279			125,000	364,725	489,725	
Woodland Mutual Water Co	3,257,320	0% int, 30 yrs	3F293		`	3,000,000	232,000	3,232,000	
Moab	90,000		3F292				90,000	90,000	
								-	
					TOTAL PROPOSED PROJECTS FOR THIS MEETING:	**$3,125,000**	**$686,725**	**$3,811,725**	**$0**
*RWAU hardship grant is being disbursed monthly									
				TOTAL FUNDS AFTER PROPOSED PROJECTS ARE FUNDED:					**$17,036,804**
				TOTAL FUNDS AFTER PROPOSED HS PROJECTS ARE FUNDED:					**-$101,660**
NOTES OF LOAN CLOSINGS SINCE LAST BOARD MEETING:									
Glen Canyon SSD #1/Big Water	1,288,000	2.45% int/hgf, 30 yrs	3F270	Jul-16	May-17	1,052,000	176,000	1,228,000	
Corinne	555,500	2.85% int, 20 yrs	3F266	May-16	Jun-17	442,000	113,500	555,500	
Total Recent Loan Closings						**$1,494,000**	**$289,500**	**$1,783,500**	**$0**

DIVISION OF DRINKING WATER
FEDERAL SRF LOAN FUNDS
AS OF June 30, 2017

	Loan Funds 1st Round	Loan Payments 2nd Round Principal	Loan Payments 2nd Round Interest	Loan Payments Hardship Fund	TOTAL
Federal Capitalization Grants and State 20% match thru 2015	$192,253,301				
Earnings on Invested 1st Round Funds			1,174,221		
Repayments (including interest earnings on 2nd round receipts)		48,865,205	14,022,043	472,466	256,787,236
Less:					
Closed loans and grants	-190,792,241				-190,792,241
SUBTOTAL of Funds Available	**$1,461,060**	**$48,865,205**	**$15,196,264**	**$472,466**	**$65,994,995**
Loans & Grants authorized but not yet closed or fully disbursed	-40,932,623	-3,523,000	-218,377	-574,126	-45,248,126
SUBTOTAL of Funds Available less Authorized	**-$39,471,563**	**$45,342,205**	**$14,977,887**	**-$101,660**	**$20,746,869**
Future Estimates:					
Proposed Loans/Grants for current board package	-3,811,725			0	-3,811,725
SUBTOTAL of Funds Available less Proposed Loans & Grants	**-$43,283,288**	**$45,342,205**	**$14,977,887**	**-$101,660**	**$16,935,144**
PROJECTIONS THRU July-2018					
	0				
2017 SRF Capitalization Grant (Loan Portion)	5,800,000				
2017 SRF Capitalization State Match	2,800,000				
Projected repayments & revenue during the next twelve months		6,689,800	1,563,010	321,803	8,574,613
Projected annual investment earnings on invested cash balance		660,000	156,000	7,200	823,200
TOTAL	**-$34,683,288**	**$52,692,005**	**$16,696,897**	**$227,343**	**$34,932,957**

Agenda Item 5(B)

Project Priority List
Presented to the Drinking Water Board
June 14, 2017

DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST

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

Salina City is an emergency project and is being added to the Project Priority List with 100 points. Their project consists of an emergency tank replacement.

Woodland Mutual is being added to the Project Priority List with 29 points. Their project consists of a spring redevelopment, new tank, water lines and a pump station.

North Valley Ranches is being added to the Project Priority List with 17.3 points. Their project consists of a new well and transmission line.

Thatcher Penrose is being added to the Project Priority List with 8.1 points. Their project consists of a water line replacement.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board approves the updated Project Priority List.

May 19, 2017

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$225,176,172** **Total Needs, incl. Recent funding** **$268,008,027** **Authorized** **$266,018,723**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
N				29	Woodland Mutual	Summit	186	Spring redevelopment, new tank, water lines, pump station	$3,257,320	$3,257,320	
N				17.3	North Valley Ranches	Washington	25	New Well and transmission line	$413,161	$413,161	
N				??	Hatch Town	Garfiled	133	Meters	$46,230	$46,230	
N				8.1	Thatcher Penrose SD	Box Elder	580	Water line replacement	$129,400	$110,000	
A				82.6	West Erda	Tooele	158	Connect West Erda and Tooele Airport to Erda Acres	$1,801,331.00	$1,801,331	$1,622,600
A				72.3	Springdale	Washington	572	Treatment Plant	$4,730,000	$4,600,000	$5,508,350
A				43.3	Old Irontown POA	Iron	90	New 300,000-gallon tank and transmission line	$478,788	$478,788	$474,000
A				41.4	Virgin Town	Washington	750	New 500,000-gallon tank and transmission line	$1,131,313	$1,131,313	$1,120,000
A				35.6	Rocky Ridge Town	Juab	790	New well, chlorination, SCADA, transmission line	$1,011,061	$1,011,061	$1,011,000
A				28.7	Lizard Bench	Sevier	63	Water line, well house upgrades, chlorination, tank liner	$56,000	$28,000	$28,000
A				27	Bridge Hollow	Summit	45	New Well	$225,000	$225,000	$225,000
A				26.3	Hanksville	Wayne	210	Water Line Replacement	$601,548	$601,548	$601,548
A				25.3	San Juan Spanish Valley SSD	San Juan	491	New System: tank, well, distribution	$5,125,758	$2,575,758	$2,550,000
A				24.8	Torrey Town	Wayne	500	New water line and replacement	$2,230,000	$1,852,000	$1,852,000
A				24.1	Community Water Company	Summit	505	Water line replacement, treatment plant upgrades	$3,343,000	$3,343,000	
A				20.6	Corinne City	Box Elder	700	Radium Filter, Spring Rehab, Transmission Line	$561,111	$561,111	$555,500
A				18.5	Glen Canyon/ Big Water Town	Kane	480	Tank rehab, radio read meters, water lines, refinance	$1,228,000	$1,228,000	$1,228,000
A				18.3	Greenwich	Piute	67	Chlorination building	$131,300	$131,300	$131,000
A				12.5	Cove SSD	Sevier	100	New well, storage tank and water lines	$1,611,000	$1,085,000	$1,085,000
A				9.7	Juab Co	Juab	???	Regionalization pipeline	$24,000,000	$21,000,000	$21,210,000
A				8.7	Koosharem Town	Sevier	334	Tank Liner	$89,684	$42,000	
A				7.9	Echo Mutual Water System	Summit	50	Spring box modifications	$35,857	$35,857	$35,857
A				4.8	Liberty Pipeline Company	Weber	2,504	New Well	$743,954	$698,647	$699,000
A				N/A	Big Plains Water and Sewer SSD	Washington	720	Regionalization- purchase Canaan Springs Water Co.	$502,125	$502,125	

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

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

I= **Environmentally Innovative**

May 19, 2017

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$225,176,172** **Total Needs, incl. Recent funding** **$268,008,027** **Authorized** **$266,018,723**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
GREEN PROJECTS											
EMERGENCY FUNDING											
A				100	Winchester Hills	Washington	950	New Well	$624,030.00	$427,000	
N				100	Salina City	Sevier	2,494	Tank Replacement	$414,141.00	$414,141	
POTENTIAL PROJECTS											
P				**125.2**	Soldier Summit SSD-2nd home sub	Utah	33	Water line upgrade	$530,303	$530,303	
P				**36.4**	Santa Clara (on hold)	Washington	8,000	Water line 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	Water line 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	Water line	$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, water line 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		
P				**15.1**	Syracuse	Davis	25,200	Water line 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, water line	$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	Water line upgrades	$692,026		
P				**13.5**	Riverdale	Weber	8,200	New well and tank, water line 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 water lines	$3,600,000		
P				**12.6**	Enterprise	Washington	1,500	New tank, upgrade water lines	$1,917,100		

May 19, 2017

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$225,176,172** **Total Needs, incl. Recent funding** **$268,008,027** **Authorized** **$266,018,723**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
P				12.6	Price River	Carbon	7,659	New tank, water lines, treatment	$2,750,000		
P				11.6	Manila Culinary Water Co.	Utah	2,450	Treatment and water line 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		
A				11.4	Eagle Mountain	Utah	25,593	New water line and pump station	$3,395,763	$2,895,763	$2,895,000
P				11.4	North Ogden City	Weber	15,000	Water line upgrades	$746,000	$746,000	
P				11.3	Farmington	Davis	15,000	New well, new tank, water line 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	Water line upgrades	$1,000,000		
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, water line 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	Water line replacement and new tank	$5,047,899		
P				7.6	Harmony Farms Water User Assoc.	Washington	300	Water line Replacement	$3,000		
P				6.8	Hooper Water Improvement District	Weber	16,520	Storage, water lines, treatment	$2,887,000		
P				6.7	Centerville City	Davis	16,000	Replacement well, water line 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	Water line	$180,000		
P				3.4	Highland City	Utah	15,066	New well houses	$650,000		

Agenda Item 5(C)(i)(a)

Eagle Mountain
Presented to the Division of Drinking Water
July 14, 2017

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

STAFF COMMENTS:

Eagle Mountain City was authorized a construction loan of $1,800,000 in November 2016 for a 2MG tank. The City has decided to use their own funds for this project.

STAFF RECOMMENDATION:

The Drinking Water Board deauthorize the $1,800,000 construction loan to Eagle Mountain City.

Rich Peterson <richpeterson@utah.gov>

Eagle Mountain EA

Chris Trusty <ctrusty@emcity.org> Thu, Jun 8, 2017 at 8:3
To: Rich Peterson <richpeterson@utah.gov>

Rich,

Please deauthorize the state loan to Eagle Mountain City, Loan # 35244, Water System 25142, File #10638 in the amount of $1,800,000 for the construction of a 2.0 MG tank.

Feel free to contact me if you have any additional questions. Thank you.

EAGLE MOUNTAIN

Chris Trusty
City Engineer
ctrusty@Emcity.org
801-789-6671
www.eaglemountaincity.com

From: Rich Peterson [mailto:richpeterson@utah.gov]
Sent: Wednesday, June 07, 2017 8:50 AM
To: Chris Trusty
Cc: Steve Hansen
Subject: Re: FW: Eagle Mountain EA

[Quoted text hidden]

Agenda Item 5(C)(ii)(a)

Moab City
Presented to the Drinking Water Board
July 14, 2017

DRINKING WATER BOARD
PACKET FOR PLANNING ADVANCE

APPLICANT'S REQUEST

Moab City is requesting $90,000 in financial assistance from the Drinking Water Board for an Engineering Planning Study of their water system. The cost to prepare the Engineering Study is estimated at $80,000, while the Financial Consultant's fee is estimated at $10,000.

The Engineering Study will include:

- Water System Master Plan including:
  - Hydraulic model for approving future development and water service area expansions
  - Capital needs analysis of the water system to improve the system and/or address existing deficiencies
- Water Rate Study and Water Impact Fee Study
  - Lay out the schedule of rate increases moving forward to meet the capital expense requirements

Moab City's latest population figure in 2015 was estimated to be 5,235 with an approximate municipal area of 4.1 square miles. The project is looking at the Moab City Water System only and is not considering water needs beyond City boundaries. Moab City does not have an existing master plan or hydraulic model - completing the Engineering Study will benefit the City with planning and decision making moving forward.

FINANCIAL ASSISTANCE COMITTEE COMMENTS:

Moab City has a local Median Adjusted Gross Income (MAGI) of $32,965, which is approximately 76% of the State MAGI ($43,196). Their current average monthly water bill is calculated as $21.46, which is 1.15% of local MAGI.

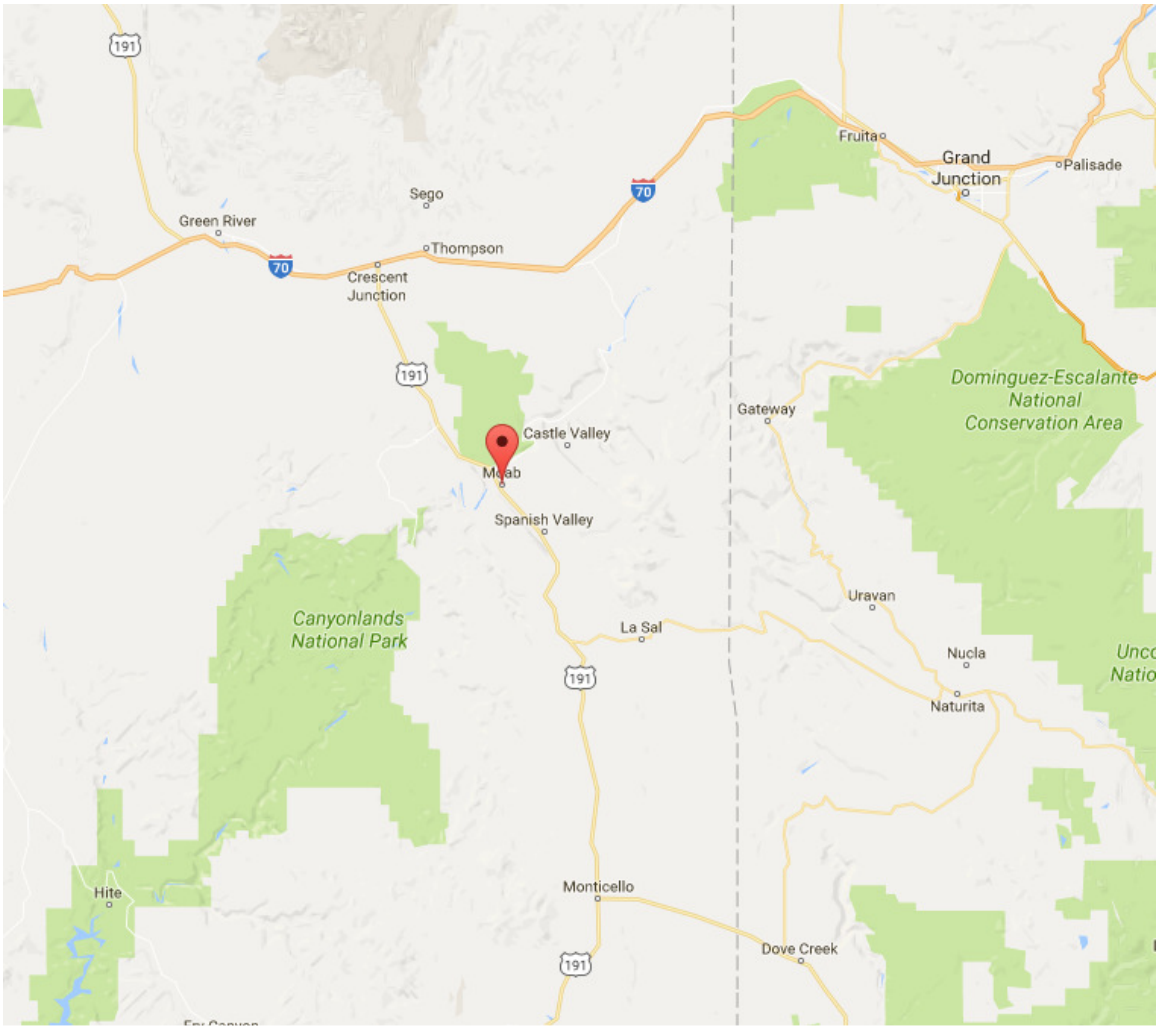
Due to Moab City's Median Adjusted Gross Income being under the threshold of 80%, Moab City qualifies for additional financial assistance for the proposed Engineering Study.

FINANCIAL ASSISTANCE COMITTEE RECOMMENDATION:

The Financial Assistance Committee recommends the Drinking Water Board authorize a $90,000 planning loan with $90,000 principal forgiveness to Moab City.

APPLICANT'S LOCATION:

Moab is a city on the southern edge of Grand County in eastern Utah. It is the county seat and largest city in Grand County located on Highway 191. Moab is known for its close proximity to nearby Arches and Canyonlands national parks.



PROJECT DESCRIPTION:

The Engineering Study will include:

- Water System Master Plan including:
  - Hydraulic model for approving future development and water service area expansions
  - Capital needs analysis of the water system to improve the system and/or address existing deficiencies
- Water Rate Study and Water Impact Fee Study
  - Lay out the schedule of rate increases moving forward to meet the capital expense requirements

IMPLEMENTATION SCHEDULE:

Apply to DWB for Funding:	April 24, 20174
DWB Funding Authorization:	July 14, 2017
Planning Study Complete	December 2017

COST ALLOCATION:

The cost allocation proposed for the project is shown below:

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

CONTACT INFORMATION:

APPLICANT:	Moab City 217 East Center Street Moab, UT 84532 (435) 259-5121
PRESIDING OFFICIAL & CONTACT PERSON:	Dave Everitt City Manager 217 East Center Street Moab, UT 84532 (435) 259-5121 deveritt@moabcity.org
CONSULTING ENGINEER:	Bret Reynolds CIVCO Engineering, Inc. 1256 West 400 South Suite 1 Vernal, UT 84078 (435) 789-5448 bretreynolds@civcoengineering.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Moab Culinary Water System
COUNTY: Grand
PROJECT DESCRIPTION: Master Planning

FUNDING SOURCE: Federal SRF

0 % Loan & 100 % P.F.

ESTIMATED POPULATION:	5,235	NO. OF CONNECTIONS:	2060 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$20.57 *			PROJECT TOTAL:	$90,000
CURRENT % OF AGI:	0.75%	FINANCIAL PTS:	41	LOAN AMOUNT:	$0
ESTIMATED MEDIAN AGI:	$32,965			PRINC. FORGIVE.:	$90,000
STATE AGI:	$43,196			TOTAL REQUEST:	$90,000
SYSTEM % OF STATE AGI:	76%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.92%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	5	5		5
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.92%		0.00%
REQUIRED DEBT SERVICE:	$0.00	$0.00		$0.00
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$0.00	$0.00		$0.00
ANNUAL NEW DEBT PER CONNECTION:	$0.00	$0.00		$0.00
O & M + FUNDED DEPRECIATION:	$736,379.00	$736,379.00		$736,379.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$357.47	$357.47		$357.47
TOTAL SYSTEM EXPENSES	$736,379.00	$736,379.00		$736,379.00
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$29.79	$29.79		$29.79
% OF ADJUSTED GROSS INCOME:	1.08%	1.08%		1.08%

* Equivalent Residential Connections

Agenda Item 5(C)(ii)(b)

Woodland Mutual Water Co
Presented to the Drinking Water Board
July 14, 2017

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN
PRESENTED TO THE DRINKING WATER BOARD

APPLICANT'S REQUEST:

Woodland Mutual Water Company is requesting $3,200,000 in financial assistance from the Drinking Water Board for construction of various water system improvements including spring and well renovation, transmission and distribution lines, a 500,000 gallon concrete tank, and a booster station. They scored 29 points on the Project Priority List. Total project cost is $3,225,000. Woodland Mutual is contributing $25,000 towards the project which brings the request from the Drinking Water Board to $3,200,000.

FINANCIAL ASSISTANCE COMMITTEE COMMENTS:

The local MAGI for Woodland is $70,569 which is 163% of the State MAGI. They currently have an average water bill of approximately $53.38 per month, which is 0.92% of local MAGI. A full loan for 20 years at the calculated interest rate of 3.71% would result in an average water bill of approximately $249.58, which is 4.24% of their local MAGI. Based on this information, they qualify to be considered for additional subsidization.

Staff explored the following options:

Assistance	Loan	Grant	Terms	Water Bill	% MAGI
$3,200,000	$3,200,000	$0	0.0%, 30 yrs	$160.27	2.73%
$3,200,000	$3,000,000	$200,000 (6%)	0.0%, 30 yrs	$152.19	2.59%

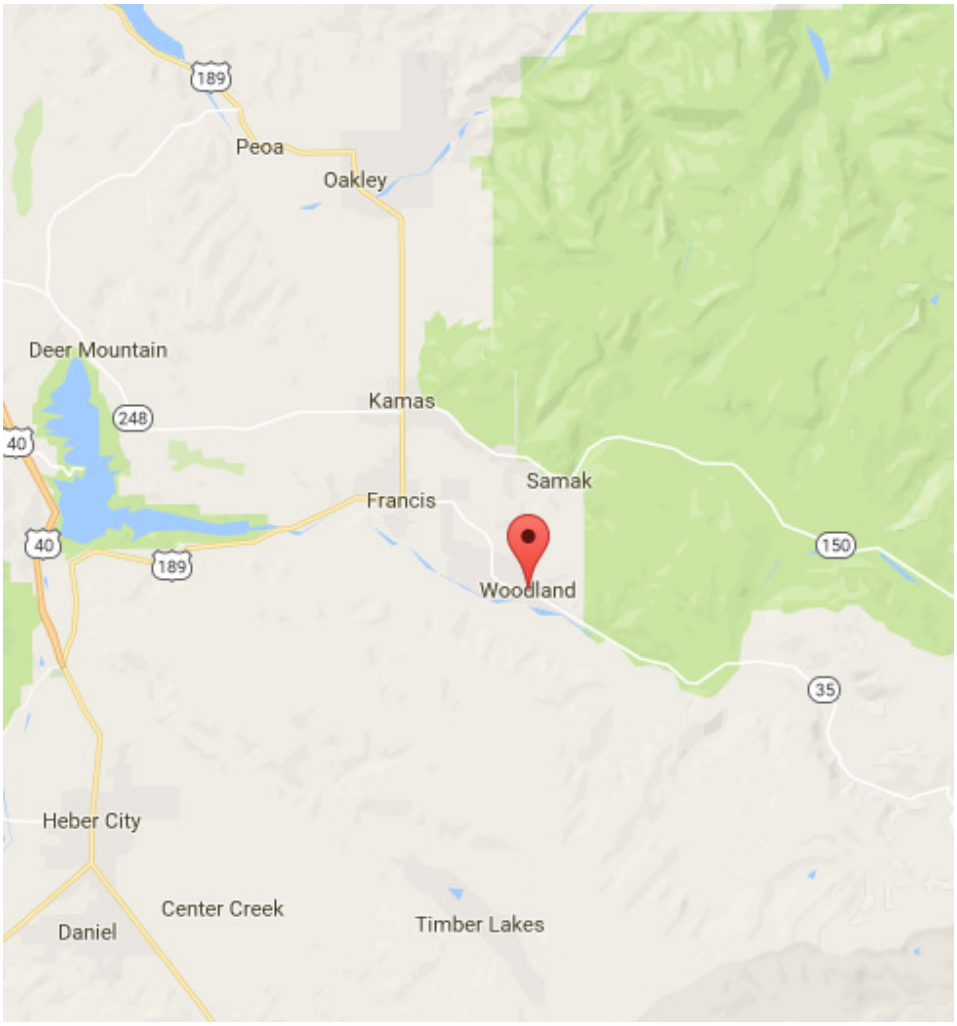
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Financial Assistance Committee recommends the Drinking Water Board authorize a $3,200,000 construction loan to Woodland Mutual Water Company with a 0% interest/fee per annum for 30 years with $200,000 in principal forgiveness for a repayable amount of $3,000,000 with the condition they resolve any issues on their compliance report.

APPLICANT'S LOCATION:

Woodland Mutual Water Company serves 186 residents of Woodland, Utah, along State Highway 35 in Summit County along the Provo River.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

The project scope includes:

- Spring Renovation
  - The spring has developed some deep rooted vegetation that needs to be removed. If soil cover has been compromised, a new liner will be installed to prevent surface water influence.

- Distribution and Transmission Line Replacement to meet minimum pressure requirements and fire flows along with removing asbestos cement pipe.
  - 6,900 LF of 6" transmission Line
  - 7,400 LF of 8" Distribution Line
  - 6,800 Lf of 10" Distribution Line
  - 4,300 LF of 12" Distribution Line

- 500,000 gallon concrete tank
  - The proposed tank will be located to provide adequate pressure to all connections and sized to be able to feed the entire system including fire storage requirements while creating a new pressure zone with a pressure reducing valve.

- Booster Station
  - For redundancy of the upper pressure zone a small booster station needs to be constructed near the existing 100,000-gallon tank. This conveys Woodland Spring water into the proposed upper tank if the Woodland Well is out of service.

- Well Improvements
  - The Woodland Well needs to be re-equipped to pump to the higher elevation proposed tank.

POPULATION GROWTH:

The anticipated growth rate for Summit County is approximately 3.1 % per year over the next 30 years. Using the most recent population figures, Woodland has the following current and projected population figures:

	Year	Population
Current:	2017	338
Projected:	2047	848

IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	May 2017
SRF Committee Conference Call:	June 14 2017
DWB Funding Authorization:	July 14 2017
Complete Design:	December 2017
Plan Approval:	January 2018
Advertise for Bids:	January 2018
Bid Opening:	March 2018
Loan Closing:	March 2018
Begin Construction:	April 2018
Complete Construction:	November 2018
Receive Operating Permit:	November 2018

COST ESTIMATE:

Environmental Clearances	$25,000
Engineering- Design	$170,000
Engineering- CM	$170,000
Survey	$25,000
Geotechnical	$15,000
Construction – Water Source	$50,000
Construction – Transmission Lines	$488,966
Construction – Storage Tank	$415,000
Construction – Pump Station	$95,000
Construction – Distribution Lines	$1,511,034
Contingency (~10%)	$260,000
Total Project Cost	**$3,225,000**

COST ALLOCATION:

Funding Source	Cost Sharing	Percent of Project
DWB Loan (0%, 30-yr)	$3,000,000	93%
DWB Principal Forgiveness	$200,000	6%
System Contribution	$25,000	1%
Total Amount	$3,225,000	100%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance plus Depreciation: $32,064
Existing DW Debt Service: $0.00
DDW Required Debt Service (0%, 30-yrs): $100,000
DDW Partial Debt Coverage: $15,000
DDW Additional Coverage and Reserve: $10,000
Annual Cost/ERC: $1,826.28
Monthly Cost/ERC: $152.19
Cost as % MAGI: 2.59%

CONTACTS:

APPLICANT:	Woodland Mutual Water Company P.O. Box 478 Kamas, Utah 84036 (435) 714-0556
PRESIDING OFFICIAL & CONTACT PERSON:	Phares Gines 3651 South 1000 East Woodland, Utah 84036 (435) 714-0556
TREASURER/RECORDER:	Beaudee Richards (435) 783-2043
CONSULTING ENGINEER:	Cliff Linford Sunrise Engineering 6875 South 900 East Salt Lake City, Utah 84047 (801) 523-0100 clinford@sunrise-eng.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Woodland Mutual Water Co
COUNTY: Summit
PROJECT DESCRIPTION: Water System Improvments

FUNDING SOURCE: Federal SRF

94 % Loan & 6 % P.F.

ESTIMATED POPULATION:	186	NO. OF CONNECTIONS:	86 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$53.83 *			PROJECT TOTAL:	$3,225,000
CURRENT % OF AGI:	0.92%	FINANCIAL PTS:	22	LOAN AMOUNT:	$3,000,000
ESTIMATED MEDIAN AGI:	$70,569			PRINC. FORGIVE.:	$200,000
STATE AGI:	$43,196			TOTAL REQUEST:	$3,200,000
SYSTEM % OF STATE AGI:	163%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.92%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.92%		0.00%
REQUIRED DEBT SERVICE:	$100,000.00	$171,809.07		$100,000.00
*PARTIAL COVERAGE (15%):	$15,000.00	$25,771.36		$15,000.00
*ADD. COVERAGE AND RESERVE (10%):	$10,000.00	$17,180.91		$10,000.00
ANNUAL NEW DEBT PER CONNECTION:	$1,453.49	$2,497.22		$1,453.49
O & M + FUNDED DEPRECIATION:	$32,064.00	$32,064.00		$32,064.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$372.84	$372.84		$372.84
TOTAL SYSTEM EXPENSES	$157,064.00	$246,825.33		$157,064.00
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$152.19	$239.17		$152.19
% OF ADJUSTED GROSS INCOME:	2.59%	4.07%		2.59%

* Equivalent Residential Connections

R309-700-5

Woodland Mutual Water Co
Summit
July 14, 2017

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	
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	X
	$37,500		
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	
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
	163%		
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
	0.8%		
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	X
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	
	2.59%		
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		22	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Agenda Item 5(C)(ii)(c)

Hanksville Town
Presented to the Drinking Water Board
July 14, 2017

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN
AUTHORIZATION

APPLICANT'S REQUEST:

Hanksville Town is requesting an additional $489,725 in funding to expand their project scope to include an arsenic treatment plant to address increasing arsenic levels in their wells. Currently, they do not meet the maximum contaminant level for arsenic.

STAFF COMMENTS:

In November 2016, the Drinking Water Board authorized Hanskville a $601,548 loan with 0% interest for 30 years with $180,000 in principal forgiveness. The project scope involved replacing and upgrading their existing distribution system, replacing fire hydrants, adding auto-read water meters and installing a telemetry system. After further review of the system, it was determined that arsenic treatment was necessary to address the increasing arsenic levels in their wells. The Town had a mixing plan in place in 2012; however, it has not proven to be successful in reducing arsenic levels in the system. An arsenic removal plant and new transmission lines from the wells to the plant are being added to the original project scope.

The local MAGI for Hanksville is $18,623 which is 44% of the State MAGI. They currently have an average water bill of approximately $23.98 per month, which is 1.54% of local MAGI. A full loan for 20 years at the calculated interest rate of 2.07% would result in an average water bill of approximately $79, which is 5.09% of their local MAGI. Based on this information, they qualify to be considered for additional subsidization.

Staff explored the following funding options for consideration:

Total Funding	Loan	Grant	Terms	Water Bill	% MAGI
$1,091,273	$545,000	$546,273	0%, 30 yrs	$44.87	2.88%
$1,091,273	$328,000	$763,273	0%, 30 yrs	$40.18	2.58%

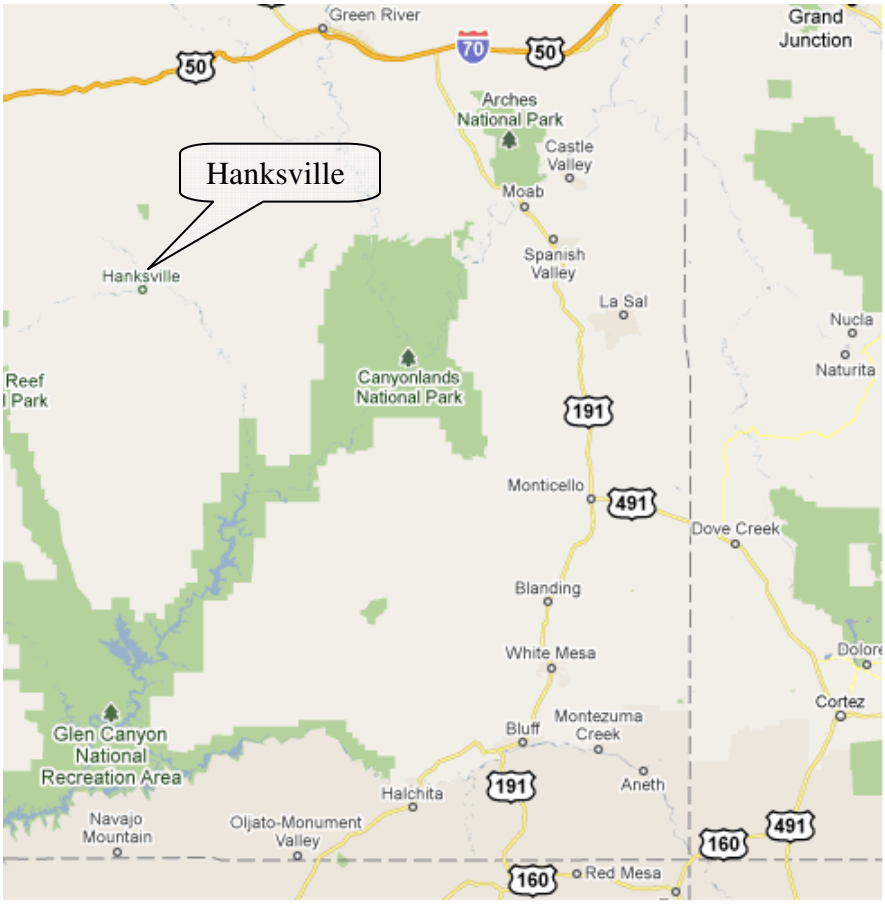
STAFF RECOMMENDATION:

No recommendation

APPLICANT'S LOCATION:

Hanksville Town is located in Wayne County.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

The project scope involves replacing their existing old, 6-inch water lines with 8-inch water lines. They will also add a section of 8-inch water line to loop the system, replace hydrants, add auto-read water meters and install a telemetry system. To address high arsenic levels in their wells, they will also install an arsenic removal system. The system identified for arsenic removal is a GEH Granular Ferric Hydroxide Arsenic Removal System.

POPULATION GROWTH:

The anticipated growth rate for Hanksville Town is approximately 1.2 % per year over the next 20 years.

	Year	Population
Current:	2016	219
Projected:	2035	278

IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	May 2017
SRF Committee Conference Call:	June 2017
DWB Funding Authorization:	July 2017
Complete Design:	August 2017
Plan Approval:	August 2017
Advertise for Bids:	August 2017
Bid Opening:	September 2017
Loan Closing:	September 2017
Begin Construction:	September 2017
Complete Construction:	April 2018
Receive Operating Permit:	April 2018

COST ESTIMATE:

Legal-Bonding	$15,000
Environmental	$25,000
Engineering- Design	$111,824
Engineering- CMS	$89,459
Survey/Easements	$29,950
Construction- Arsenic Treatment Plant	$254,125
Construction- Distribution Lines	$402,866
Construction- Fire Hydrants	$36,000
Construction- Meters	$22,500
Construction- Telemetry	$30,000
Contingency 10%	$74,549
Total Project Cost	**$1,091,273**

COST ALLOCATION:

Funding Source	Cost Sharing	Percent of Project
DWB Loan (0%, 30-yr)	$545,000	50%
DWB Grant	$546,273	50%
Total Amount	$1,091,273	100%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance plus Depreciation: $33,569
Existing DW Debt Service: $22,637.50
DDW Debt Service (0%, 30-yrs): $18,166.67
DDW Debt Reserve: $1,816.67
Replacement Reserve Account: $3,492.28
Annual Cost/ERC: $538.39
Monthly Cost/ERC: $44.87
Cost as % MAGI: 2.88%

APPLICANT:	Hanksville Town P.O. Box 127 Hanksville, Utah 84374 435-542-3451
PRESIDING OFFICIAL & CONTACT PERSON:	Kim Wilson P.O. Box 127 Hanksville, Utah 84734 435-542-6451
TREASURER/RECORDER:	Lisa Wells 435-542-3451
CONSULTING ENGINEER:	Kelly Crane Ensign Engineering 225 North 100 East Richfield, Utah 84701 435-896-2983 kcrane@ensignutah.com
CITY ATTORNEY:	Richard Chamberlain Chamberlain Associates 225 North 100 East Richfield, Utah 84701 435-896-4461 baxterse@hotmail.com
BOND ATTORNEY:	Richard Chamberlain Chamberlain Associates 225 North 100 East Richfield, Utah 84701 435-896-4461 baxterse@hotmail.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Hanksville
COUNTY: Wayne
PROJECT DESCRIPTION: Water line replacement, meters, arsenic treatment

FUNDING SOURCE: Federal SRF

50 % Loan & 50 % P.F.

ESTIMATED POPULATION:	219	NO. OF CONNECTIONS:	148 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$23.98 *			PROJECT TOTAL:	$1,091,273
CURRENT % OF AGI:	1.54%	FINANCIAL PTS:	42	LOAN AMOUNT:	$545,000
ESTIMATED MEDIAN AGI:	$18,692			PRINC. FORGIVE.:	$546,273
STATE AGI:	$41,923			TOTAL REQUEST:	$1,091,273
SYSTEM % OF STATE AGI:	45%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.06%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.06%		0.00%
REQUIRED DEBT SERVICE:	$18,166.67	$28,021.58		$18,166.67
*PARTIAL COVERAGE (15%):	$0.00	$4,203.24		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$1,816.67	$2,802.16		$1,816.67
ANNUAL NEW DEBT PER CONNECTION:	$135.02	$236.67		$135.02
O & M + FUNDED DEPRECIATION:	$33,569.00	$33,569.00		$33,569.00
OTHER DEBT + COVERAGE:	$22,637.50	$22,637.50		$22,637.50
REPLACEMENT RESERVE ACCOUNT:	$3,492.28	$0.00		$3,492.28
ANNUAL EXPENSES PER CONNECTION:	$403.37	$379.77		$403.37
TOTAL SYSTEM EXPENSES	$79,682.12	$91,233.48		$79,682.12
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$44.87	$51.37		$44.87
% OF ADJUSTED GROSS INCOME:	2.88%	3.30%		2.88%

* Equivalent Residential Connections

R309-700-5

Hanksville
Wayne
October 6, 2016

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	
D. $2,001 to $3,000		8	
E. $3,001 to $5,000		4	
F. $5,001 to $10,000		1	X
G. Over $10,000		0	
	$7,373		
2. CURRENT LOCAL MEDIAN ADJUSTED GROSS INCOME (AGI) (SELECT ONE)			
A. Less than 70% of State Median AGI		19	X
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	
	45%		
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	X
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	
	2.88%		
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		42	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Hanksville
COUNTY: Wayne
PROJECT DESCRIPTION: Water line replacement, meters, arsenic treatment

FUNDING SOURCE: Federal SRF

30 % Loan & 70 % P.F.

ESTIMATED POPULATION:	219	NO. OF CONNECTIONS:	148 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$23.98 *			PROJECT TOTAL:	$1,091,273
CURRENT % OF AGI:	1.54%	FINANCIAL PTS:	42	LOAN AMOUNT:	$328,000
ESTIMATED MEDIAN AGI:	$18,692			PRINC. FORGIVE.:	$763,273
STATE AGI:	$41,923			TOTAL REQUEST:	$1,091,273
SYSTEM % OF STATE AGI:	45%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.06%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.06%		0.00%
REQUIRED DEBT SERVICE:	$10,933.33	$16,864.37		$10,933.33
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$1,093.33	$1,686.44		$1,093.33
ANNUAL NEW DEBT PER CONNECTION:	$81.26	$125.34		$81.26
O & M + FUNDED DEPRECIATION:	$33,569.00	$33,569.00		$33,569.00
OTHER DEBT + COVERAGE:	$22,637.50	$22,637.50		$22,637.50
REPLACEMENT RESERVE ACCOUNT:	$3,130.62	$3,427.17		$3,130.62
ANNUAL EXPENSES PER CONNECTION:	$400.93	$402.93		$400.93
TOTAL SYSTEM EXPENSES	$71,363.78	$78,184.47		$71,363.78
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$40.18	$44.02		$40.18
% OF ADJUSTED GROSS INCOME:	2.58%	2.83%		2.58%

* Equivalent Residential Connections

Agenda Item 6(A)

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
DRINKING WATER

Plan Submittal Waiver
Versus
Approved Standard Installation Drawings and Specifications

	Plan Submittal Waiver [R309-500-6(3)(a) & (3)(b), prior to July 2017]	**Approved Standard Installation Drawings and Specifications** [Revision proposed in July 2017]
1	**Two** waiver types	A **single** approval
2	Master plan-based waiver **available** [(3)(a)]	**Unavailable**
3	**Various pipe diameter limits** based on PWS population [(3)(b)]	**One pipe diameter limit (≤16")** for all; not population based
4	PWS must obtain **waiver eligibility** first	PWS must submit application for **approved Standard Installation Drawings and Specs**
5	Waiver eligibility **does not expire**	Approval **must be renewed every 5 years** (or whenever standard installation drawings and specifications change)
6	Required for **waiver eligibility:** 1. **Letter** requesting eligibility 2. Standard installation drawings and specs meeting R309-550 requirements [(3)(a) & (3)(b)] 3. PE designation for system design by PWS [(3)(b)] 4. PE designation for hydraulic analysis by PWS [(3)(b)]	Required for **approval:** 1. **Application form** 2. Standard installation drawings and specs **(with effective date)** meeting R309-550 requirements 3. PE designation for system design by PWS (notify DDW of change) 4. PE designation for hydraulic analysis by PWS (notify DDW of change) 5. Statement **with application form** acknowledging hydraulic analysis, flushing, disinfection, coliform sampling, and as-built/record drawings
7	Obtain waiver **for each water line project** prior to construction [(3)(a) & (3)(b)]	**Not required**
8	Submit with each water line waiver request: 1. Project Notification Form (PNF) 2. Certification by designated PEs for (1) hydraulic analysis and (2) flushing, disinfection, coliform sampling, as-built/record drawings	**Not required**
9	May obtain **year-end after-the-fact waiver** for multiple water line projects [(3)(b)]	**Not required**
10	Must **maintain a tracking sheet** for year-end, after-the-fact waivers [(3)(b)]	**Not required**
11	Water line projects with **pump stations ineligible** for waivers	**Same**
12	Water **lines >16" ineligible** for waivers	**Same**
13	Water line **projects not meeting water/sewer separation must obtain exception** to R309-550-7	**Same**

R309-500. Facility Design and Operation: Plan Review, Operation and Maintenance Requirements.

R309-500-1. Purpose.

The purpose of this rule is to describe plan review procedures and requirements, clarify projects requiring review, and inspection requirements for drinking water projects. It is intended to be applied in conjunction with rules 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 which consistently meet applicable drinking water quality requirements and do not pose a threat to public health.

R309-500-2. 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 63G, Chapter 3 of the same, known as the Administrative Rulemaking Act.

R309-500-3. Definitions.

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

R309-500-4. General.

(1) Construction of New Facilities and Modification of Existing Facilities.

(a) Plans, specifications, and other data pertinent to new facilities, or existing facilities of public drinking water systems not previously reviewed, shall be submitted to the Director for review for conformance with rules R309-500 through R309-550. All submittals shall be from the public water system or its agent.

(b) The Director has the authority to grant an exception to R309-500 through R309-550 per R309-105-6(2)(b).

(c) ~~Construction of a public drinking water project shall not begin until complete plans and specifications have received Plan Approval or a Plan Submittal Waiver has been issued by the Director.~~A public water system may not begin construction of

a public drinking water project without Plan Approval unless it meets the requirements of R309-500-7.

(d) ~~No new public drinking water facility shall be put into operation until the Director has issued an Operating Permit or a Plan Submittal Waiver.~~A public water system may not begin operation of a drinking water facility without an Operating Permit unless it meets the requirements of R309-500-7.

(2) Minimum Quantity and Quality Requirements for Existing Facilities.

All existing public drinking water systems shall be capable of reliably delivering water that meets current drinking water minimum quantity and quality requirements. The Director may require modification of existing systems in accordance with R309-500 through R309-550 when such modifications are needed to reliably achieve minimum quantity and quality requirements.

(3) Operation and Maintenance.

Public drinking water system facilities shall be operated and maintained in a manner that protects public health. As a minimum, operation and maintenance procedures described in R309-500 through R309-550 shall be met.

R309-500-5. Public Drinking Water Project

(1) Definition.

A public drinking water project~~, requiring submittal of a Project Notification Form and plans and specifications,~~ is any of the following:

(a) Construction of, ~~any facility for a proposed drinking water system.~~

~~(b) Any~~ addition to, or modification of~~, the facilities of an existing~~ a public drinking water facility~~system~~ that may affect the quality or quantity of water delivered.

(~~c~~b) Any activity~~, other than on-going operation and maintenance procedures,~~ that may affect the quality or quantity of water delivered by an existing public drinking water system~~. Such activities may~~ include~~ing~~:

(i) the interior re-coating or re-lining of any raw or drinking water storage tank, or water storage chamber within any treatment facility,

(ii) the in-situ re-lining of any pipeline,

(iii) a change or addition of a water treatment process,

(iv) the re-development of any spring or well source,

(v) replacement of a well pump with one of different capacity, ~~and~~

(vi) deepening a well~~.~~,

(vii) well rehabilitation or cleaning using a chemical other than a disinfectant previously approved for drinking water use, and

(viii) replacement of pipeline not due to on-going operation and maintenance.

(2) On-going Operation and Maintenance Procedures.

On-going operation and maintenance procedures are not considered public drinking water projects and, accordingly, are not subject to the project notification, plan approval and operating permit requirements of this rule. However, these activities shall be carried out in accordance with all requirements contained in R309-500 through R309-550 and specifically the design, construction, disinfection, flushing, and bacteriological sampling and testing requirements before the facilities are placed back into service. The following activities are considered to be on-going operation and maintenance procedures:

(a) pipeline leak repair,

(b) replacement of ~~existing~~ deteriorated pipeline where the new pipeline segment is the same size as the old pipeline or the new segment is upgraded to meet the minimum pipeline sizes required by R309-550-5(4) or larger sizes as determined by a hydraulic analysis in accordance with R309-550-5(3), ~~excluding substantial distribution system upgrades that involve long-term planning and complex design,~~

(c) tapping existing water mains with corporation stops ~~so as~~ to make connection to new service laterals to individual structures,

(d) distribution pipeline additions where the pipeline size is the same as the main supplying the addition or the pipeline addition meets the minimum pipeline sizes required by R309-550-5(4) or larger sizes as determined by a hydraulic analysis in accordance with R309-550-5(3), the length is less than 500 feet, and contiguous segments of new pipe total less than 1000 feet in any fiscal year,

(e) entry into a drinking water storage facility for the purposes of inspection, cleaning and maintenance, ~~and~~

(f) replacement of equipment or pipeline appurtenances with the same type, size and rated capacity (fire hydrants, valves, pressure regulators, meters, service laterals, chemical feeders and booster pumps including deep well pumps)~~.~~, and

(g) mechanical well rehabilitation or cleaning using a disinfectant previously approved for drinking water use.

R309-500-6. Plan Approval Procedure.

(1) Project Notification.

The Division shall be notified prior to the construction of any "public drinking water project" as defined in R309-500-5(1) above. The notification may be prior to or simultaneous with submission of construction plans and specifications as required by R309-500-6(2) below. Notification shall be made on a form provided by the Division.

Guidance: In addition to the Project Notification Form, new public water systems should submit a New Public Water System Supplemental Form to the Director.

(2) Pre-Construction Requirements.

All of the following shall be accomplished before construction of any public drinking water project begins:

(a) Plans and specifications for a public drinking water project shall be submitted to the Division at least 30 days prior to the date on which ~~action is desired~~ Plan Approval is required.

Guidance: Review of complicated projects, especially water treatment facilities, may require more than 30 days and should be submitted well in advance of the date on which ~~action is desired~~approval is required.

(b) Required submittals may include engineering reports, hydraulic analyses of the existing system and additions, local requirements for fire flow and duration, proximity of sewers and other utilities, water consumption data, supporting information, evidence of rights-of-way and reference to any previously submitted master plans pertinent to the project, a description of a program for keeping existing water works facilities in operation during construction so as to minimize interruption of service, etc.

(c) Plans and specifications submitted shall be complete and sufficiently detailed for actual construction. Plans and specifications shall also adequately identify and address any conflicts or interferences.

Guidance: It is recommended that an inspector familiar with these rules be retained to observe all construction.

(d) Drawings that are illegible or of unusual size will not be accepted for review.

(e) The plans and specifications shall be stamped and signed by a ~~licensed~~ professional engineer ~~as required by Section 58-22-602(2) of the Utah Code~~licensed by the state of Utah.

(f) If construction or the ordering of substantial equipment has not commenced within one year of Plan Approval, a renewal of the Plan Approval shall be obtained prior to proceeding with construction.

(3) Changes to Approved Plans or Specifications.

(a) Changes to approved plans or specifications affecting capacity, hydraulic conditions, operating units, the functioning of water treatment processes, or the quality of water to be delivered, shall be reported to the Division before the start of construction.

(b) The Division may require revised plans and specifications be submitted for review. If required, revised plans or specifications shall be submitted to the Division in time to permit review and approval before the start of construction affected by the changes.

~~(3) Eligibility for Plan Submittal Waivers.~~

~~In lieu of submitting plans and specifications for Plan Approval and obtaining Operating Permits, public water systems may request Plan Submittal Waivers for two types of water line projects (excluding booster pump stations) after first becoming eligible to request the waivers. The Director will issue written notification that a public water system is eligible to request the Plan Submittal Waivers described in R309-500-6(3)(a) and (3)(b) if the information provided is acceptable.~~

~~(a) Water Line Projects Included in an Approved Master Plan. To become eligible to request this type of waiver, a public water system must submit standard installation drawings, which meet the requirements in R309-550, and a master plan, which is supported by a hydraulic analysis, to the Director for approval.~~

~~(b) Water Line Projects Included in (i) through (iii) below. To become eligible to request this type of waiver, a public water system must submit the following in~~

writing to the Director: standard installation drawings that meet the requirements of R309-550, the name of the professional engineer responsible for design of the entire water system, and the name of the professional engineer responsible for oversight of the hydraulic analysis for the entire water system.

(i) Water lines less than or equal to 8 inches in diameter in water systems providing water to a population less than 3,300;

(ii) Water lines less than or equal to 12 inches in diameter in water systems providing water to a population between 3,300 and 50,000; or

(iii) Water lines less than or equal to 16 inches in diameter in water systems providing water to a population greater than 50,000.

Public water systems eligible for Plan Submittal Waivers per R309-500-6(3)(b) may request an after-the-fact Plan Submittal Waiver for multiple water line projects by submitting the required information to the Director annually per R309-500-6(4)(b).

Guidance: When a water line project requires an exception to rule, the exception-to-rule request must be submitted to the Division prior to construction. If the exception is granted, the project itself can then be included in the after-the-fact waiver request, which is due by January 31 of the following year.

(4) Using Plan Submittal Waivers.

(a) Plan Submittal Waivers Prior to Construction.
After becoming eligible to request Plan Submittal Waivers per R309-500-6(3), a public water system must complete the following when requesting a Plan Submittal Waiver for an individual water line project prior to construction:

(i) Submit a complete Project Notification Form describing the project, including pipe length, diameter, material, and joint type; project location; number of new service connections; whether minimum separation requirements between water lines and sewer lines in R309-550-7 will be met for the proposed water line project; and specifying which Plan Submittal Waiver, R309-500-6(3)(a) or R309-500-6(3)(b), is being requested;

(ii) For projects that will have a hydraulic impact, submit a certification of hydraulic analysis by a professional engineer per R309-511-6(1) indicating that the design will not result in unacceptable pressure and flow conditions (including fire flow if fire hydrants are installed);

(iii) Submit a certification by a professional engineer, who is responsible for the design and construction of the project or has been designated by the water system in writing as the professional engineer directly responsible for the design of the entire water system, indicating that design and construction will meet the requirements of R309-500 through 550, that proper flushing and disinfection will be completed according to the appropriate ANSI/AWWA standard, that satisfactory bacteriological sample results will be obtained prior to placing the facilities into service, and that the water system will receive a copy of as-built or record drawings;

(iv) Obtain a written Plan Submittal Waiver, in lieu of Plan Approval, from the Director prior to the start of construction; and

(v) Comply with the conditions in R309-500-6(4)(a)(iii) prior to placing the new facilities into service.

Guidance: A template for Certification of Hydraulic Analysis & Plan Submittal Waiver Conditions is available from the Division for use by the water system or its agent.

(b) After-the-Fact Plan Submittal Waivers.
After becoming eligible to request Plan Submittal Waivers per R309-500-6(3)(b), a public water system may choose to obtain an after-the-fact waiver for multiple water line projects by complying with the following requirements:

(i) Water systems shall submit a single copy of each item listed above in R309-500-6(4)(a)(i) through (iii) to the Director by January 31 of each year.

(ii) The single Project Notification Form and the required certifications shall include the information required per R309-500-6(4)(a)(i) for each water line project completed during the previous calendar year that has not received a Plan Submittal Waiver.

(iii) Water systems shall maintain an up-to-date record tracking the water line project information required per R309-500-6(4)(a)(i) through (iii) for each project completed during the year that has not received a Plan Submittal Waiver but will be included in the annual after-the-fact waiver request. Water systems shall make the water line project tracking record available for Division review upon request.

Guidance: A template for tracking and summarizing the qualified water line projects constructed during a calendar year is available from the Division for use by the water system or its agent requesting after-the-fact Plan Submittal Waivers.

~~***Projects that are eligible for and obtain after-the-fact Plan Submittal Waivers, or are documented and tracked by public water systems in preparation of requesting after-the-fact Plan Submittal Waivers in accordance with this rule, are not subject to the penalty fee.***~~

R309-500-7. Approval of Standard Installation Drawings and Specifications for Water Transmission and Distribution Lines.

(1) A public water system with approved standard installation drawings and specifications may install water transmission and distribution lines up to and including 16 inches in diameter and is not required to:

(a) submit project notification, plans, or specifications or obtain Plan Approval per R309-500-6;

(b) obtain an Operating Permit per R309-500-9; or

(c) submit a certification of hydraulic modeling per R309-511.

(2) To obtain or renew approved standard installation drawings and specifications, a public water system shall submit to the Director:

(a) an application form;

(b) standard installation drawings and specifications meeting the requirements of R309-550 for construction of water transmission and distribution lines;

(c) the name and license number of a professional engineer designated to oversee design of the water system;

(d) the name and license number of a professional engineer designated to oversee hydraulic analysis of the water system; and

(e) a statement from the designated water system contact acknowledging that:

(i) a hydraulic analysis will be completed for each water line project to assure compliance with minimum sizing, pressure, and flow requirements;

(ii) flushing, disinfection, and coliform sampling will be completed according to ANSI/AWWA standards for each water line before use; and

(iii) as-built or record drawings will be maintained for each water line constructed.

(3) Approved standard installation drawings and specifications are valid for construction of water transmission and distribution lines for the five-year period specified in the approval.

(4) Before or upon the expiration of approved standard installation drawings and specifications, a public water system may submit an application to renew the approval.

(5) A public water system that installs water transmission and distribution lines with approved standard installation drawings and specifications shall:

(a) construct each water line according to plans and specifications stamped and signed by a professional engineer licensed by the state of Utah;

(b) notify the Director of a change in approved standard installation drawings and specifications, a change in the designated water system contact, or a change in the designated professional engineer for system design or hydraulic analysis;

(c) obtain Plan Approval for each booster pump installed as part of a water line; and

(d) obtain an exception prior to construction for any requirement in R309-500 through R309-550 that cannot be met.

R309-500-~~7~~8. Inspection during Construction.

Staff from the Division, the Department of Environmental Quality, or the local health department, after reasonable notice and presentation of credentials, may make visits to the work site to assure compliance with these rules.

~~*R309-500-8. Change Orders.*~~

~~Any deviations from approved plans or specifications affecting capacity, hydraulic conditions, operating units, the functioning of water treatment processes, or the quality of water to be delivered, shall be reported to the Director. The Director may require that revised plans and specifications be submitted for review. If required, revised plans or specifications shall be submitted to the Division in time to permit the review and approval of such plans or specifications before any construction work, which will be affected by such changes, is begun.~~

R309-500-9. Operating Permit.

(1) The Division shall be informed when a public drinking water project, or a well-defined phase thereof, is at or near completion.

(2) The new or modified facility shall not be placed into service until an Operating Permit ~~or a Plan Submittal Waiver~~ is issued by the Director unless it meets the requirements of R309-500-7.

(3) The Operating Permit will not be issued until all of the following items are submitted and found to be acceptable for all projects. ~~Distribution lines (not including in-line booster pump stations), may be placed into service prior to submittal of all items if the professional engineer responsible for the entire system, as identified to the Director, has received items (1) and (4):~~

(~~1~~a) Certification of Rule Conformance by a professional engineer that all conditions of Plan Approval were accomplished and if applicable, changes made during construction were in conformance with rules R309-500 through 550,

(~~2~~b) as-built or record drawings incorporating all changes to approved plans and specifications, unless no changes are made from previously submitted and approved plans during construction,

(~~3~~c) confirmation that a copy of the as-built or record drawings has been received by the water system owner,

(~~4~~d) evidence of proper flushing and disinfection in accordance with the appropriate ANSI/AWWA Standard,

(~~5~~e) where appropriate, water quality data,

Guidance: Water quality data for finished and raw water samples will be required as evidence of effective performance of new or modified water treatment plants prior to issuing an Operating Permit.

(~~6~~f) all other documentation which may have been required during the plan review process, and

(~~7~~g) confirmation that the water system owner has been provided with an Operation and Maintenance manual for the new facility if applicable.

(4) Distribution lines (not including in-line booster pump stations) requiring Plan Approval may be placed into service prior to submittal of all of the above items and receipt of an Operating Permit if the public water system has received items (3)(a) and (3)(d).

R309-500-10. Waste and Wastewater Disposal.

Approval of plans and specifications may require evidence showing that the methods of waste and wastewater disposal have been approved or accepted by the Utah Division of Water Quality, the local health agency, or the local authority for:

(1) new drinking water facilities, including discharges from treatment facilities, discharges related to construction, etc., and

(2) new drinking water facilities serving proposed developments.

R309-500-11. Fee Schedule.

The Division is authorized to assess fees according to the Department of Environmental Quality fee schedule. ~~The fee schedule is available from the Division.~~

R309-500-12. Other Permits.

Local, county, federal, and other state authorities may impose different, more stringent, or additional requirements for public drinking water projects. Water systems may be required to comply with other permitting requirements before beginning construction of drinking water projects or placing new facilities into service.

KEY: drinking water, plan review, operation and maintenance requirements, permits
Date of Enactment or Last Substantive Amendment: ~~November 16, 2015~~
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

Application for Approval of Standard Installation Drawings and Specifications for Water Transmission and Distribution Lines -

Utah Division of Drinking Water (see directions below) DRAFT

PWS Name:

PWS Number:

Name of P.E. Designated to Oversee Water System Design:

Utah P.E. License No.:

Name of P.E. Designated to Oversee Water System Hydraulic Analysis:

Utah P.E. License No.:

The above water system requests approval of the attached standard installation drawings and specifications for water transmission and distribution lines per R309-500-7. For each water line:

1. *a hydraulic analysis will be competed by the designated P.E.;*
2. *flushing, disinfection, and coliform sampling will be completed according to ANSI/AWWA standards before use of the water line; and*
3. *as-built or record drawings will be maintained.*

Name of Designated Water System Contact:

Date:

Signature: _____

Directions: Complete the above application and attach standard installation drawings and specifications meeting the requirements of R309-550 for construction of water lines. The application must be signed by the designated water system contact. The drawings and specifications must be signed, sealed, and dated by a professional engineer licensed by the state of Utah. Submit the completed application and standard installation drawings and specifications to the Division of Drinking Water.

Agenda Item 6(B)

R309-100. Administration: Drinking Water Program.

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R309-100. Administration: Drinking Water Program.

R309-100-1. Purpose.

The purpose of this rule is to set forth the water quality and drinking water standards for public water systems.

R309-100-2. 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 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-100-3. Definitions.

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

R309-100-4. General.

These rules shall apply to all public drinking water systems within the State of Utah.

(1) A public drinking water system is a system, either publicly or privately owned, providing water for human consumption and other domestic uses, which:

(a) Has at least 15 service connections,

(i) Delivery of drinking water, such as by a single well, to a portion of a platted subdivision or a portion of a contiguous development, either of which is under the same ownership or control, shall be considered a single public drinking water system; and

(ii) A platted subdivision or other contiguous development of 15 or more lots, under the same ownership or control, is considered to have the corresponding number of connections as there are lots; or

(b) Serves an average of at least 25 individuals daily at least 60 days out of the year.

(i) A ratio of 3.13 persons per connection shall be used to calculate the individuals served unless, at the time of operation, more accurate

information is available. The ratio is based on the statewide average persons per residence in the 2000 census.

(ii) Notwithstanding the threshold for the number of service connections set forth in (a), a drinking water system consisting of at least 8 service connections is considered to serve 25 people, based on the ratio in (b)(i), and consequently is classified as a public drinking water system, unless, at the time of operation, more accurate data can be used.

(iii) The ratio in (b)(i) is only be used to determine whether, prior to construction or modification, any particular water system is considered to be a public water system.

(c) Any person or entity may request a review of the designation of a public water system by submitting documentation to the Director showing that the drinking water system, upon complete build out, falls below both thresholds listed in (a) and (b) above. All decisions made by the Director under this provision may be challenged as provided in Section 19-1-301.5 and R305-7.

(2) Submetered Properties.

(a) Submetered Properties means a billing process by which a property owner (or association of property owners, in the case of co-ops or condominiums) bills tenants based on metered total water use; the property owner is then responsible for payment of a water bill from a public water system.

(b) A property owner who installs submeters to track usage of water by tenants on his or her property shall not be subject to these rules solely as a result of taking the administrative act of submetering and billing.

(c) Owners of submetered properties shall receive all their water from a regulated public water system to qualify under the terms of R309-105-5 for exemption from monitoring requirements, except as to the selling of water.

(d) This is not intended to exempt systems where the property in question has a large distribution system (piping in excess of 500 feet in length and sized larger than the normal service lateral based on a fixture unit analysis) serves a large population or serves a mixed (commercial/residential) population (e.g. many military installations/facilities or large mobile home parks or P.U.D's) from regulation as a public drinking water system as pertains to notifying the Division of the persons indicated below in (5) or plan review of modifications or changes to their systems (refer to R309-500).

(3) The term public drinking water system includes collection, treatment, storage or distribution facilities under control of the operator and used primarily in connection with the system. Additionally, the term includes collection, pretreatment or storage facilities used

primarily in connection with the system but not under such control (see 19-4-102 of the Utah Code Annotated).

(4) Categories of Public Drinking Water Systems

Public drinking water systems are divided into three categories, as follows:

(a) "Community water system" (CWS) means a public drinking water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

(b) "Non-transient, non-community water system" (NTNCWS) means a public water system that is not a community water system and that regularly serves at least 25 of the same nonresident persons over six months per year. Examples of such systems are those serving the same individuals (industrial workers, school children, church members) by means of a separate system.

(c) "Transient non-community water system" (TNCWS) means a non-community public water system that does not serve 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those, RV park, diner or convenience store where the permanent nonresident staff number less than 25, but the number of people served exceeds 25.

(d) The distinctions between "Community", "Non-transient, non-community", and "Transient Non-community" water systems are important with respect to monitoring and water quality requirements.

(5) Responsibility

(a) All public drinking water systems must have a person or organization designated as the owner of the system. The name, address and phone number of this person or organization shall be supplied, in writing, to the Director.

(b) The name of the person to be contacted on issues concerning the operation and maintenance of the system shall also be provided, in writing, to the Director.

R309-100-5. Approval of Plans and Specifications for Public Water Supply Projects.

(1) ~~The Director must approve, in writing, a~~All engineering plans and specifications for public drinking water projects must be approved in writing prior to construction, in accordance with~~.~~

~~(2) Refer to~~ R309-105-6 and~~/or~~ R309-500-6 ~~for further requirements~~.

(~~3~~2) A public water system shall obtain an Operating Permit~~s shall be obtained by the public water system~~ prior to placing any public drinking water facility into operation as required in R309-500-9.

~~R309-100-6. Feasibility Reviews.~~

~~(1) Upon the request of the local health department, the Department of Environmental Quality will conduct a review to determine the "feasibility" of adequate water supply for any proposed public water system (e.g. subdivisions, industrial plants or commercial facilities). Information submitted to the Department for consideration must be simultaneously submitted to the local health department. This feasibility review is a preliminary investigation of the proposed method of water supply and is done in conjunction with a review of proposed methods of wastewater disposal.~~

~~(2) Refer to the Department of Environmental Quality publication "Review Criteria for Establishing the Feasibility of Proposed Housing Subdivisions" available at the Division of Drinking Water.~~

R309-100-~~7~~6. Sanitary Survey, Evaluation, and Corrective Action of Existing Facilities.

(1) The Director, after considering information gathered during sanitary surveys and facility evaluations, may make determinations of regulatory significance including: monitoring reductions or increases, treatment, variances and exemptions.

(2) CONDUCTING SANITARY SURVEYS

(a) The Director shall ensure a sanitary survey is conducted at least every three years on all public water systems. The Director may reduce this frequency to once every five years based on outstanding performance on prior sanitary surveys.

(b) Sanitary surveys conducted by the following individuals under the circumstances as listed, may be used by the Director for the above determinations:

(i) Division of Drinking Water personnel;

(ii) Utah Department of Environmental Quality District Engineers;

(iii) local health officials;

(iv) Forest Service engineers;

(v) Utah Rural Water Association staff;

(vi) consulting engineers; and

(vii) other qualified individuals authorized in writing by the Director.

(3) Public water systems must provide the Director, at the Director's request, any existing information that will enable the State to conduct a sanitary survey.

(4) For the purposes of this subpart, a "sanitary survey", as conducted by the Director, includes but is not limited to, an onsite review of the water source(s) (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

(5) The sanitary survey must include an evaluation of the applicable components listed in paragraphs (5)(a) through (h) of this section:

(a) Source,

(b) Treatment,

(c) Distribution system,

(d) Finished water storage,

(e) Pumps, pump facilities, and controls,

(f) Monitoring, reporting, and data verification,

(g) System management and operation, and

(h) Operator compliance with State requirements.

(6) CONDITIONS ON CONDUCT OF SANITARY SURVEYS

In order for the groups of individuals listed in R309-100-7(2)(b) to conduct sanitary surveys acceptable for consideration by the Director, the following criteria must be met:

(a) Surveys of all systems involving complete treatment plants must be performed by Division of Drinking Water staff or others authorized in writing by the Director;

(b) Local Health officials may conduct surveys of systems within their respective jurisdictions;

(c) U.S. Forest Service (USFS) engineers may conduct surveys of water systems if the system is owned and operated by the USFS or USFS concessionaires;

(d) Utah Rural Water Association staff may conduct surveys of water systems if the system's population is less than 10,000;

(e) Consulting Engineers under the direction of a Registered Professional Engineer;

(f) Other qualified individuals who are authorized in writing by the Director may conduct surveys.

(7) SANITARY SURVEY REPORT CONTENT

The Director will prescribe the form and content of sanitary survey reports and be empowered to reject all or part of unacceptable reports.

(8) ACCESS TO WATER FACILITIES

Department of Environmental Quality employees after reasonable notice and presentation of credentials, may enter any part of a public water system at reasonable times to inspect the facilities and water quality records, conduct sanitary surveys, take samples and otherwise evaluate compliance with Utah's drinking water rules. All others who have been authorized by the Director to conduct sanitary surveys must have the permission of the water system owner or designated representative before a sanitary survey may be conducted.

(9) CORRECTIVE ACTION

Public water systems must comply with requirements found in R309-215-16(3)(a)(iii), R309-215-16(3)(a)(iv), R309-215-16(3)(a)(v), R309-215-16(3)(a)(vi), and R309-215-16(3)(a)(vii).

(10) Refer to R309-100-8 and R309-105-6 for further requirements.

R309-100-~~8~~7. Rating System.

The Director shall assign a rating to each public water supply in order to provide a concise indication of its condition and performance. The criteria to be used for determining a water system's rating shall be as set forth in R309-400.

R309-100-~~9~~8. Orders and Emergency Actions.

(1) In situations in which a public water system fails to meet the requirements of these rules, the Director may issue an order to a water supplier to take appropriate protective or corrective measures.

(2) Failure to comply with these rules or with an order issued by the Director may result in the imposition of penalties as provided in the Utah Safe Drinking Water Act and R309.

(3) The Director may respond to emergency situations involving public drinking water, including emergency situations as described in R309-105-18, in a manner appropriate to protect the public health. The Director's response may include the following:

(a) Issuing press releases to inform the public of any confirmed or possible hazards in their drinking water.

(b) Ordering water suppliers to take appropriate measures to protect public health, including issuance of orders pursuant to 63G-4-502, if warranted.

R309-100-~~10~~9. Variances.

(1) Variances to the requirements of R309-200 of these rules may be granted by the Board to water systems which, because of characteristics of their raw water sources, cannot meet the required maximum contaminant levels despite the application of best technology and treatment techniques available (taking costs into consideration).

(2) The variance will be granted only if doing so will not result in an unreasonable risk to health.

(3) No variance from the maximum contaminant level for total coliforms are permitted.

(4) No variance from the minimum filtration and disinfection requirements of R309-525 and R309-530 will be permitted for sources classified by the Director as directly influenced by surface water.

(6) Within one year of the date any variance is granted, the Board shall prescribe a schedule by which the water system will come into compliance with the maximum contaminant level in question. The requirements of Section 1415 of the Federal Safe Drinking Water Act, PL 104-182, are hereby incorporated by reference. The Board shall provide notice and opportunity for public hearing prior to granting any variance or determining the compliance schedule. Procedures for giving notice and opportunity for hearing will be as outlined in 40 CFR Section 142.44.

R309-100-~~11~~10. Exemptions.

(1) The Board may grant an exemption from the requirements of R309-200 or from any required treatment technique if:

(a) Due to compelling factors (which may include economic factors), the public water system is unable to comply with contaminant level or treatment technique requirements, and

(b) The public water system was in operation on the effective date of such contaminant level or treatment technique requirement, and

(c) The granting of the exemption will not result in an unreasonable risk to health.

(2) No exemptions from the maximum contaminant level for total coliforms are permitted.

(3) No exemptions from the minimum disinfection requirements of R309-200-5(7) will be permitted for sources classified by the Director as directly influenced by surface water.

(4) Within one year of the granting of an exemption, the Board shall prescribe a schedule by which the water system will come into compliance with contaminant level or treatment technique requirement. The requirements of Section 1416 of the Federal Safe Drinking Water Act, PL 104-182, are hereby incorporated by reference.

(5) The Board shall provide notice and opportunity for an exemption hearing as provided in 40 CFR Section 142.54.

KEY: drinking water, environmental protection, administrative procedures
Date of Enactment or Last Substantive Amendment: ~~February 3, 2011~~
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

R309-105. Administration: General Responsibilities of Public Water Systems.

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R309-105. Administration: General Responsibilities of Public Water Systems.

R309-105-1. Purpose.

The purpose of this rule is to set forth the general responsibilities of public water systems, water system owners and operators.

R309-105-2. 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 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-105-3. Definitions.

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

R309-105-4. General.

(1) Water suppliers are responsible for the quality of water delivered to their customers. In order to give the public reasonable assurance that the water which they are consuming is satisfactory, the Board has established rules for the design, construction, water quality, water treatment, contaminant monitoring, source protection, operation and maintenance of public water supplies.

(2) For compliance monitoring required by R309-200 through 215, public water systems must use a laboratory certified by the Utah Public Health Department in accordance with R444-14-4. The Federal Safe Drinking Water Act requires each analyte to be analyzed by a specific method. These methods are described in the July 1, 1992 through 2015, editions of 40 CFR Parts 141, 142, and 143 (Safe Drinking Water Act).

R309-105-5. Exemptions from Monitoring Requirements.

(1) The applicable requirements specified in R309-205, R309-210 and R309-215 for monitoring shall apply to each public water system, unless the public water system meets all of the following conditions:

(a) Consists only of distribution and storage facilities (and does not have any collection and treatment facilities);

(b) Obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;

(c) Does not sell water to any person; and

(d) Is not a carrier which conveys passengers in interstate commerce.

(2) When a public water system supplies water to one or more other public water systems, the Director may modify the monitoring requirements imposed by R309-205, R309-210 and R309-215 to the extent that the interconnection of the systems justifies treating them as a single system for monitoring purposes.

(3) In no event shall the Director authorize modifications in the monitoring requirements which are less stringent than requirements established by the Federal Safe Drinking Water Act.

R309-105-6. Construction of Public Drinking Water Facilities.

The following requirements pertain to the construction of public water systems.

(1) Approval of Engineering Plans and Specifications

(a) Complete plans and specifications for all public drinking water projects, as described in R309-500-5, shall be approved in writing (Plan Approval) by the Director prior to the commencement of construction. The Director may also authorize the Engineering Manager for the Division to issue Plan Approvals. A minimum 30-day review time should be assumed.

(b) Appropriate engineering reports, supporting information and master plans may also be required by the Director as needed to evaluate the proposed project. A certificate of convenience and necessity or an exemption therefrom, issued by the Public Service Commission, shall be filed with the Director prior to approval of any plans or specifications for projects described in R309-500-4(1) as new or previously un-reviewed water system.

(2) Acceptable Design and Construction Methods

(a) The design and construction methods of all public drinking water facilities shall conform to the applicable standards contained in R309-500 through R309-550 of

these rules. The ~~Director~~Division may require modifications to plans and specifications before approval is granted.

(b) There may be times in which the requirements of the applicable standards contained in R309-500 through R309-550 are not appropriate. Thus, the Director may grant an "exception" to portions of these standards if it can be shown that the granting of such an exception will not jeopardize the public health. The Director may also authorize the Engineering Manager for the Division to grant exceptions to the separation requirements under R309-550-7 if the requirements of that rule are met. In order for the ~~Director~~ Division to consider such a request, the public drinking water system shall submit a written request directly from the management of the public drinking water system, preferably on system letterhead, that includes the following:

(i) citation of the specific rule for which the "exception" is being requested;

(ii) a detailed explanation, drawings may be included, of why the conditions of rule cannot be met;

(iii) what the system proposes, drawings may be included, in lieu of rule;

(iv) justification the proposed alternative will protect the public health to a similar or better degree than required by rule.

Physical conditions as well as cost may be justification for requesting an "exception-to-rule."

(c) Alternative or new treatment techniques may be developed which are not specifically addressed by the applicable standards contained in R309-500 through R309-550. These treatment techniques may be accepted by the Director if it can be shown that:

(i) They will result in a finished water meeting the requirements of R309-200 of these regulations.

(ii) The technique will produce finished water which will protect public health to the same extent provided by comparable treatment processes outlined in the applicable standards contained in R309-500 through R309-550.

(iii) The technique is as reliable as any comparable treatment process governed by the applicable standards contained in R309-500 through R309-550.

(3) Description of "Public Drinking Water Project"

Refer to R309-500-5 for the description of a public drinking water project and R309-500-6 for required items to be submitted for plan approval.

(4) Specifications for the drilling of a public water supply well

may be prepared and submitted by a licensed well driller holding a current Utah Well Driller's Permit if authorized by the Director.

(5) Drawing Quality and Size

Drawings which are submitted shall be compatible with Division of Drinking Water Document storage. Drawings which are illegible or of unusual size will not be accepted for review. Drawing size shall not exceed 30" x 42" nor be less than 8-1/2" x 11".

(6) Requirements After Approval of Plans for Construction

After the approval of plans for construction, and prior to operation of any facilities dealing with drinking water, the items required by R309-500-9 shall be submitted and an operating permit received.

R309-105-7. Source Protection.

(1) Public Water Systems are responsible for protecting their sources of drinking water from contamination. R309-600 and R309-605 sets forth minimum requirements to establish a uniform, statewide program for implementation by PWSs to protect their sources of drinking water. PWSs are encouraged to enact more stringent programs to protect their sources of drinking water if they decide they are necessary.

(2) R309-600 applies to ground-water sources and to ground-water sources which are under the direct influence of surface water which are used by PWSs to supply their systems with drinking water.

(3) R309-605 applies to PWSs which obtain surface water prior to treatment and distribution and to PWSs obtaining water from ground-water sources which are under the direct influence of surface water. However, compliance with this rule is voluntary for public transient non-community water systems to the extent that they are using existing surface water sources of drinking water.

R309-105-8. Existing Water System Facilities.

(1) All public water systems shall deliver water meeting the applicable requirements of R309-200 of these rules.

(2) Existing facilities shall be brought into compliance with R309-500 through R309-550 or shall be reliably capable of delivering water meeting the requirements of R309-200.

(3) In situations where a water system is providing water of unsatisfactory quality, or when the quality of the water or the public health is threatened by poor physical facilities, the water system management shall solve the problem(s).

R309-105-9. Minimum Water Pressure.

(1) Unless otherwise specifically approved by the Director, no water supplier shall allow any connection to the water system where the dynamic water pressure at the point of connection will fall below 20 psi during the normal operation of the water system. Water systems approved prior to January 1, 2007, are required to maintain the above minimum dynamic water pressure at all locations within their distribution system. Existing public drinking water systems, approved prior to January 1, 2007, which expand their service into new areas or supply new subdivisions shall meet the minimum dynamic water pressure requirements in R309-105-9(2) at any point of connection in the new service areas or new subdivisions.

(2) Unless otherwise specifically approved by the Director, new public drinking water systems constructed after January 1, 2007 shall be designed and shall meet the following minimum water pressures at points of connection:

(a) 20 psi during conditions of fire flow and fire demand experienced during peak day demand;

(b) 30 psi during peak instantaneous demand; and

(c) 40 psi during peak day demand.

(3) Individual home booster pumps are not allowed as indicated in R309-540-5(4)(c).

R309-105-10. Operation and Maintenance Procedures.

All routine operation and maintenance of public water supplies shall be carried out with due regard for public health and safety. The following sections describe procedures which shall be used in carrying out some common operation and maintenance procedures.

(1) Chemical Addition

(a) Water system operators shall determine that all chemicals added to water intended for human consumption are suitable for potable water use and comply with ANSI/NSF Standard 60.

(b) No chemicals or other substances shall be added to public water supplies unless the chemical addition facilities and chemical type have been reviewed and approved by the Director.

(c) Chlorine, when used in the distribution system, shall be added in sufficient quantity to achieve either "breakpoint" and yield a detectable free chlorine residual or a detectable combined chlorine residual in the distribution system at points to be determined by the Director. Residual checks shall be taken a minimum of three times each week by the operator of any system using disinfectants. The Director may, however, reduce the frequency of residual checks if he determines that this would be an unwarranted hardship on the water system operator and, furthermore, the disinfection equipment has a verified record of reliable operation. Suppliers, when checking for residuals, shall use test kits and methods which meet the requirements of the U.S. EPA. The "DPD" test method is recommended for free chlorine residuals. Information on the suppliers of this equipment is available from the Division of Drinking Water.

(2) New and Repaired Mains

(a) All new water mains shall meet the requirements of R309-550-6 with regard to materials of construction. All products in contact with culinary water shall comply with ANSI/NSF Standard 61.

(b) All new and repaired water mains or appurtenances shall be disinfected in accordance with AWWA Standard C651-92. The chlorine solution shall be flushed from the water main with potable water prior to the main being placed in use.

(c) All products used to recoat the interiors of storage structures and which may come in contact with culinary water shall comply with ANSI/NSF Standard 61.

(3) Reservoir Maintenance and Disinfection

After a reservoir has been entered for maintenance or re-coating, it shall be disinfected prior to being placed into service. Procedures given in AWWA Standard C651-92 shall be followed in this regard.

(4) Spring Collection Area Maintenance

(a) Spring collection areas shall be periodically cleared of deep rooted vegetation to prevent root growth from clogging collection lines. Frequent hand or mechanical clearing of spring collection areas 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 shall be given 1) only when acceptable pesticides are proposed; 2) when the pesticide product manufacturer certifies that no harmful substance will be imparted to the water; and 3) only when spring development meets the requirements of these rules (see R309-515-7).

(5) Security

All water system facilities such as spring junction boxes, well houses, reservoirs, and treatment facilities shall be secure.

(6) Seasonal Operation

Water systems operated seasonally shall be disinfected and flushed according to the techniques given in AWWA Standard C651-92 and C652-92 prior to each season's use. A satisfactory bacteriologic sample shall be achieved prior to use. During the non-use period, care shall be taken to close all openings into the system.

(7) Pump Lubricants

All oil lubricated pumps for culinary wells shall utilize mineral oils suitable for human consumption as determined by the Director. To assure proper performance, and to prevent the voiding of any warranties which may be in force, the water supplier should confirm with individual pump manufacturers that the oil which is selected will have the necessary properties to perform satisfactorily.

R309-105-11. Operator Certification.

All community and non-transient non-community water systems or any public system that employs treatment techniques for surface water or ground water under the direct influence of surface water shall have an appropriately certified operator in accordance with the requirements of these rules. Refer to R309-300, Certification Rules for Water Supply Operators, for specific requirements.

R309-105-12. Cross Connection Control.

(1) The water supplier shall not allow a connection to his system which may jeopardize its quality and integrity. Cross connections are not allowed unless controlled by an approved and properly operating backflow prevention assembly. The requirements of Chapter 6 of the 2009 International Plumbing Code and its amendments as adopted by the Department of Commerce under R156-56 shall be met with respect to cross connection control and backflow prevention.

(2) Each water system shall have a functioning cross connection control program. The program shall consist of five designated elements documented on an annual basis. The elements are:

(a) a legally adopted and functional local authority to enforce a cross connection control program (i.e., ordinance, bylaw or policy);

(b) providing public education or awareness material or presentations;

(c) an operator with adequate training in the area of cross connection control or backflow prevention;

(d) written records of cross connection control activities, such as, backflow assembly inventory; and

(e) test history and documentation of on-going enforcement (hazard assessments and enforcement actions) activities.

(3) Suppliers shall maintain, as proper documentation, an inventory of each pressure atmospheric vacuum breaker, double check valve, reduced pressure zone principle assembly, and high hazard air gap used by their customers, and a service record for each such assembly.

(4) Backflow prevention assemblies shall be in-line serviceable (repairable), in-line testable and have certification through third party certifying agencies to be used within a public drinking water system. Third party certification shall consist of any combination of two certifications, laboratory or field, performed by a recognized testing organization which has demonstrated competency to perform such tests.

(5) Backflow prevention assemblies shall be inspected and tested at least once a year, by an individual certified for such work as specified in R309-305. Suppliers shall maintain, as proper documentation, records of these inspections. This testing responsibility may be borne by the water system or the water system management may require that the customer having the backflow prevention assembly be responsible for having the device tested.

(6) Suppliers serving areas also served by a pressurized irrigation system shall prevent cross connections between the two. Requirements for pressurized irrigation systems are outlined in Section 19-4-112 of the Utah Code.

R309-105-13. Finished Water Quality.

All public water systems are required to monitor their water according to the requirements of R309-205, R309-210 and R309-215 to determine if the water quality standards of R309-200 have been met. Water systems are also required to keep records and, under certain circumstances, give public notice as required in R309-220.

R309-105-14. Operational Reports.

(1) Written Operational Reports.

(a) If, in the opinion of the Director, a water system is not properly operated, the Director may require a public water system to submit a written operational report covering the operation of the whole or a part of the water system's infrastructure.

(b) The Director may require revisions to the submitted operational report to ensure satisfactory operation, and may order the water system to follow the operational report.

(c) If the water system fails to implement the provisions of the operational report, as evidenced by unsatisfactory delivery of a safe and/or reliable supply of drinking water, the Director may order further remedies as deemed necessary.

(2) Treatment techniques for acrylamide and epichlorohydrin.

(a) Each public water system shall certify annually in writing to the Director (using third party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the levels specified in R309-215-8(2)(c).

(b) Certifications may rely on manufacturer's data.

(3) (a) All water systems using chemical addition or specialized equipment for the treatment of drinking water shall regularly complete operational reports. This information shall be evaluated to confirm that the treatment process is being done properly, resulting in successful treatment.

(b) The information to be provided, and the frequency at which it is to be gathered and reported, will be determined by the Director.

R309-105-15. Report Submittal.

(1) A public water system shall submit water use data if required by a state agency and shall verify the accuracy of the data by including a certification by a certified operator or a professional engineer performing the duties of a certified operator.

(2) A public water system shall comply with the report submittal requirements of the R309 rules.

R309-105-16. Reporting Test Results.

(1) If analyses are made by certified laboratories other than the state laboratory, these results shall be forwarded to the Division as follows:

(a) The supplier shall report to the Division the analysis of water samples which fail to comply with the Primary Drinking Water Standards of R309-200. Except where a different reporting period is specified in R309-205, R309-210 or R309-215, this report shall be submitted within 48 hours after the supplier receives the report from his lab. The Division may be reached at (801)536-4200.

(b) Monthly summaries of bacteriologic results shall be submitted within ten days following the end of each month.

(c) All results of TTHM samples shall be reported to the Division within 10 days of receipt of analysis for systems monitoring pursuant to R309-210-9.

(d) For all samples other than samples showing unacceptable results, bacteriologic samples or TTHM samples, the time between the receipt of the analysis and the reporting of the results to the Division shall not exceed 40 days.

(e) Arsenic sampling results shall be reported to the nearest 0.001 mg/L.

(f) There are additional reporting requirements in other sections of the rules, see R309-215-16(5).

(2) Disinfection byproducts, maximum residual disinfectant levels and disinfection byproduct precursors and enhanced coagulation or enhanced softening. This section applies to the reporting requirements of R309-210-8, R309-215-12 and R309-215-13. For the reporting requirements of R309-210-9, R309-210-10 and R309-215-15 are contained within R309-210-9, R309-210-10 and R309-215-15, respectively.

(a) Systems required to sample quarterly or more frequently shall report to the State within 10 days after the end of each quarter in which samples were collected. Systems required to sample less frequently than quarterly shall report to the State within 10 days after the end of each monitoring period in which samples were

collected. The Director may choose to perform calculations and determine whether the MCL was exceeded, in lieu of having the system report that information.

(b) Disinfection byproducts. Systems shall report the information specified.

(i) Systems monitoring for TTHMs and HAA5 under the requirements of R309-210-8(2) on a quarterly or more frequent basis shall report:

(A) The number of samples taken during the last quarter.

(B) The location, date, and result of each sample taken during the last quarter.

(C) The arithmetic average of all samples taken in the last quarter.

(D) The annual arithmetic average of the quarterly arithmetic averages of this section for the last four quarters.

(E) Whether, based on R309-210-8(6)(b)(i), the MCL was violated.

(ii) Systems monitoring for TTHMs and HAA5 under the requirements of R309-210-8(2) less frequently than quarterly (but at least annually) shall report:

(A) The number of samples taken during the last year.

(B) The location, date, and result of each sample taken during the last monitoring period.

(C) The arithmetic average of all samples taken over the last year.

(D) Whether, based on R309-210-8(6)(b)(i), the MCL was violated.

(iii) Systems monitoring for TTHMs and HAA5 under the requirements of R309-210-8(2) less frequently than annually shall report:

(A) The location, date, and result of the last sample taken.

(B) Whether, based on R309-210-8(6)(b)(i), the MCL was violated.

(iv) Systems monitoring for chlorite under the requirements of R309-210-8(2) shall report:

(A) The number of entry point samples taken each month for the last 3 months.

(B) The location, date, and result of each sample (both entry point and distribution system) taken during the last quarter.

(C) For each month in the reporting period, the arithmetic average of all samples taken in each three sample set taken in the distribution system.

(D) Whether, based on R309-210-8(6)(b)(ii), the MCL was violated.

(v) System monitoring for bromate under the requirements of R309-210-8(2) shall report:

(A) The number of samples taken during the last quarter.

(B) The location, date, and result of each sample taken during the last quarter.

(C) The arithmetic average of the monthly arithmetic averages of all samples taken in the last year.

(D) Whether, based on R309-210-8(6)(b)(iii), the MCL was violated.

(c) Disinfectants. Systems shall report the information specified to the Director within ten days after the end of each month the system serves water to the public, except as otherwise noted:

(i) Systems monitoring for chlorine or chloramines under the requirements of R309-210-8(3)(a) shall report and certify, by signing the report form provided by the Director, that all the information provided is accurate and correct and that any chemical introduced into the drinking water complies with ANSI/NSF Standard 60:

(A) The number of samples taken during each month of the last quarter.

(B) The monthly arithmetic average of all samples taken in each month for the last 12 months.

(C) The arithmetic average of all monthly averages for the last 12 months.

(D) The additional data required in R309-210-8(3)(a)(ii).

(E) Whether, based on R309-210-8(6)(c)(i), the MRDL was violated.

(ii) Systems monitoring for chlorine dioxide under the requirements of R309-210-8(3) shall report:

(A) The dates, results, and locations of samples taken during the last quarter.

(B) Whether, based on R309-210-8(6)(c)(ii), the MRDL was violated.

(C) Whether the MRDL was exceeded in any two consecutive daily samples and whether the resulting violation was acute or nonacute.

(d) Disinfection byproduct precursors and enhanced coagulation or enhanced softening. Systems shall report the information specified.

(i) Systems monitoring monthly or quarterly for TOC under the requirements of R309-215-12 and required to meet the enhanced coagulation or enhanced softening requirements in R309-215-13(2)(b) or (c) shall report:

(A) The number of paired (source water and treated water) samples taken during the last quarter.

(B) The location, date, and results of each paired sample and associated alkalinity taken during the last quarter.

(C) For each month in the reporting period that paired samples were taken, the arithmetic average of the percent reduction of TOC for each paired sample and the required TOC percent removal.

(D) Calculations for determining compliance with the TOC percent removal requirements, as provided in R309-215-13(3)(a).

(E) Whether the system is in compliance with the enhanced coagulation or enhanced softening percent removal requirements in R309-215-13(2) for the last four quarters.

(ii) Systems monitoring monthly or quarterly for TOC under the requirements of R309-215-12 and meeting one or more of the alternative compliance criteria in R309-215-13(1)(b) or (c) shall report:

(A) The alternative compliance criterion that the system is using.

(B) The number of paired samples taken during the last quarter.

(C) The location, date, and result of each paired sample and associated alkalinity taken during the last quarter.

(D) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water TOC for systems meeting a criterion in R309-215-13(1)(b)(i) or (iii) or of treated water TOC for systems meeting the criterion in R309-215-13(1)(b)(ii).

(E) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water SUVA for systems meeting the criterion in R309-215-13(1)(b)(v) or of treated water SUVA for systems meeting the criterion in R309-215-13(1)(b)(vi).

(F) The running annual average of source water alkalinity for systems meeting the criterion in R309-215-13(1)(b)(iii) and of treated water alkalinity for systems meeting the criterion in R309-215-13(1)(c)(i).

(G) The running annual average for both TTHM and HAA5 for systems meeting the criterion in R309-215-13(1)(b)(iii) or (iv).

(H) The running annual average of the amount of magnesium hardness removal (as $CaCO_3$, in mg/L) for systems meeting the criterion in R309-215-13(1)(c)(ii).

(I) Whether the system is in compliance with the particular alternative compliance criterion in R309-215-13(1)(b) or (c).

(3) The public water system, within 10 days of completing the public notification requirements under R309-220 for the initial public notice and any repeat notices, shall submit to the Division a certification that it has fully complied with the public notification regulations. The public water system shall include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media.

(4) All samples taken in accordance with R309-215-6 shall be submitted within 10 days following the end of the operational period specified for that particular treatment. Finished water samples results for the contaminant of concern that exceed the Primary Drinking Water Standards of R309-200, shall be reported to the Division within 48 hours after the supplier receives the report. The Division may be reached at (801) 536-4000.

(5) Documentation of operation and maintenance for point-of-use or point-of-entry treatment units shall be provided to the Division annually. The Division shall receive the documentation by January 31 annually.

R309-105-17. Record Maintenance.

All public water systems shall retain on their premises or at convenient location near their premises the following records:

(1) Records of microbiological analyses and turbidity analyses made pursuant to this Section shall be kept for not less than five years. Records of chemical analyses made pursuant to this Section shall be kept for not less than ten years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

(a) The date, place and time of sampling, and the name of the person who collected the sample;

(b) Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample.

(c) Date of analysis;

(d) Laboratory and person responsible for performing analysis;

(e) The analytical technique/method used; and

(f) The results of the analysis.

(2) Lead and copper recordkeeping requirements.

(a) Any water system subject to the requirements of R309-210-6 shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Director determinations, and any other information required by R309-210-6.

(b) Each water system shall retain the records required by this section for no fewer than 12 years.

(3) Records of action taken by the system to correct violations of primary drinking water regulations shall be kept for a period not less than three years after the last action taken with respect to the particular violation involved.

(4) Copies of any written reports, summaries or communications relating to sanitary surveys of the system conducted by the system itself, by a private consultant, or by any local, State or Federal agency, shall be kept for a period not less than ten years after completion of the sanitary survey involved.

(5) Records concerning a variance or exemption granted to the system shall be kept for a period ending not less than five years following the expiration of such variance or exemption.

(6) Records that concern the tests of a backflow prevention assembly and location shall be kept by the system for a minimum of not less than five years from the date of the test.

(7) Copies of public notices issued pursuant to R309-220 and certifications made to the Director pursuant to R309-105-16 shall be kept for three years after issuance.

(8) Copies of monitoring plans developed pursuant to these rules shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under R309-105-17(1), except as otherwise specified. In all cases the monitoring plans shall be kept as long as the any associated report.

(9) A water system must retain a complete copy of your IDSE report submitted under this section for 10 years after the date that you submitted your IDSE report. If the Director modifies the R309-210-10 monitoring requirements that you recommended in your IDSE report or if the Director approves alternative monitoring locations, you must keep a copy of the Director's notification on file for 10 years after the date of the Director's notification. You must make the IDSE report and any Director notification available for review by the Director or the public.

(10) A water system must retain a complete copy of its 40/30 certification submitted under this R309-210-9 for 10 years after the date that you submitted your certification. You must make the certification, all data upon which the certification is based, and any Director notification available for review by the Director or the public.

(11) A water subject to the disinfection profiling requirements of R309-215-14 shall keep must keep results of profile (raw data and analysis) indefinitely.

(12) A water system subject to the disinfection benchmarking requirements of R309-215-14 shall keep must keep results of profile (raw data and analysis) indefinitely.

R309-105-18. Emergencies.

(1) The Director or the local health department shall be informed by telephone by a water supplier of any "emergency situation". The term "emergency situation" includes the following:

(a) The malfunction of any disinfection facility such that a detectable residual cannot be maintained at all points in the distribution system.

(b) The malfunction of any "complete" treatment plant such that a clearwell effluent turbidity greater than 5 NTU is maintained longer than fifteen minutes.

(c) Muddy or discolored water (which cannot be explained by air entrainment or re-suspension of sediments normally deposited within the distribution system) is experienced by a significant number of individuals on a system.

(d) An accident has occurred which has, or could have, permitted the entry of untreated surface water and/or other contamination into the system (e.g. break in an unpressurized transmission line, flooded spring area, chemical spill, etc.)

(e) A threat of sabotage has been received by the water supplier or there is evidence of vandalism or sabotage to any public drinking water supply facility which may affect the quality of the delivered water.

(f) Any instance where a consumer reports becoming sick by drinking from a public water supply and the illness is substantiated by a doctor's diagnosis (unsubstantiated claims should also be reported to the Division of Drinking Water, but this is not required).

(2) If an emergency situation exists, the water supplier shall then contact the Division in Salt Lake City within eight hours. Division personnel may be reached at all times through 801-536-4123.

(3) All suppliers are advised to develop contingency plans to cope with possible emergency situations. In many areas of the state the possibility of earthquake damage shall be realistically considered.

KEY: drinking water, watershed management
Date of Enactment or Last Substantive Amendment: ~~November 22, 2016~~
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

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R309-110. Administration: Definitions.

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R309-110. Administration: Definitions.

R309-110-1. Purpose.

The purpose of this rule is to define certain terms and expressions that are utilized throughout all rules under R309. Collectively, those rules govern the administration, monitoring, operation and maintenance of public drinking water systems as well as the design and construction of facilities within said systems.

R309-110-2. 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 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-110-3. Acronyms.

As used in R309:

"AF" means Acre Foot.

"AWOP" means Area Wide Optimization Program.

"AWWA" means American Water Works Association.

"BAT" means Best Available Technology.

"C" means Residual Disinfectant Concentration.

"CCP" means Composite Correction Program.

"CCR" means Consumer Confidence Report.

"CEU" means Continuing Education Unit.

"CFE" means Combined Filter Effluent.

"CFR" means Code of Federal Regulations.

"cfs" means Cubic Feet Per Second.

"CPE" means Comprehensive Performance Evaluation.

"CT" means Residual Concentration multiplied by Contact Time.

"CTA" means Comprehensive Technical Assistance.

"CWS" means Community Water System.

"DBPs" means Disinfection Byproducts.

"DE" means Diatomaceous Earth.

"DTF" means Data Transfer Format.

"DWSP" means Drinking Water Source Protection.

"EP" means Entry Point.

"EPA" means Environmental Protection Agency.

"ERC" means Equivalent Residential Connection.

"FBRR" means Filter Backwash Recycling Rule.

"fps" means Feet Per Second

"FR" means Federal Register.

"gpd" means Gallons Per Day.

"gpm" means Gallons Per Minute.

"gpm/sf" means Gallons Per Minute Per Square Foot.

"GWR" means Ground Water Rule.

"GWUDI" means Ground Water Under Direct Influence of Surface Water.

"HAA5s" means Haloacetic Acids (Five).

"HPC" means Heterotrophic Plate Count.

"ICR" means Information Collection Rule of 40 CRF 141 subpart M.

"IESWTR" means Interim Enhanced Surface Water Treatment Rule.

"IFE" means Individual Filter Effluent.

"LT1ESWTR" means Long Term 1 Enhanced Surface Water Treatment Rule.

"LT2ESWTR" means Long Term 2 Enhanced Surface Water Treatment Rule.

"MCL" means Maximum Contaminant Level.

"MCLG" means Maximum Contaminant Level Goal.

"M and R" means Monitoring and Reporting.

"MDBP" means Microbial-Disinfection Byproducts.

"M/DBP Cluster" means Microbial-Disinfectants/Disinfection Byproducts Cluster.

"MG" means Million Gallons.

"MGD" means Million Gallons Per Day.

"mg/L" means Milligrams Per Liter

"MRDL" means Maximum Residual Disinfectant Level.

"MRDLG" means Maximum Residual Disinfectant Level Goal.

"NCWS" means Non-Community Water System.

"NTNC" means Non-Transient Non-Community.

"NTU" means Nephelometric Turbidity Unit.

"PN" means Public Notification.

"POE" means Point-of-Entry.

"POU" means Point-of-Use.

"PWS" means Public Water System.

"PWS-ID" means Public Water System Identification Number.

"RTC" means Return to Compliance.

"SDWA" means Safe Drinking Water Act.

"SDWIS/FED" means Safe Drinking Water Information System/Federal Version.

"SDWIS/STATE" means Safe Drinking Water Information System/State Version.

"SNC" means Significant Non-Compliance.

"Stage 1 DBPR" means Stage 1 Disinfectants and Disinfection Byproducts Rule.

"Stage 2 DBPR" means Stage 2 Disinfectants and Disinfection Byproducts Rule.

"Subpart H" means A PWS using SW or GWUDI.

"Subpart P" means A PWS using SW or GWUDI and serving at least 10,000 people.

"Subpart S" means Provisions of 40 CRF 141 subpart S commonly referred to as the Information Collection Rule.

"Subpart T" means A PWS using SW or GWUDI and serving less than 10,000 people.

"SUVA" means Specific Ultraviolet Absorption.

"SW" means Surface Water.

"SWAP" means Source Water Assessment Program.

"SWTR" means Surface Water Treatment Rule.

"T" means Contact Time.

"TA" means Technical Assistance.

"TCR" means Total Coliform Rule.

"TNCWS" means Transient Non-Community Water System.

"TNTC" means Too Numerous To Count.

"TOC" means Total Organic Carbon.

"TT" means Treatment Technique.

"TTHM" means Total Trihalomethanes.

"UAC" means Utah Administrative Code.

"UPDWR" means Utah Public Drinking Water Rules (R309 of the UAC).

"WCP" means Watershed Control Program.

"WHP" means Wellhead Protection.

R309-110-4. Definitions.

As used in R309:

"Action Level" means the concentration of lead or copper in drinking water tap samples (0.015 mg/l for lead and 1.3 mg/l for copper) which determines, in some cases, the corrosion treatment, public education and lead line replacement requirements that a water system is required to complete.

"AF" means acre foot and is the volume of water required to cover an acre to a depth of one foot (one AF is equivalent to 325,851 gallons).

"Air gap" The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, catch basin, plumbing fixture or other device and the flood level rim of the receptacle. This distance shall be two times the diameter of the effective opening for openings greater than one inch in diameter where walls or obstructions are spaced from the nearest inside edge of the pipe opening a distance greater than three times the diameter of the effective openings for a single wall, or a distance greater than four times the diameter of the effective opening for two intersecting walls. This distance shall be three times the diameter of the effective opening where walls or obstructions are closer than the distances indicated above.

"ANSI/NSF" refers to the American National Standards Institute and NSF International. NSF International has prepared at least two health effect standards dealing with treatment chemicals added to drinking water and system components that will come into contact with drinking water, these being Standard 60 and Standard 61. The American National Standards Institute acts as a certifying agency, and determines which laboratories may certify to these standards.

"Approval" unless indicated otherwise, shall be taken to mean a written statement of acceptance from the Director.

"Approved" refers to a rating placed on a system by the Division and means that the public water system is operating in substantial compliance with all the Rules of R309.

"Average Yearly Demand" means the amount of water delivered to consumers by a public water system during a typical year, generally expressed in MG or AF.

"AWWA" refers to the American Water Works Association located at 6666 West Quincy Avenue, Denver, Colorado 80235. Reference within these rules is generally to a particular

Standard prepared by AWWA and which has completed the ANSI approval process such as ANSI/AWWA Standard C651-92 (AWWA Standard for Disinfecting Water Mains).

"Backflow" means the undesirable reversal of flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of the potable water supply from any source. Also see backsiphonage, backpressure and cross-connection.

"Backpressure" means the phenomena that occurs when the customer's pressure is higher than the supply pressure, This could be caused by an unprotected cross connection between a drinking water supply and a pressurized irrigation system, a boiler, a pressurized industrial process, elevation differences, air or steam pressure, use of booster pumps or any other source of pressure. Also see backflow, backsiphonage and cross connection.

"Backsiphonage" means a form of backflow due to a reduction in system pressure which causes a subatmospheric or negative pressure to exist at a site or point in the water system. Also see backflow and cross-connection.

"Bag Filters" are pressure-driven separation devices that remove particle matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside.

"Bank Filtration" is a water treatment process that uses a well to recover surface water that has naturally infiltrated into ground water through a river bed or bank(s). Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well(s).

"Best Available Technology" (BAT) means the best technology, treatment techniques, or other means which the Director finds, after examination under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purposes of setting MCLs for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon for all these chemicals except vinyl chloride. Central treatment using packed tower aeration is also identified as BAT for synthetic organic chemicals.

"Board" means the Drinking Water Board.

"Body Politic" means the State or its agencies or any political subdivision of the State to include a county, city, town, improvement district, taxing district or any other governmental subdivision or public corporation fo the State.

"Breakpoint Chlorination" means addition of chlorine to water until the chlorine demand has been satisfied. At this point, further addition of chlorine will result in a free residual chlorine that is directly proportional to the amount of chlorine added beyond the breakpoint.

"C" is short for "Residual Disinfectant Concentration."

"Capacity Development" means technical, managerial, and financial capabilities of the water system to plan for, achieve, and maintain compliance with applicable drinking water standards.

"Cartridge filters" are pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.

"cfs" means cubic feet per second and is one way of expressing flowrate (one cfs is equivalent to 448.8 gpm).

"Class" means the level of certification of Backflow Prevention Technician (Class I, II or III).

“Clean compliance history” means a record of no MCL violations; and no coliform treatment technique trigger exceedances or treatment technique violations.

"Coagulation" is the process of destabilization of the charge (predominantly negative) on particulates and colloids suspended in water. Destabilization lessens the repelling character of particulates and colloids and allows them to become attached to other particles so that they may be removed in subsequent processes. The particulates in raw waters (which contribute to color and turbidity) are mainly clays, silt, viruses, bacteria, fulvic and humic acids, minerals (including asbestos, silicates, silica, and radioactive particles), and organic particulate.

"Collection area" means the area surrounding a ground-water source which is underlain by collection pipes, tile, tunnels, infiltration boxes, or other ground-water collection devices.

"Combined distribution system" is the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

"Commission" means the Operator Certification Commission.

"Community Water System" (CWS) means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

"Compliance cycle" means the nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle began January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019.

"Compliance period" means a three-year calendar year period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period ran from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; and the third is from January 1, 1999 to December 31, 2001.

"Comprehensive Performance Evaluation" (CPE) is a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. For purposes of compliance with these rules, the comprehensive performance evaluation must consist of at least the following components: Assessment of plant performance; evaluation of major unit processes; identification and prioritization of performance limiting factors; assessment of the applicability of comprehensive technical assistance; and preparation of a CPE report.

"Confirmed SOC contamination area" means an area surrounding and including a plume of SOC contamination of the soil or water which previous monitoring results have confirmed. The area boundaries may be determined by measuring 3,000 feet horizontally from the outermost edges of the confirmed plume. The area includes deeper aquifers even though only the shallow aquifer is the one contaminated.

"Confluent growth" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion of the filtration area in which discrete bacterial colonies can not be distinguished.

"Consecutive system" is a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system or one or more consecutive systems.

"Contaminant" means any physical, chemical biological, or radiological substance or matter in water.

"Continuing Education Unit" (CEU) means ten contact hours of participation in, and successful completion of, an organized and approved continuing education experience under responsible sponsorship, capable direction, and qualified instruction. College credit in approved courses may be substituted for CEUs on an equivalency basis.

"Conventional Surface Water Treatment" means a series of processes including coagulation, flocculation, sedimentation, filtration and disinfection resulting in substantial particulate removal and inactivation of pathogens.

"Controls" means any codes, ordinances, rules, and regulations that a public water system can cite as currently in effect to regulate potential contamination sources; any physical conditions which may prevent contaminants from migrating off of a site and into surface or ground water; and any site with negligible quantities of contaminants.

"Corrective Action" refers to a rating placed on a system by the Division and means a provisional rating for a public water system not in compliance with the Rules of R309, but making all the necessary changes outlined by the Director to bring them into compliance.

"Corrosion inhibitor" means a substance capable of reducing the corrosiveness of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

"Credit Enhancement Agreement" means any agreement entered into between the Board, on behalf of the State, and an eligible water system for the purpose of providing methods and assistance to eligible water systems to improve the security for and marketability of drinking water project obligations.

"Criteria" means the conceptual standards that form the basis for DWSP area delineation to include distance, ground-water time of travel, aquifer boundaries, and ground-water divides.

"Criteria threshold" means a value or set of values selected to represent the limits above or below which a given criterion will cease to provide the desired degree of protection.

"Cross-Connection" means any actual or potential connection between a drinking (potable) water system and any other source or system through which it is possible to introduce into the public drinking water system any used water, industrial fluid, gas or substance other than the intended potable water. For example, if you have a pump moving non-potable water and hook into the drinking water system to supply water for the pump seal, a cross-connection or mixing may lead to contamination of the drinking water. Also see backsiphonage, backpressure and backflow.

"Cross Connection Control Program" means the program administered by the public water system in which cross connections are either eliminated or controlled.

"Cross Connection Control Commission" means the duly constituted advisory subcommittee appointed by the Board to advise the Board on Backflow Technician Certification and the Cross Connection Control Program of Utah.

"CT" or "CT_{calc}" is the product of "residual disinfectant concentration" (C) in mg/l determined before or at the first customer, and the corresponding "disinfectant contact time" (T) in minutes, i.e., "C" x "T." If a public water system applies disinfectant at more than one point prior to the first customer, the summation of each CT value for each disinfectant sequence before or at the first customer determines the total percent inactivation or "Total Inactivation Ratio." In determining the Total Inactivation Ratio, the public water system must determine the residual disinfectant concentration of each disinfection sequence and corresponding contact time before any subsequent disinfection application point(s).

"$CT_{req'd}$" is the CT value required when the log reduction credit given the filter is subtracted from the (3-log) inactivation requirement for Giardia lamblia or the (4-log) inactivation requirement for viruses.

"$CT_{99.9}$" is the CT value required for 99.9 percent (3-log) inactivation of Giardia lamblia cysts. $CT_{99.9}$ for a variety of disinfectants and conditions appear in Tables 1.1-1.6, 2.1, and 3.1 of Section 141.74(b)(3) in the code of Federal Regulations (also available from the Division).

"Designated person" means the person appointed by a public water system to ensure that the requirements of their Drinking Water Source Protection Plan(s) for ground water sources and/or surface water sources are met.

"Desired Design Discharge Rate" means the discharge rate selected for the permanent pump installed in a public drinking water well source. This pumping rate is selected by the water system owner or engineer and can match or be the same rate utilized during the constant rate pump test required by R309-515 and R309-600 to determine delineated protection zones. For consideration of the number of permanent residential connections or ERC's that a well source can support (see Safe Yield) the Director will consider 2/3 of the test pumping rate as the safe yield.

"Detectable residual" means the minimum level of free chlorine in the water that the analysis method is capable of detecting and indicating positive confirmation.

"Direct Employment" means that the operator is directly compensated by the drinking water system to operate that drinking water system.

"Direct Filtration" means a series of processes including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal.

"Direct Responsible Charge" means active on-site control and management of routine maintenance and operation duties. A person in direct responsible charge is generally an operator of a water treatment plant or distribution system who independently makes decisions during normal operation which can affect the sanitary quality, safety, and adequacy of water delivered to customers. In cases where only one operator is employed by the system, this operator shall be considered to be in direct responsible charge.

"Director" means the Director of the Division of Drinking Water.

"Disadvantaged Communities" are defined as those communities located in an area which has a median adjusted gross income which is less than or equal to 80% of the State's median adjusted gross income, as determined by the Utah State Tax commission from federal individual income tax returns excluding zero exemptions returns.

"Discipline" means type of certification (Distribution or Treatment).

"Disinfectant Contact Time" ("T" in CT calculations) means the time in minutes that it takes water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration ("C") is measured. Where only one "C" is measured, "T" is the time in minutes that it takes water to move from the point of disinfectant application to a point before or at where residual disinfectant concentration ("C") is measured. Where more than one "C" is measured, "T" is (a) for the first measurement of "C," the time in minutes that it takes water to move from the first or only point of disinfectant application to a point before or at the point where the first "C" is measured and (b) for subsequent measurements of "C," the time in minutes that it takes for water to move from the previous "C" measurement point to the "C" measurement point for which the particular "T" is being calculated. Disinfectant contact time in pipelines must be calculated by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.

"Disinfection" means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents (see also Primary Disinfection and Secondary Disinfection).

"Disinfection profile" is a summary of daily Giardia lamblia inactivation through the treatment plant.

"Distribution System" means the use of any spring or well source, distribution pipelines, appurtenances, and facilities which carry water for potable use to consumers through a public water supply. Systems which chlorinate groundwater are in this discipline.

"Distribution System Manager" means the individual responsible for all operations of a distribution system.

"Division" means the Utah Division of Drinking Water, who acts as staff to the Director and is also part of the Utah Department of Environmental Quality.

"Dose-monitoring Strategy" is the method by which a UV reactor maintains the required dose at or near some specified value by monitoring UV dose delivery. Such strategies must include, at a minimum, flow rate and UV intensity (measured via duty UV sensor) and lamp status. They sometimes include UVT and lamp power. Two common Dose-monitoring Strategies are the UV Intensity Setpoint Approach and the Calculated Dose Approach.

(1) The "UV Intensity Setpoint Approach" relies on one or more "setpoints" for UV intensity that are established during validation testing to determine UV dose. During operations, the UV intensity as measured by the UV sensors must meet or exceed the setpoint(s) to ensure delivery of the required dose. Reactors must also be operated within validated operation conditions for flow rates and lamp status. In the UV Intensity Setpoint Approach, UVT does not need to be monitored separately. Instead, the intensity readings by the sensors account for changes in UVT. The

operating strategy can be with either a single setpoint (one UV intensity setpoint is used for all validated flow rates) or a variable setpoint (the UV intensity setpoint is determined using a lookup table or equation for a range of flow rates).

(2) The "Calculated Dose Approach" uses a dose-monitoring equation to estimate the UV dose based on operating conditions (typically flow rate, UV intensity, and UVT). The dose-monitoring equation may be developed by the UV manufacturers using numerical methods; or the systems use an empirical dose-monitoring equation developed through validation testing. During reactor operations, the UV reactor control system inputs the measured parameters into the dose-monitoring equation to produce a calculated dose. The system operator divides the calculated dose by the Validation Factor (see the 2006 Final UV Guidance Manual Chapter 5 for more details on the Validation Factor) and compares the resulting value to the required dose for the target pathogen and log inactivation level.

"Dose Equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission of Radiological Units and Measurements (ICRU).

"Drinking Water" means water that is fit for human consumption and meets the quality standards of R309-200. Common usage of terms such as culinary water, potable water or finished water are synonymous with drinking water.

"Drinking Water Project" means any work or facility necessary or desirable to provide water for human consumption and other domestic uses which has at least fifteen service connections or serves an average of twenty-five individuals daily for at least sixty days of the year and includes collection, treatment, storage, and distribution facilities under the control of the operator and used primarily with the system and collection, pretreatment or storage facilities used primarily in connection with the system but not under such control.

"Drinking Water Project Obligation" means any bond, note or other obligation issued to finance all or part of the cost of acquiring, constructing, expanding, upgrading or improving a drinking water project.

"Drinking Water Regional Planning" means a county wide water plan, administered locally by a coordinator, who facilitates the input of representatives of each public water system in the county with a selected consultant, to determine how each public water system will either collectively or individually comply with source protection, operator certification, monitoring (including consumer confidence reports), capacity development (including technical, financial and managerial aspects), environmental issues, available funding and related studies.

"Dual sample set" is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets

are collected for the purposes of conducting an IDSE under R309-210-9 and determining compliance with the TTHM and HAA5 MCLs under R309-210-10.

"Duty UV Sensors (or Duty Sensors)" are on-line sensors installed in the UV reactor and continuously monitor UV intensity during UV equipment operations.

"DWSP Program" means the program to protect drinking water source protection zones and management areas from contaminants that may have an adverse effect on the health of persons.

"DWSP Zone" means the surface and subsurface area surrounding a ground-water or surface water source of drinking water supplying a PWS, over which or through which contaminants are reasonably likely to move toward and reach such water source.

"Emergency Storage" means that storage tank volume which provides water during emergency situations, such as pipeline failures, major trunk main failures, equipment failures, electrical power outages, water treatment facility failures, source water supply contamination, or natural disasters.

"Engineer" means a person licensed under the Professional Engineers and Land Surveyors Licensing Act, 58-22 of the Utah Code, as a "professional engineer" as defined therein.

"Enhanced coagulation" means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment.

"Enhanced softening" means the improved removal of disinfection byproduct precursors by precipitative softening.

"Equalization Storage" means that storage tank volume which stores water during periods of low demand and releases the water under periods of high demand. Equalization storage provides a buffer between the sources and distribution for the varying daily water demands. Typically, water demands are high in the early morning or evening and relatively low in the middle of the night. A rule-of-thumb for equalization storage volume is that it should be equal to one average day's use.

"Equivalent Residential Connection" (ERC) is a term used to evaluate service connections to consumers other than the typical residential domicile. Public water system management is expected to review annual metered drinking water volumes delivered to non-residential connections and estimate the equivalent number of residential connections that these represent based upon the average of annual metered drinking water volumes delivered to true single family residential connections. This information is utilized in evaluation of the system's source and storage capacities (refer to R309-510).

"Existing ground-water source of drinking water" means a public supply ground-water source for which plans and specifications were submitted to the Division on or before July 26, 1993.

"Existing surface water source of drinking water" means a public supply surface water source for which plans and specifications were submitted to the Division on or before June 12, 2000.

"Filtration" means a process for removing particulate matter from water by passage through porous media.

"Filter profile" is a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts verus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

"Financial Assistance" means a drinking water project loan, credit enhancement agreement, interest buy-down agreement or hardship grant.

"Finished water" is water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals).

"Fire Suppression Storage" means that storage tank volume allocated to fire suppression activities. It is generally determined by the requirements of the local fire marshal, expressed in gallons, and determined by the product of a minimum flowrate in gpm and required time expressed in minutes.

"First draw sample" means a one-liter sample of tap water, collected in accordance with an approved lead and copper sampling site plan, that has been standing in plumbing pipes at least 6 hours and is collected without flushing the tap.

"Flash Mix" is the physical process of blending or dispersing a chemical additive into an unblended stream. Flash Mixing is used where an additive needs to be dispersed rapidly (within a period of one to ten seconds). Common usage of terms such as "rapid mix" or "initial mix" are synonymous with flash mix.

"Floc" means flocculated particles or agglomerated particles formed during the flocculation process. Flocculation enhances the agglomeration of destabilized particles and colloids toward settleable (or filterable) particles (flocs). Flocculated particles may be small (less than 0.1 mm diameter) micro flocs or large, visible flocs (0.1 to 3.0 mm diameter).

"Flocculation" means a process to enhance agglomeration of destabilized particles and colloids toward settleable (or filterable) particles (flocs). Flocculation begins immediately after destabilization in the zone of decaying mixing energy (downstream from the mixer) or as a result of the turbulence of transporting flow. Such incidental flocculation may be an adequate flocculation process in some instances. Normally flocculation involves an intentional and defined process of gentle stirring to enhance contact of destabilized particles

and to build floc particles of optimum size, density, and strength to be subsequently removed by settling or filtration.

"Flowing stream" is a course of running water flowing in a definite channel.

"fps" means feet per second and is one way of expressing the velocity of water.

"G" is used to express the energy required for mixing and for flocculation. It is a term which is used to compare velocity gradients or the relative number of contacts per unit volume per second made by suspended particles during the flocculation process. Velocity gradients G may be calculated from the following equation: G = square root of the value(550 times P divided by u times V). Where: P = applied horsepower, u = viscosity, and V = effective volume.

"GAC10" means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with R309-210-10 MCLs under R309-200-5(3)(i)(A) shall be 120 days.

"GAC20" means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

"Geologist" means a person licensed under the Professional Geologist Licensing Act, 58-76 of the Utah Code, as a "professional geologist" as defined therein.

"Geometric Mean" the geometric mean of a set of N numbers X_1, X_2, X_3,...., X_N is the Nth root of the product of the numbers.

"gpd" means gallons per day and is one way of expressing average daily water demands experienced by public water systems.

"gpm" means gallons per minute and is one way of expressing flowrate.

"gpm/sf" means gallons per minute per square foot and is one way of expressing flowrate through a surface area.

"Grade" means any one of four possible steps within a certification discipline of either water distribution or water treatment. Grade I indicates knowledge and experience requirements for the smallest type of public water supply. Grade IV indicates knowledge and experience levels appropriate for the largest, most complex type of public water supply.

"Gross Alpha Particle Activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

"Gross Beta Particle Activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

"ground water of high quality" means a well or spring producing water deemed by the Director to be of sufficiently high quality that no treatment is required. Such sources shall have been designed and constructed in conformance with these rules, have been tested to establish that all applicable drinking water quality standards (as given in rule R309-200) are reliably and consistently met, have been deemed not vulnerable to natural or man-caused contamination, and the public water system management have established adequate protection zones and management policies in accordance with rule R309-600.

"ground water of low quality" means a well or spring which, as determined by the Director, cannot reliably and consistently meet the drinking water quality standards described in R309-200. Such sources shall be deemed to be a low quality ground water source if any of the conditions outlined in subsection R309-505-8(1) exist. Ground water that is classified "UDI" is a subset of this definition and requires "conventional surface water treatment" or an acceptable alternative.

"Ground Water Source" means any well, spring, tunnel, adit, or other underground opening from or through which ground water flows or is pumped from subsurface water-bearing formations.

"Ground Water Under the Direct Influence of Surface Water" or "UDI" or "GWUDI" means any water beneath the surface of the ground with significant occurrence of insects or other macro organisms, algae, or large-diameter pathogens such as Giardia lamblia, or Cryptosporidium, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence will be determined for individual sources in accordance with criteria established by the Director. The determination of direct influence may be based on site-specific measurements of water quality and/or documentation of well or spring construction and geology with field evaluation.

"Haloacetic acids"(five) (HAA5) mean the sum of the concentrations in mg/L of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to two significant figures after addition.

"Hardship Grant" means a grant of monies to a political subdivision that meets the drinking water project loan considerations whose project is determined by the Board to not be economically feasible unless grant assistance is provided. A hardship grant may be authorized in the following forms:

(1) a Planning Advance which will be required to be repaid at a later date, to help meet project costs incident to planning to determine the economic, engineering and financial feasibility of a proposed project;

(2) a Design Advance which will be required to be repaid at a later date, to help meet project costs incident to design including, but not limited to, surveys, preparation of plans, working drawings, specifications, investigations and studies; or

(3) a Project Grant which will not be required to be repaid.

"Hardship Grant Assessment" means an assessment applied to loan recipients. The assessment shall be calculated as a percentage of principal. Hardship grant assessment funds shall be subject to the requirements of UAC R309-700 for hardship grants.

"Hotel, Motel or Resort" shall include tourist courts, motor hotels, resort camps, hostels, lodges, dormitories and similar facilities, and shall mean every building, or structure with all buildings and facilities in connection, kept, used, maintained as, advertised as, or held out to the public to be, a place where living accommodations are furnished to transient guests or to groups normally occupying such facilities on a seasonal or short term basis.

"Hydrogeologic methods" means the techniques used to translate selected criteria and criteria thresholds into mappable delineation boundaries. These methods include, but are not limited to, arbitrary fixed radii, analytical calculations and models, hydrogeologic mapping, and numerical flow models.

"Inactivation" means, in the context of UV disinfection, a process by which a microorganism is rendered unable to reproduce, thereby rendering it unable to infect a host.

"Initial compliance period" means the first full three-year compliance period which begins at least 18 months after promulgation, except for contaminants listed in R309-200-5(3)(a), Table 200-2 numbers 19 to 33; R309-200-5(3)(b), Table 200-3 numbers 19 to 21; and R309-200-5(1)(c), Table 200-1 numbers 1, 5, 8, 11 and 18, initial compliance period means the first full three-year compliance after promulgation for systems with 150 or more service connections (January 1993-December 1995), and first full three-year compliance period after the effective date of the regulation (January 1996-December 1998) for systems having fewer than 150 service connections.

"Intake", for the purposes of surface water drinking water source protection, means the device used to divert surface water and also the conveyance to the point immediately preceding treatment, or, if no treatment is provided, at the entry point to the distribution system.

"Interest Buy-Down Agreement" means any agreement entered into between the Board, on behalf of the State, and a political subdivision, for the purpose of reducing the cost of financing incurred by a political subdivision on bonds issued by the subdivision for drinking water project costs.

"Labor Camp" shall mean one or more buildings, structures, or grounds set aside for use as living quarters for groups of migrant laborers or temporary housing facilities intended to accommodate construction, industrial, mining or demolition workers.

"Lake / reservoir" refers to a natural or man made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

"Land management strategies" means zoning and non-zoning controls which include, but are not limited to, the following: zoning and subdivision ordinances, site plan reviews, design and operating standards, source prohibitions, purchase of property and development rights, public education programs, ground water monitoring, household hazardous waste collection programs, water conservation programs, memoranda of understanding, written contracts and agreements, and so forth.

"Land use agreement" means a written agreement, memoranda or contract wherein the owner(s) agrees not to locate or allow the location of uncontrolled potential contamination sources or pollution sources within zone one of new wells in protected aquifers or zone one of surface water sources. The owner(s) must also agree not to locate or allow the location of pollution sources within zone two of new wells in unprotected aquifers and new springs unless the pollution source agrees to install design standards which prevent contaminated discharges to ground water. This restriction must be binding on all heirs, successors, and assigns. Land use agreements must be recorded with the property description in the local county recorder's office. Refer to R309-600-13(2)(d).

Land use agreements for protection areas on publicly owned lands need not be recorded in the local county recorder office. However, a letter must be obtained from the Administrator of the land in question and meet the requirements described above.

"Large water system" for the purposes of R309-210-6 only, means a water system that serves more than 50,000 persons.

"Lead free" means, for the purposes of R309-210-6, when used with respect to solders and flux refers to solders and flux containing not more than 0.2 percent lead; when used with respect to pipes and pipe fittings refers to pipes and pipe fittings containing not more than 8.0 percent lead; and when used with respect to plumbing fittings and fixtures intended by the manufacturer to dispense water for human ingestion refers to fittings and fixtures that are in compliance with standards established in accordance with 42 U.S.C. 300 g-6(e).

"Lead service line" means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.

"Legionella" means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.

“Level 1 assessment” means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system

operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

“Level 2 assessment” means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system’s monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the State in the case of an E. coli MCL violation.

"Locational running annual average (LRAA)" is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

"Major Bacteriological Routine Monitoring Violation" means that no routine bacteriological sample was taken as required by R309-210-5(1).

"Major Bacteriological Repeat Monitoring Violation" - means that no repeat bacteriological sample was taken as required by R309-210-5(2).

"Major Chemical Monitoring Violation" - means that no initial background chemical sample was taken as required in R309-515-4(5).

"Management area" means the area outside of zone one and within a two-mile radius where the Optional Two-mile Radius Delineation Procedure has been used to identify a protection area.

For wells, land may be excluded from the DWSP management area at locations where it is more than 100 feet lower in elevation than the total drilled depth of the well.

For springs and tunnels, the DWSP management area is all land at elevation equal to or higher than, and within a two-mile radius, of the spring or tunnel collection area. The DWSP management area also includes all land lower in elevation than, and within 100 horizontal feet, of the spring or tunnel collection area. The elevation datum to be used is the point of water collection. Land may also be excluded from the DWSP management area at locations where it is separated from the ground water source by a surface drainage which is lower in elevation than the spring or tunnel collection area.

"Man-Made Beta Particle and Photon Emitters" means all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, "NBS Handbook 69," except the daughter products of thorium-232, uranium-235 and uranium-238.

"Master Plan" (or "System Capacity and Expansion Report") means a organized plan addressing the present and future demands that will be placed on a public drinking water system by expanding into undeveloped areas or accepting additional service contracts. As a minimum a satisfactory master plan must contain the following elements:

(a) A listing of sources including: the source name, the source type (i.e., well, spring, reservoir, stream etc.) for both existing sources and additional sources identified as needed for system expansion, the minimum reliable flow of the source in gallons per minute, the status of the water right and the flow capacity of the water right.

(b) A listing of storage facilities including: the storage tank name, the type of material (i.e., steel, concrete etc.), the diameter, the total volume in gallons, and the elevation of the overflow, the lowest level (elevation) of the equalization volume, the fire suppression volume, and the emergency volume or the outlet.

(c) A listing of pump stations including: the pump station name and the pumping capacity in gallons per minute. Under this requirement one does not need to list well pump stations as they are provided in requirement (a) above.

(d) A listing of the various pipeline sizes within the distribution system with their associated pipe materials and, if readily available, the approximate length of pipe in each size and material category. A schematic of the distribution piping showing node points, elevations, length and size of lines, pressure zones, demands, and coefficients used for the hydraulic analysis required by (h) below will suffice.

(e) A listing by customer type (i.e., single family residence, 40 unit condominium complex, elementary school, junior high school, high school, hospital, post office,

industry, commercial etc.) along with an assessment of their associated number of ERC'S.

(f) The number of connections along with their associated ERC value that the public drinking water system is committed to serve, but has not yet physically connected to the infrastructure.

(g) A description of the nature and extent of the area currently served by the water system and a plan of action to control addition of new service connections or expansion of the public drinking water system to serve new development(s). The plan shall include current number of service connections and water usage as well as land use projections and forecasts of future water usage.

(h) A hydraulic analysis of the existing distribution system along with any proposed distribution system expansion identified in (g) above.

(i) A description of potential alternatives to manage system growth, including interconnections with other existing public drinking water systems, developer responsibilities and requirements, water rights issues, source and storage capacity issues and distribution issues.

"Maximum Contaminant Level" (MCL) means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

"Maximum residual disinfectant level" (MRDL) means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. For chlorine and chloramines, a PWS is in compliance with the MRDL when the running annual average of monthly averages of samples taken in the distribution system, computed quarterly, is less than or equal to the MRDL. For chlorine dioxide, a PWS is in compliance with the MRDL when daily samples are taken at the entrance to the distribution system and no two consecutive daily samples exceed the MRDL. MRDLs are enforceable in the same manner as MCLs pursuant to UT Code S 19-4-104. There is convincing evidence that addition of a disinfectant is necessary for control of waterborne microbial contaminants. Notwithstanding the MRDLs listed in R309-200-5(3), operators may increase residual disinfectant levels of chlorine or chloramines (but not chlorine dioxide) in the distribution system to a level and for a time necessary to protect public health to address specific microbiological contamination problems caused by circumstances such as distribution line breaks, storm runoff events, source water contamination, or cross-connections.

"Maximum residual disinfectant level goal" (MRDLG) means the maximum level of a disinfectant added for water treatment at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. MRDLGs are non-enforceable health goals and do not reflect the benefit of the addition of the chemical for control of waterborne microbial contaminants.

"Medium-size water system" for the purposes of R309-210-6 only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

"Membrane filtration" is a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes that common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.

"Metropolitan area sources" means all sources within a metropolitan area. A metropolitan area is further defined to contain at least 3,300 year round residents. A small water system which has sources within a metropolitan system's service area, may have those sources classified as a metropolitan area source.

"MG" means million gallons and is one way of expressing a volume of water.

"MGD" means million gallons per day and is one way of expressing average daily water demands experienced by public water systems or the capacity of a water treatment plant.

"mg/L" means milligrams per liter and is one way of expressing the concentration of a chemical in water. At small concentrations, mg/L is synonymous with "ppm" (parts per million).

"Minor Bacteriological Routine Monitoring Violation" means that not all of the routine bacteriological samples were taken as required by R309-210-5(1).

"Minor Bacteriological Repeat Monitoring Violation" means that not all of the repeat bacteriological samples were taken as required by R309-210-5(2).

"Minor Chemical Monitoring Violation" means that the required chemical sample(s) was not taken in accordance with R309-205 and R309-210.

"Modern Recreation Camp" means a campground accessible by any type of vehicular traffic. The camp is used wholly or in part for recreation, training or instruction, social, religious, or physical education activities or whose primary purpose is to provide an outdoor group living experience. The site is equipped with permanent buildings for the purpose of sleeping, a drinking water supply under pressure, food service facilities, and may be operated on a seasonal or short term basis. These types of camps shall include but are not limited to privately owned campgrounds such as youth camps, church camps, boy or girl scout camps, mixed age groups, family group camps, etc.

"Near the first service connection" means one of the service connections within the first 20 percent of all service connections that are nearest to the treatment facilities.

"Negative Interest" means a loan having loan terms with an interest rate at less than zero percent. The repayment schedule for loans having a negative interest rate will be prepared by the Board.

"New ground water source of drinking water" means a public supply ground water source of drinking water for which plans and specifications are submitted to the Division after July 26, 1993.

"New surface water source of drinking water" means a public supply surface water source of drinking water for which plans and specifications are submitted to the Division after June 12, 2000.

"New Water System" means a system that will become a community water system or non-transient, non-community water system on or after October 1, 1999.

"Non-Community Water System" (NCWS) means a public water system that is not a community water system. There are two types of NCWS's: transient and non-transient.

"Non-distribution system plumbing problem" means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which a coliform-positive sample was taken.

"Nonpoint source" means any diffuse source of contaminants or pollutants not otherwise defined as a point source.

"Non-Transient Non-Community Water System" (NTNCWS) means a public water system that regularly serves at least 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those serving the same individuals (industrial workers, school children, church members) by means of a separate system.

"Not Approved" refers to a rating placed on a system by the Division and means the water system does not fully comply with all the Rules of R309 as measured by R309-400.

"NTU" means Nephelometric Turbidity Units and is an acceptable method for measuring the clarity of water utilizing an electronic nephelometer (see "Standard Methods for Examination of Water and Wastewater").

"Off-specification" means a UV facility is operating outside of the validated operating conditions, for example, at a flow rate higher than the validated range or a UVT below the validated range).

"Operator" means a person who operates, repairs, maintains, and is directly employed by a public drinking water system.

"Operator Certification Commission" means the Commission appointed by the Board as an advisory Commission on public water system operator certification.

"Operating Permit" means written authorization from the Director to actually start utilizing a facility constructed as part of a public water system.

"Optimal corrosion control treatment" for the purposes of R309-210-6 only, means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.

"Package Plants" refers to water treatment plants manufactured and supplied generally by one company which are reportedly complete and ready to hook to a raw water supply line. Caution, some plants do not completely comply with all requirements of these rules and will generally require additional equipment.

"PCBs" means a group of chemicals that contain polychlorinated biphenyl.

"Peak Day Demand" means the amount of water delivered to consumers by a public water system on the day of highest consumption, generally expressed in gpd or MGD. This peak day will likely occur during a particularly hot spell in the summer. In contrast, some systems associated with the skiing industry may experience their "Peak Day Demand" in the winter.

"Peak Hourly Flow" means the maximum hourly flow rate from a water treatment plant and utilized when the plant is preparing disinfection profiling as called for in R309-215-14(2).

"Peak Instantaneous Demand" means calculated or estimated highest flowrate that can be expected through any water mains of the distribution network of a public water system at any instant in time, generally expressed in gpm or cfs (refer to section R309-510-9).

"Person" means an individual, corporation, company, association, partnership; municipality; or State, Federal, or tribal agency.

"Picocurie" (pCi) means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

"Plan Approval" means written approval~~, by the Director,~~ of contract plans and specifications for any public drinking water project which have been submitted for review prior to the start of construction pursuant to ~~(see also~~R309-105-6 and R309-500-~~7~~6~~)~~.

"Plant intake" refers to the works or structures at the head of a conduit through which water is diverted from a source (e.g., river or lake) into the treatment plant.

"Plug Flow" is a term to describe when water flowing through a tank, basin or reactors moves as a plug of water without ever dispersing or mixing with the rest of the water flowing through the tank.

"Point of Disinfectant Application" is the point where the disinfectant is applied and water downstream of that point is not subject to re-contamination by surface water runoff.

"Point of Diversion"(POD) is the point at which water from a surface source enters a piped conveyance, storage tank, or is otherwise removed from open exposure prior to treatment.

"Point-of-Entry Treatment Device" means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

"Point-of-Use Treatment Device" means a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

"Point source" means any discernible, confined, and discrete source of pollutants or contaminants, including but not limited to any site, pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation with more than ten animal units, landfill, or vessel or other floating craft, from which pollutants are or may be discharged.

"Political Subdivision" means any county, city, town, improvement district, metropolitan water district, water conservancy district, special service district, drainage district, irrigation district, separate legal or administrative entity created under Title 11, Chapter 13, Interlocal Cooperation Act, or any other entity constituting a political subdivision under the laws of Utah.

"Pollution source" means point source discharges of contaminants to ground or surface water or potential discharges of the liquid forms of "extremely hazardous substances" which are stored in containers in excess of "applicable threshold planning quantities" as specified in SARA Title III. Examples of possible pollution sources include, but are not limited to, the following: storage facilities that store the liquid forms of extremely hazardous substances, septic tanks, drain fields, class V underground injection wells, landfills, open dumps, landfilling of sludge and septage, manure piles, salt piles, pit privies, drain lines, and animal feeding operations with more than ten animal units.

The following definitions are part of R309-600 and clarify the meaning of "pollution source:"

> (1) "Animal feeding operation" means a lot or facility where the following conditions are met: animals have been or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period, and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are considered to be a single feeding operation if they adjoin each other, if they use a common area, or if they use a common system for the disposal of wastes.

(2) "Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers; the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

(3) "Extremely hazardous substances" means those substances which are identified in the Sec. 302(EHS) column of the "TITLE III LIST OF LISTS - Consolidated List of Chemicals Subject to Reporting Under SARA Title III," (EPA 550-B-96-015). A copy of this document may be obtained from: NCEPI, PO Box 42419, Cincinnati, OH 45202. Online ordering is also available at http://www.epa.gov/ncepihom/orderpub.html.

"Potential contamination source" means any facility or site which employs an activity or procedure which may potentially contaminate ground or surface water. A pollution source is also a potential contamination source.

"ppm" means parts per million and is one way of expressing the concentration of a chemical in water. At small concentrations generally used, ppm is synonymous with "mg/l" (milligrams per liter).

"Practical Quantitation Level" (PQL) means the required analysis standard for laboratory certification to perform lead and copper analyses. The PQL for lead is .005 milligrams per liter and the PQL for copper is 0.050 milligrams per liter.

"Presedimentation" is a preliminary treatment process used to remove gravel, sand and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.

"Primary Disinfection" means the adding of an acceptable primary disinfectant or ultraviolet light irradiation during the treatment process to provide adequate levels of inactivation of bacteria and pathogens. The effectiveness is measured through "CT" values, and the "Total Inactivation Ratio," and the ultraviolet light dose. Acceptable primary disinfectants are, chlorine, ozone, ultraviolet light, and chlorine dioxide (see also "CT" and "$CT_{99.9}$").

"Principal Forgiveness" means a loan wherein a portion of the loan amount is "forgiven" upon closing the loan. The terms for principal forgiveness will be as directed by R309-705-8, and by the Board.

"Project Costs" include the cost of acquiring and constructing any drinking water project including, without limitation: the cost of acquisition and construction of any facility or any modification, improvement, or extension of such facility; any cost incident to the acquisition of any necessary property, easement or right of way; engineering or architectural fees, legal fees, fiscal agent's and financial advisors' fees; any cost incurred for any preliminary planning to determine the economic and engineering feasibility of a proposed project; costs of economic investigations and studies, surveys, preparation of designs, plans, working

drawings, specifications and the inspection and supervision of the construction of any facility; interest accruing on loans made under this program during acquisition and construction of the project; and any other cost incurred by the political subdivision, the Board or the Department of Environmental Quality, in connection with the issuance of obligation of the political subdivision to evidence any loan made to it under the law.

"Protected aquifer" means a producing aquifer in which the following conditions are met:

(1) A naturally protective layer of clay, at least 30 feet in thickness, is present above the aquifer;

(2) the PWS provides data to indicate the lateral continuity of the clay layer to the extent of zone two; and

(3) the public supply well is grouted with a grout seal that extends from the ground surface down to at least 100 feet below the surface, and for a thickness of at least 30 feet through the protective clay layer.

"Public Drinking Water Project" means construction, addition to, or modification of any facility of a public water system which may affect the quality or quantity of the drinking water (see also section R309-500-6).

"Public Water System" (PWS) means a system, either publicly or privately owned, providing water through constructed conveyances for human consumption and other domestic uses, which has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days out of the year and includes collection, treatment, storage, or distribution facilities under the control of the operator and used primarily in connection with the system, or collection, pretreatment or storage facilities used primarily in connection with the system but not under his control (see 19-4-102 of the Utah Code Annotated). All public water systems are further categorized into three different types, community (CWS), non-transient non-community (NTNCWS), and transient non-community (TNCWS). These categories are important with respect to required monitoring and water quality testing found in R309-205 and R309-210 (see also definition of "water system").

"Raw Water" means water that is destined for some treatment process that will make it acceptable as drinking water. Common usage of terms such as lake or stream water, surface water or irrigation water are synonymous with raw water.

"Recreational Home Developments" are subdivision type developments wherein the dwellings are not intended as permanent domiciles.

"Recreational Vehicle Park" means any site, tract or parcel of land on which facilities have been developed to provide temporary living quarters for individuals utilizing recreational vehicles. Such a park may be developed or owned by a private, public or non-profit organization catering to the general public or restricted to the organizational or institutional member and their guests only.

"Reference UV Sensors (or Reference Sensors)" are off-line calibrated UV sensors that are used to assess the duty UV sensors' performance and to determine UV sensor uncertainty.

"Regional Operator" means a certified operator who is in direct responsible charge of more than one public drinking water system.

"Regionalized Water System" means any combination of water systems which are physically connected or operated or managed as a single unit.

"Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem" (mrem) is 1/1000 of a rem.

"Renewal Course" means a course of instruction, approved by the Subcommittee, which is a prerequisite to the renewal of a Backflow Technician's Certificate.

"Repeat compliance period" means any subsequent compliance period after the initial compliance period.

"Replacement well" means a public supply well drilled for the sole purpose of replacing an existing public supply well which is impaired or made useless by structural difficulties and in which the following conditions are met:

(1) the proposed well location shall be within a radius of 150 feet from an existing ground water supply well; and

(2) the PWS provides a copy of the replacement application approved by the State Engineer (refer to Section 73-3-28 of the Utah Code).

"Required Dose" is the UV dose required for a certain level of log inactivation. Required doses are set forth by the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and R309-215-15(19)(d)(i) Table 215-5 the UV Dose Table.

"Required reserve" means funds set aside to meet requirements set forth in a loan covenant/bond indenture.

"Residual Disinfectant Concentration" ("C" in CT calculations) means the concentration of disinfectant, measured in mg/L, in a representative sample of water.

"Restricted Certificate" means that the operator has qualified by passing an examination but is in a restricted certification status due to lack of experience as an operator.

"Roadway Rest Stop" shall mean any building, or buildings, or grounds, parking areas, including the necessary toilet, hand washing, water supply and wastewater facilities intended for the accommodation of people using such facilities while traveling on public

roadways. It does not include scenic view or roadside picnic areas or other parking areas if these are properly identified

"Routine Chemical Monitoring Violation" means no routine chemical sample(s) was taken as required in R309-205, R309-210 and R309-215.

"Safe Yield" means the annual quantity of water that can be taken from a source of supply over a period of years without depleting the source beyond its ability to be replenished naturally in "wet years".

“Sanitary defect” means a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

"Sanitary Seal" means a cap that prevents contaminants from entering a well through the top of the casing.

"scfm/sf" means standard cubic foot per minute per square foot and is one way of expressing flowrate of air at standard density through a filter or duct area.

“Seasonal system” means a non-community water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

"Secondary Disinfection" means the adding of an acceptable secondary disinfectant to assure that the quality of the water is maintained throughout the distribution system. The effectiveness is measured by maintaining detectable disinfectant residuals throughout the distribution system. Acceptable secondary disinfectants are chlorine, chloramine, and chlorine dioxide.

"Secondary Maximum Contaminant Level" means the advisable maximum level of contaminant in water which is delivered to any user of a public water system.

"Secretary to the Subcommittee" means that individual appointed by the Director to conduct the business of the Subcommittee.

"Sedimentation" means a process for removal of solids before filtration by gravity or separation.

"Semi-Developed Camp" means a campground accessible by any type of vehicular traffic. Facilities are provided for both protection of site and comfort of users. Roads, trails and campsites are defined and basic facilities (water, flush toilets and/or vault toilets, tables, fireplaces or tent pads) are provided. These camps include but are not limited to National Forest campgrounds, Bureau of Reclamation campgrounds, and youth camps.

"Service Connection" means the constructed conveyance by which a dwelling, commercial or industrial establishment, or other water user obtains water from the supplier's distribution system. Multiple dwelling units such as condominiums or apartments, shall be considered to have a single service connection, if fed by a single line, for the purpose of microbiological repeat sampling; but shall be evaluated by the supplier as multiple "equivalent residential connections" for the purpose of source and storage capacities.

"Service Factor" means a rating on a motor to indicate an increased horsepower capacity beyond nominal nameplate capacity for occasional overload conditions.

"Service line sample" means a one-liter sample of water collected in accordance with R309-210-6(3)(b)(iii), that has been standing for at least 6 hours in a service line.

"Significant deficiencies" means defects in design, operation, or maintenance, or a failure or defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the Director determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers.

"Single family structure" for the purposes of R309-210-6 only, means a building constructed as a single-family residence that is currently used as either a residence or a place of business.

"Small water system" means a public water system that serves 3,300 persons or fewer.

"Specialist" means a person who has successfully passed the written certification exam and meets the required experience, but who is not in direct employment with a Utah public drinking water system.

"Stabilized drawdown" means that there is less than 0.5 foot of change in water level measurements in a pumped well for a minimum period of six hours.

"Standard sample" means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

"SOCs" means synthetic organic chemicals.

"Stabilized Drawdown" means the drawdown measurements taken during a constant-rate yield and drawdown test as outlined in subsection R309-515-14(10)(b) are constant (no change).

"Stock Tight" means a type of fence that can prevent the passage of grazing livestock through its boundary. An example of such fencing is provided by design drawing 02838-3 titled "Cattle Exclosure" designed by the U.S. Department of the Interior, Bureau of Land Management, Division of Technical Services (copies available from the Division).

"Subcommittee" means the Cross Connection Control Subcommittee.

"Supplier of water" means any person who owns or operates a public water system.

"Surface Water" means all water which is open to the atmosphere and subject to surface runoff (see also section R309-515-5(1)). This includes conveyances such as ditches, canals and aqueducts, as well as natural features.

"Surface Water Systems" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to filtration and disinfection (Federal SWTR subpart H) and the requirements of R309-215 "Monitoring and Water Quality: Treatment Plant Monitoring Requirements."

"Surface Water Systems (Large)" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to filtration and disinfection and serve a population of 10,000 or greater (Federal SWTR subpart P and L) and the requirements of R309-215 "Monitoring and Water Quality: Treatment Plant Monitoring Requirements."

"Surface Water Systems (Small)" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to filtration and disinfection and serve a population less than 10,000 (Federal SWTR subpart L, T and P (sanitary survey requirements)) and the requirements of R309-215 "Monitoring and Water Quality: Treatment Plant Monitoring Requirements."

"Susceptibility" means the potential for a PWS (as determined at the point immediately preceding treatment, or if no treatment is provided, at the entry point to the distribution system) to draw water contaminated above a demonstrated background water quality concentration through any overland or subsurface pathway. Such pathways may include cracks or fissures in or open areas of the surface water intake, and/or the wellhead, and/or the pipe/conveyance between the intake and the water distribution system or treatment.

"SUVA" means Specific Ultraviolet Absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (UV_{254}) (in m^{-1}) by its concentration of dissolved organic carbon (DOC) (in mg/L).

"System with a single service connection" means a system which supplies drinking water to consumers via a single service line.

"T" is short for "Contact Time" and is generally used in conjunction with either the residual disinfectant concentration (C) in determining CT or the velocity gradient (G) in determining mixing energy GT.

"Target Log Inactivation" means the specific log inactivation the PWS wants to achieve for the target pathogen using UV disinfection. The target log inactivation is driven by

requirements of the Surface Water Treatment Rule (SWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), and the log removal/inactivation requirements in R309-215-15, and the Groundwater Rule.

"Ten State Standards" refers to the Recommended Standards For Water Works, 1997 by the Great Lakes Upper Mississippi River Board of State Public Health and Environmental Managers available from Health Education Services, A Division of Health Research Inc., P.O. Box 7126, Albany, New York 12224, (518)439-7286.

"Time of travel" means the time required for a particle of water to move in the producing aquifer from a specific point to a ground water source of drinking water. It also means the time required for a particle of water to travel from a specific point along a surface water body to an intake.

"Total Inactivation Ratio" is the sum of all the inactivation ratios calculated for a series of disinfection sequences, and is indicated or shown as: "Summation sign $(CT_{calc})/(CT_{req'd})$." A total inactivation ratio equal to or greater than 1.0 is assumed to provide the required inactivation of Giardia lamblia cysts. $CT_{calc}/CT_{99.9}$ equal to 1.0 provides 99.9 percent (3-log) inactivation, whereas CT_{calc}/CT_{90} equal to 1.0 only provides 90 percent (1-log) inactivation.

"Too numerous to count" (TNTC) means that the total number of bacterial colonies exceeds 200 on a 47 mm diameter membrane filter used for coliform detection.

"Total Organic Carbon" (TOC) means total organic carbon in mg/L measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.

"Total Trihalomethanes" (TTHM) means the MCL for trihalomethanes. This is the sum of four of ten possible isomers of chlorine/bromine/methane compounds, all known as trihalomethanes (THM). TTHM is defined as the arithmetic sum of the concentrations in micro grams per liter of only four of these (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) rounded to two significant figures. This measurement is made by samples which are "quenched," meaning that a chlorine neutralizing agent has been added, preventing further THM formation in the samples.

"Training Coordinating Committee" means the voluntary association of individuals responsible for environmental training in the state of Utah.

"Transient Non-Community Water System" (TNCWS) means a non-community public water system that does not serve 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those, RV park, diner or convenience store where the permanent nonresident staff number less than 25, but the number of people served exceeds 25.

"Treatment Plant" means those facilities capable of providing any treatment to any waterserving a public drinking water system. (Examples would include but not be limited to disinfection, conventional surface water treatment, alternative surface water treatment methods, corrosion control methods, aeration, softening, etc.).

"Treatment Plant Manager" means the individual responsible for all operations of a treatment plant.

"Trihalomethanes" (THM) means any one or all members of this class of organic compounds.

"Trihalomethane Formation Potential" (THMFP) - these samples are collected just following disinfection and measure the highest possible TTHM value to be expected in the water distribution system. The formation potential is measured by not neutralizing the disinfecting agent at the time of collection, but storing the sample seven days at 25 degrees C prior to analysis. A chlorine residual must be present in these samples at the end of the seven day period prior to analysis for the samples to be considered valid for this test. Samples without a residual at the end of this period must be resampled if this test is desired.

"Turbidity Unit" refers to NTU or Nephelometric Turbidity Unit.

"Two-stage lime softening" is a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.

"UDI" means under direct influence (see also "Ground Water Under the Direct Influence of Surface Water").

"Uncovered finished water storage facility" is a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere.

"Unprotected aquifer" means any aquifer that does not meet the definition of a protected aquifer.

"Unregulated Contaminant" means a known or suspected disease causing contaminant for which no maximum contaminant level has been established.

"Unrestricted Certificate" means that a certificate of competency issued by the Director when the operator has passed the appropriate level written examination and has met all certification requirements at the discipline and grade stated on the certificate.

"UV Dose" means the UV energy per unit area incident on a surface, typically reported in units of mJ/cm^2 or J/m^2. The UV dose received by a waterborne microorganism in a reactor vessel accounts for the effects on UV intensity of the absorbance of the water, absorbance of the quartz sleeves, reflection and refraction of light from the water surface and reactor walls,

and the germicidal effectiveness of the UV wavelengths transmitted. The following terms are related to UV dose:

(1) "Reduction Equivalent Dose (RED)" means the UV dose derived by entering the log inactivation measured during full-scale reactor testing into the UV dose-response curve that was derived through collimated beam testing. RED values are always specific to the challenge microorganism used during experimental testing and the validation test conditions for full-scale reactor testing.

(2) "Required Dose" means the UV dose in units of mJ/cm^2 needed to achieve the target log inactivation for the target pathogen. The required dose is specified in the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR).

(3) "Validated Dose" means the UV dose in units of mJ/cm^2 delivered by the UV reactor as determined through validation testing. The validated dose is compared to the Required Dose to determine log inactivation credit.

(4) "Calculated Dose" - the RED calculated using the dose-monitoring equation that was developed through validation testing.

"UV Facility" means all of the components of the UV disinfection process, including (but not limited to) UV reactors, control systems, piping, valves, and building (if applicable).

"UV Intensity" means the UV power passing through a unit area perpendicular to the direction of propagation. UV intensity is used to describe the magnitude of UV light measured by UV sensors in a reactor or with a radiometer in bench-scale UV experiments.

"UV Reactor" means the vessel or chamber where exposure to UV light takes place, consisting of UV lamps, quartz sleeves, UV sensors, quartz sleeve cleaning systems, and baffles or other hydraulic controls. The UV reactor also includes additional hardware for monitoring UV dose delivery; typically comprised of (but not limited to): UV sensors and UVT monitors.

"UV Reactor Validation" is experimental testing to determine the operating conditions under which a UV reactor delivers the dose required for inactivation credit of Cryptosporidium, Giardia lamblia, and viruses.

"UV Transmittance (UVT)" is a measure of the fraction of incident light transmitted through a material (e.g., water sample or quartz). The UVT is usually reported for a wavelength of 254 nm and a pathlength of 1-cm. If an alternate pathlength is used, it should be specified or converted to units of cm^{-1}.

"Validation Factor" - an uncertainty term that accounts for the bias and uncertainty associated with UV validation testing.

"Validated Operating Conditions" - the operating conditions under which the UV reactor is confirmed as delivering the dose required for LT2ESWTR inactivation credit. These operating conditions must include flow rate, UV intensity as measured by a UV sensor, and UV lamp status. The term "Validated Operating Conditions" is also commonly referred to as the "validated range" or the "validated limits."

"Virus" means a virus of fecal origin which is infectious to humans.

"Waterborne Disease Outbreak" means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system, as determined by the appropriate local or State agency.

"Watershed" means the topographic boundary that is the perimeter of the catchment basin that contributes water through a surface source to the intake structure. For the purposes of surface water DWSP, if the topographic boundary intersects the state boundary, the state boundary becomes the boundary of the watershed.

"Water Supplier" means a person who owns or operates a public drinking water system.

"Water System" means all lands, property, rights, rights-of-way, easements and related facilities owned by a single entity, which are deemed necessary or convenient to deliver drinking water from source to the service connection of a consumer(s). This includes all water rights acquired in connection with the system, all means of conserving, controlling and distributing drinking water, including, but not limited to, diversion or collection works, springs, wells, treatment plants, pumps, lift stations, service meters, mains, hydrants, reservoirs, tanks and associated appurtenances within the property or easement boundaries under the control of or controlled by the entity owning the system.

In accordance with R309, certain water systems may be exempted from monitoring requirements, but such exemption does not extend to submittal of plans and specifications for any modifications considered a public drinking water project.

"Wellhead" means the physical structure, facility, or device at the land surface from or through which ground water flows or is pumped from subsurface, water-bearing formations.

"Wholesale system" is a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

"Zone of Influence" corresponds to area of the upper portion of the cone of depression as described in "Groundwater and Wells," second edition, by Fletcher G. Driscoll, Ph.D., and published by Johnson Division, St. Paul, Minnesota.

KEY: drinking water, definitions
Date of Enactment or Last Substantive Amendment: ~~May 1, 2016~~

Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

R309. Environmental Quality, Drinking Water.
R309-600. Source Protection: Drinking Water Source Protection For Ground-Water Sources.
R309-600-1. Authority.

Under authority of Section 19-4-104(1)(a)(iv), the Drinking Water Board adopts this rule which governs the protection of ground-water sources of drinking water.

R309-600-2. Purpose.

Public Water Systems (PWSs) are responsible for protecting their sources of drinking water from contamination. R309-600 sets forth minimum requirements to establish a uniform, statewide program for implementation by PWSs to protect their ground-water sources of drinking water. PWSs are encouraged to enact more stringent programs to protect their sources of drinking water if they decide they are necessary.

R309-600 applies to ground-water sources and to ground-water sources which are under the direct influence of surface water which are used by PWSs to supply their systems with drinking water. However, compliance with this rule is voluntary for existing ground-water sources of drinking water which are used by public (transient) non-community water systems.

R309-600-3. Implementation.

(1) New Ground-Water Sources - Each PWS shall submit a Preliminary Evaluation Report (PER) in accordance with R309-600-13(2) for each of its new ground-water sources to the Division of Drinking Water (DDW). A PWS shall not begin construction of a new source until the Director concurs with its PER.

(2) Existing Ground-Water Sources - Each PWS shall submit a Drinking Water Source Protection (DWSP) Plan in accordance with R309-600-7(1) for each of its existing ground-water sources to DDW according to the following schedule. Well fields or groups of springs may be considered to be a single source.

TABLE 1

Population Served By PWS:	Percent Of Sources:	DWSP Plans Due By:
Over 10,000	50% of wells	December 31, 1995
Over 10,000	100% of wells	December 31, 1996
3,300-10,000	100% of wells	December 31, 1997
Less than 3,300	100% of wells	December 31, 1998
Springs and other sources	100%	December 31, 1999

(3) DWSP for existing ground-water sources under the direct influence of surface water shall be accomplished through delineation of both the ground water and surface water contribution areas. The requirements of R309-600-7(1) apply to the ground water portion and the requirements of R309-605 apply to the surface water portion, except that the schedule for submitting these DWSP plans to DDW is based on the schedule in R309-605-3(1).

(4) PWSs shall maintain all land use agreements which were established under previous rules to protect their ground-water sources of drinking water from contamination.

R309-600-4. Exceptions.

(1) Exceptions to the requirements of R309-600 or parts thereof may be granted by the Director to PWSs if: due to compelling factors (which may include economic factors), a PWS is unable to comply with these requirements, and the granting of an exception will not result in an unreasonable risk to health.

(2) The Director may prescribe a schedule by which the PWS must come into compliance with the requirements of R309-600.

R309-600-5. Designated Person.

(1) A designated person shall be appointed and reported in writing to the Director by each PWS within 180 days of the effective date of R309-600. The designated person's address and telephone number shall be included in the written correspondence. Additionally, the above information must be included in each DWSP Plan and PER that is submitted to DDW.

(2) Each PWS shall notify the Director in writing within 30 days of any changes in the appointment of a designated person.

R309-600-6. Definitions.

(1) The following terms are defined for the purposes of this rule:

(a) "Collection area" means the area surrounding a ground-water source which is underlain by collection pipes, tile, tunnels, infiltration boxes, or other ground-water collection devices.

(b) "Controls" means the codes, ordinances, rules, and regulations currently in effect to regulate a potential contamination source. "Controls" also means physical controls which may prevent contaminants from migrating off of a site and into surface or ground water. "Controls" also means negligible quantities of contaminants.

(c) "Criteria" means the conceptual standards that form the basis for DWSP area delineation to include distance, ground-water time of travel, aquifer boundaries, and ground-water divides.

(d) "Criteria threshold" means a value or set of values selected to represent the limits above or below which a given criterion will cease to provide the desired degree of protection.

(e) "DDW" means Division of Drinking Water.

(f) "DWSP Program" means the program to protect drinking water source protection zones and management areas from contaminants that may have an adverse effect on the health of persons.

(g) "DWSP Zone" means the surface and subsurface area surrounding a ground-water source of drinking water supplying a PWS, through which contaminants are reasonably likely to move toward and reach such ground-water source.

(h) "Designated person" means the person appointed by a PWS to ensure that the requirements of R309-600 are met.

(i) "Director" means the Director of the Division of Drinking Water.

(j) "Engineer" means a person licensed under the Professional Engineers and Land Surveyors Licensing Act, 58-22 of the Utah Code,

as a "professional engineer" as defined therein.

(k) "Existing ground-water source of drinking water" means a public supply ground-water source for which plans and specifications were submitted to DDW on or before July 26, 1993.

(l) "Geologist" means a person licensed under the Professional Geologist Licensing Act, 58-76 of the Utah Code, as a "professional geologist" as defined therein.

(m) "Ground-water Source" means any well, spring, tunnel, adit, or other underground opening from or through which ground-water flows or is pumped from subsurface water-bearing formations.

(n) "Hydrogeologic methods" means the techniques used to translate selected criteria and criteria thresholds into mappable delineation boundaries. These methods include, but are not limited to, arbitrary fixed radii, analytical calculations and models, hydrogeologic mapping, and numerical flow models.

(o) "Land management strategies" means zoning and non-zoning strategies which include, but are not limited to, the following: zoning and subdivision ordinances, site plan reviews, design and operating standards, source prohibitions, purchase of property and development rights, public education programs, ground-water monitoring, household hazardous waste collection programs, water conservation programs, memoranda of understanding, written contracts and agreements, and so forth.

(p) "Land use agreement" means a written agreement wherein the owner(s) agrees not to locate or allow the location of uncontrolled potential contamination sources or pollution sources within zone one of new wells in protected aquifers. The owner(s) must also agree not to locate or allow the location of pollution sources within zone two of new wells in unprotected aquifers and new springs unless the pollution source agrees to install design standards which prevent contaminated discharges to ground water. This restriction must be binding on all heirs, successors, and assigns. Land use agreements must be recorded with the property description in the local county recorder's office. Refer to R309-600-13(2)(d).

Land use agreements for protection areas on publicly owned lands need not be recorded in the local county recorder office. However, a letter must be obtained from the Administrator of the land in question and meet the requirements described above.

(q) "Management area" means the area outside of zone one and within a two-mile radius where the Optional Two-mile Radius Delineation Procedure has been used to identify a protection area.

For wells, land may be excluded from the DWSP management area at locations where it is more than 100 feet lower in elevation than the total drilled depth of the well.

For springs and tunnels, the DWSP management area is all land at elevation equal to or higher than, and within a two-mile radius, of the spring or tunnel collection area. The DWSP management area also includes all land lower in elevation than, and within 100 horizontal feet, of the spring or tunnel collection area. The elevation datum to be used is the point of water collection. Land may also be excluded from the DWSP management area at locations where it is separated from the ground-water source by a surface drainage which is lower in elevation than the spring or tunnel collection area.

(r) "New ground-water source of drinking water" means a public

supply ground-water source of drinking water for which plans and specifications are submitted to DDW after July 26, 1993.

(s) "Nonpoint source" means any diffuse source of pollutants or contaminants not otherwise defined as a point source.

(t) "PWS" means public water system.

(u) "Point source" means any discernible, confined, and discrete source of pollutants or contaminants, including but not limited to any site, pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation with more than ten animal units, landfill, or vessel or other floating craft, from which pollutants are or may be discharged.

(v) "Pollution source" means point source discharges of contaminants to ground water or potential discharges of the liquid forms of "extremely hazardous substances" which are stored in containers in excess of "applicable threshold planning quantities" as specified in SARA Title III. Examples of possible pollution sources include, but are not limited to, the following: storage facilities that store the liquid forms of extremely hazardous substances, septic tanks, drain fields, class V underground injection wells, landfills, open dumps, landfilling of sludge and septage, manure piles, salt piles, pit privies, drain lines, and animal feeding operations with more than ten animal units.

The following definitions are part of R309-600 and clarify the meaning of "pollution source:"

(i) "Animal feeding operation" means a lot or facility where the following conditions are met: animals have been or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period, and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are considered to be a single feeding operation if they adjoin each other, if they use a common area, or if they use a common system for the disposal of wastes.

(ii) "Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers; the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

(iii) "Extremely hazardous substances" means those substances which are identified in the Sec. 302(EHS) column of the "Title III List of Lists: Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 112(R) of the Clean Air Act, As Amended," (550B98017). A copy of this document may be obtained from: NCEPI, PO Box 42419, Cincinnati, OH 45202. Online ordering is also available at http://www.epa.gov/ncepihom/orderpub.html.

(w) "Potential contamination source" means any facility or site which employs an activity or procedure which may potentially contaminate ground water. A pollution source is also a potential contamination source.

(x) "Protected aquifer" means a producing aquifer in which the following conditions are met:

(i) A naturally protective layer of clay, at least 30 feet in

thickness, is present above the aquifer;

(ii) the PWS provides data to indicate the lateral continuity of the clay layer to the extent of zone two; and

(iii) the public-supply well is grouted with a grout seal that extends from the ground surface down to at least 100 feet below the surface, and for a thickness of at least 30 feet through the protective clay layer.

(y) "Replacement well" means a public-supply well drilled for the sole purpose of replacing an existing public-supply well which is impaired or made useless by structural difficulties and in which the following conditions are met:

(i) the proposed well location shall be within a radius of 150 feet from an existing ground-water supply well, as defined in R309-600-6(1)(k); and

(ii) the PWS provides a copy of the replacement application approved by the State Engineer (refer to Section 73-3-28 of the Utah Code Annotated).

(z) "Time of travel" means the time required for a particle of water to move in the producing aquifer from a specific point to a ground-water source of drinking water.

(aa) "Unprotected aquifer" means any aquifer that does not meet the definition of a protected aquifer.

(bb) "Wellhead" means the physical structure, facility, or device at the land surface from or through which ground-water flows or is pumped from subsurface, water-bearing formations.

R309-600-7. DWSP Plans.

(1) Each PWS shall develop, submit, and implement a DWSP Plan for each of its ground-water sources of drinking water.

Required Sections for DWSP Plans - DWSP Plans should be developed in accordance with the "Standard Report Format for Existing Wells and Springs." This document may be obtained from DDW. DWSP Plans must include the following seven sections:

(a) DWSP Delineation Report - A DWSP Delineation Report in accordance with R309-600-9(6) is the first section of a DWSP Plan.

(b) Potential Contamination Source Inventory and Assessment of Controls - A Prioritized Inventory of Potential Contamination Sources and an assessment of their controls in accordance with R309-600-10 is the second section of a DWSP Plan.

(c) Management Program to Control Each Preexisting Potential Contamination Source - A Management Program to Control Each Preexisting Potential Contamination Source in accordance with R309-600-11 is the third section of a DWSP Plan.

(d) Management Program to Control or Prohibit Future Potential Contamination Sources - A Plan for Controlling or Prohibiting Future Potential Contamination Sources is the fourth section of a DWSP Plan. This must be in accordance with R309-600-12, consistent with the general provisions of this rule, and implemented to an extent allowed under the PWS's authority and jurisdiction.

(e) Implementation Schedule - Each PWS shall develop a step-by-step implementation schedule which lists each of its proposed land management strategies with an implementation date for each strategy.

(f) Resource Evaluation - Each PWS shall assess the financial

and other resources which may be required for it to implement each of its DWSP Plans and determine how these resources may be acquired.

(g) Recordkeeping - Each PWS shall document changes in each of its DWSP Plans as they are continuously updated to show current conditions in the protection zones and management areas. As a DWSP Plan is executed, the PWS shall document any land management strategies that are implemented. These documents may include any of the following: ordinances, codes, permits, memoranda of understanding, public education programs, public notifications, and so forth.

(2) DWSP Plan Administration - DWSP Plans shall be submitted, corrected, retained, implemented, updated, and revised according to the following:

(a) Submitting DWSP Plans - Each PWS shall submit a DWSP Plan to DDW in accordance with the schedule in R309-600-3 for each of its ground-water sources of drinking water.

(b) Correcting Deficiencies - Each PWS shall correct any deficiencies in a disapproved DWSP Plan and resubmit it to DDW within 90 days of the disapproval date.

(c) Retaining DWSP Plans - Each PWS shall retain on its premises a current copy of each of its DWSP Plans.

(d) Implementing DWSP Plans - Each PWS shall begin implementing each of its DWSP Plans in accordance with its schedule in R309-600-7(1)(e), within 180 days after submittal if they are not disapproved by the Director.

(e) Updating and Resubmitting DWSP Plans - Each PWS shall update its DWSP Plans as often as necessary to ensure they show current conditions in the DWSP zones and management areas. Updated plans also document the implementation of land management strategies in the recordkeeping section. Actual copies of any ordinances, codes, permits, memoranda of understanding, public education programs, bill stuffers, newsletters, training session agendas, minutes of meetings, memoranda for file, etc. must be submitted with the recordkeeping section of updated plans. DWSP Plans are initially due according to the schedule in R309-600-3. Thereafter, updated DWSP Plans are due every six years from their original due date. This applies even though a PWS may have been granted an extension beyond the original due date.

(f) Revising DWSP Plans - Each PWS shall submit a revised DWSP Plan to DDW within 180 days after the reconstruction or redevelopment of any ground-water source of drinking water which addresses changes in source construction, source development, hydrogeology, delineation, potential contamination sources, and proposed land management strategies.

R309-600-8. DWSP Plan Review.

(1) The Director shall review each DWSP Plan submitted by PWSs and "concur," "concur with recommendations," "conditionally concur" or "disapprove" the plan. The Director may also authorize the designated DDW Source Protection Manager to issue the following actions: “concur” and “concur with recommendations.”

(2) The Director may "disapprove" DWSP Plans for any of the following reasons:

(a) An inaccurate DWSP Delineation Report, a report that uses a non-applicable delineation method, or a DWSP Plan that is missing

this report or any of the information and data required in it (refer to R309-600-9(6));

(b) an inaccurate Prioritized Inventory of Potential Contamination Sources or a DWSP Plan that is missing this report or any of the information required in it (refer to R309-600-10(1));

(c) an inaccurate assessment of current controls (refer to R309-600-10(2));

(d) a missing Management Program to Control Each Preexisting Potential Contamination Source which has been assessed as "not adequately controlled" by the PWS (refer to R309-600-11(1));

(e) a missing Management Program to Control or Prohibit Future Potential Contamination Sources (refer to R309-600-12);

(f) a missing or incomplete Implementation Schedule, Resource Evaluation, Recordkeeping Section, Contingency Plan, or Public Notification Plan (refer to R309-600-7(1)(e)-(g), R309-600-14, and R309-600-15).

(3) The Director may "concur with recommendations" when PWSs propose management programs to control preexisting potential contamination sources or management programs to control or prohibit future potential contamination sources for existing or new drinking water sources which appear inadequate or ineffective.

(4) The Director may "conditionally concur" with a DWSP Plan or PER. The PWS must implement the conditions and report compliance the next time the DWSP Plan is due and submitted to DDW.

R309-600-9. Delineation of Protection Zones and Management Areas.

(1) PWSs shall delineate protection zones or a management area around each of their ground-water sources of drinking water using the Preferred Delineation Procedure or the Optional Two-mile Radius Delineation Procedure. The hydrogeologic method used by PWSs shall produce protection zones or a management area in accordance with the criteria thresholds below. PWSs may also choose to verify protected aquifer conditions to reduce the level of management controls applied in applicable protection areas.

(2) Reports must be prepared by a qualified licensed professional - A submitted report which addresses any of the following sections shall be stamped and signed by a professional geologist or professional engineer:

(a) A Delineation Report for Estimated DWSP Zones produced using the Preferred Delineation Procedure, as explained in R309-600-13(2)(a);

(b) a DWSP Delineation Report produced using the Preferred Delineation Procedure, as explained in R309-600-9(3)(a) and (6)(a);

(c) a report to verify protected aquifer conditions, as explained in R309-600-9(4) and (7);

(d) a report which addresses special conditions, as explained in R309-600-9(5); or

(e) a Hydrogeologic Report to Exclude a Potential Contamination Source, as explained in R309-600-9(6)(b)(ii).

(3) Criteria Thresholds for Ground-water Sources of Drinking Water:

(a) Preferred Delineation Procedure - Four zones are delineated for management purposes:

(i) Zone one is the area within a 100-foot radius from the

wellhead or margin of the collection area.

(ii) Zone two is the area within a 250-day ground-water time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water source, or the ground-water divide, whichever is closer. If the available data indicate a zone of increased ground-water velocity within the producing aquifer(s), then time-of-travel calculations shall be based on this data.

(iii) Zone three (waiver criteria zone) is the area within a 3-year ground-water time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water source, or the ground-water divide, whichever is closer. If the available data indicate a zone of increased ground-water velocity within the producing aquifer(s), then time-of-travel calculations shall be based on this data.

(iv) Zone four is the area within a 15-year ground-water time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water source, or the ground-water divide, whichever is closer. If the available data indicate a zone of increased ground-water velocity within the producing aquifer(s), then time-of-travel calculation shall be based on this data.

(b) Optional Two-mile Radius Delineation Procedure - In place of the Preferred Delineation Procedure, PWSs may choose to use the Optional Two-mile Radius Delineation Procedure to delineate a management area. This procedure is best applied in remote areas where few if any potential contamination sources are located. Refer to R309-600-6(1)(q) for the definition of a management area.

(4) Protected Aquifer Classification - PWSs may choose to verify protected aquifer conditions to reduce the level of management controls for a public-supply well which produces water from a protected aquifer(s) or to meet one of the requirements of a VOC or pesticide susceptibility waiver (R309-600-16(4)). Refer to R309-600-6(1)(x) for the definition of a "protected aquifer."

(5) Special Conditions - Special scientific or engineering studies may be conducted to support a request for an exception (refer to R309-600-4) due to special conditions. These studies must be approved by the Director before the PWS begins the study. Special studies may include confined aquifer conditions, ground-water movement through protective layers, wastewater transport and fate, etc.

(6) DWSP Delineation Report - Each PWS shall submit a DWSP Delineation Report to DDW for each of its ground-water sources using the Preferred Delineation Procedure or the Optional Two-mile Radius Delineation Procedure.

(a) Preferred Delineation Procedure - Delineation reports for protection zones delineated using the Preferred Delineation Procedure shall include the following information and a list of all sources or references for this information:

(i) Geologic Data - A brief description of geologic features and aquifer characteristics observed in the well and area of the potential protection zones. This should include the formal or informal stratigraphic name(s), lithology of the aquifer(s) and confining unit(s), and description of fractures and solution cavities

(size, abundance, spacing, orientation) and faults (brief description of location in or near the well, and orientation). Lithologic descriptions can be obtained from surface hand samples or well cuttings; core samples and laboratory analyses are not necessary. Fractures, solution cavities, and faults may be described from surface outcrops or drill logs.

(ii) Well Construction Data - If the source is a well, the report shall include the well drillers log, elevation of the wellhead, borehole radius, casing radius, total depth of the well, depth and length of the screened or perforated interval(s), well screen or perforation type, casing type, method of well construction, type of pump, location of pump in the well, and the maximum projected pumping rate of the well. The maximum pumping rate of the well must be used in the delineation calculations. Averaged pumping rate values shall not be used.

(iii) Spring Construction Data - If the source is a spring or tunnel the report shall include a description or diagram of the collection area and method of ground-water collection.

(iv) Aquifer Data for New Wells - A summary report including the calculated hydraulic conductivity of the aquifer, transmissivity, hydraulic gradient, direction of ground-water flow, estimated effective porosity, and saturated thickness of the producing aquifer(s). The PWS shall obtain the hydraulic conductivity of the aquifer from a constant-rate aquifer test and provide the data as described in R309-515-6(10)(b). Estimated effective porosity must be between 1% and 30%. Clay layers shall not be included in calculations of aquifer thickness or estimated effective porosity. This report shall include graphs, data, or printouts showing the interpretation of the aquifer test.

(v) Aquifer Data for Existing Wells - A summary report including the calculated hydraulic conductivity of the aquifer, transmissivity, hydraulic gradient, direction of ground-water flow, estimated effective porosity, and saturated thickness of the producing aquifer(s). The PWS shall obtain the hydraulic conductivity of the aquifer from a constant-rate aquifer test using the existing pumping equipment. Aquifer tests using observation wells are encouraged, but are not required. If a previously performed aquifer test is available and includes the required data described below, data from that test may be used instead. Estimated effective porosity must be between 1% and 30%. Clay layers shall not be included in calculations of aquifer thickness or estimated effective porosity. This report shall include graphs, data, or printouts showing the interpretation of the aquifer test.

If a constant-rate aquifer test is not practical, then the PWS shall obtain hydraulic conductivity of the aquifer using another appropriate method, such as data from a nearby well in the same aquifer, specific capacity of the well, published hydrogeologic studies of the same aquifer, or local or regional ground-water models. A constant-rate test may not be practical for such reasons as insufficient drawdown in the well, inaccessibility of the well for water-level measurements, or insufficient overflow capacity for the pumped water.

The constant-rate test shall:

(A) Provide for continuous pumping for at least 24 hours or

until stabilized drawdown has continued for at least six hours. Stabilized drawdown is achieved when there is less than one foot of change of ground-water level in the well within a six-hour period.

(B) Provide data as described in R309-515-6(10)(b)(v) through (vii).

(vi) Additional Data for Observation Wells - If the aquifer test is conducted using observation wells, the report shall include the following information for each observation well: location and surface elevation; total depth; depth and length of the screened or perforated intervals; radius, casing type, screen or perforation type, and method of construction; prepumping ground-water level; the time-drawdown or distance-drawdown data and curve; and the total drawdown.

(vii) Hydrogeologic Methods and Calculations - These include the ground-water model or other hydrogeologic method used to delineate the protection zones, all applicable equations, values, and the calculations which determine the delineated boundaries of zones two, three, and four. The hydrogeologic method or ground-water model must be reasonably applicable for the aquifer setting. For wells, the hydrogeologic method or ground-water model must include the effects of drawdown (increased hydraulic gradient near the well) and interference from other wells.

(viii) Map Showing Boundaries of the DWSP Zones - A map showing the location of the ground-water source of drinking water and the boundary for each DWSP zone. The base map shall be a 1:24,000-scale (7.5-minute series) topographic map, such as is published by the U.S. Geological Survey. Although zone one (100-foot radius around the well or margin of the collection area) need not be on the map, the complete boundaries for zones two, three, and four must be drawn and labeled. More detailed maps are optional and may be submitted in addition to the map required above.

The PWS shall also include a written description of the distances which define the delineated boundaries of zones two, three, and four. These written descriptions must include the maximum distances upgradient from the well, the maximum distances downgradient from the well, and the maximum widths of each protection zone.

(b) Optional Two-Mile Radius Delineation Procedure - Delineation Reports for protection areas delineated using the Optional Two-mile Radius Delineation Procedure shall include the following information:

(i) Map Showing Boundaries of the DWSP Management Area - A map showing the location of the ground-water source of drinking water and the DWSP management area boundary. The base map shall be a 1:24,000-scale (7.5-minute series) topographic map, such as is published by the U.S. Geological Survey. Although zone one (100-foot radius around the well or margin of the collection area) need not be on the map, the complete two-mile radius must be drawn and labeled. More detailed maps are optional and may be submitted in addition to the map required above.

(ii) Hydrogeologic Report to Exclude a Potential Contamination Source - To exclude a potential contamination source from the inventory which is required in R309-600-10(1), a hydrogeologic report is required which clearly demonstrates that the potential contamination source has no capacity to contaminate the source.

(7) Protected Aquifer Conditions - If a PWS chooses to verify protected aquifer conditions, it shall submit the following additional data to DDW for each of its ground-water sources for which the protected aquifer conditions apply. The report must state that the aquifer meets the definition of a protected aquifer based on the following information:

(a) thickness, depth, and lithology of the protective clay layer;

(b) data to indicate the lateral continuity of the protective clay layer over the extent of zone two. This may include such data as correlation of beds in multiple wells, published hydrogeologic studies, stratigraphic studies, potentiometric surface studies, and so forth; and

(c) evidence that the well has been grouted or otherwise sealed from the ground surface to a depth of at least 100 feet and for a thickness of at least 30 feet through the protective clay layer in accordance with R309-600-6(1)(x) and R309-515-6(6)(i).

R309-600-10. Potential Contamination Source Inventory and Identification and Assessment of Controls.

(1) Prioritized Inventory of Potential Contamination Sources - Each PWS shall list all potential contamination sources within each DWSP zone or management area in priority order and state the basis for this order. This priority ranking shall be according to relative risk to the drinking water source. The name and address of each commercial and industrial potential contamination source is required. Additional information should include the name and phone number of a contact person and a list of the chemical, biological, and/or radiological hazards associated with each potential contamination source. Additionally, each PWS shall identify each potential contamination source as to its location in zone one, two, three, four or in a management area and plot it on the map required in R309-600-9(6)(a)(viii) or R309-600-9(6)(b)(i).

(a) List of Potential Contamination Sources - A List of Potential Contamination Sources is found in the "Source Protection User's Guide for Ground-Water Sources." This document may be obtained from DDW. This list may be used by PWSs as a guide to inventorying potential contamination sources within their DWSP zones and management areas.

(b) Refining, Expanding, Updating, and Verifying Potential Contamination Sources - Each PWS shall update its list of potential contamination sources to show current conditions within DWSP zones or management areas. This includes adding potential contamination sources which have moved into DWSP zones or management areas, deleting potential contamination sources which have moved out, improving available data about potential contamination sources, and all other appropriate refinements.

(2) Identification and Assessment of Current Controls - PWSs are not required to plan and implement land management strategies for potential contamination source hazards that are assessed as "adequately controlled." If controls are not identified, the potential contamination source will be considered to be "not adequately controlled." Additionally, if the hazards at a potential contamination source cannot be identified, the potential

contamination source must be assessed as "not adequately controlled." Identification and assessment should be limited to one of the following controls for each applicable hazard: regulatory, best management/pollution prevention, physical, or negligible quantity. Each of the following topics for a control must be addressed before identification and assessment will be considered to be complete. Refer to the "Source Protection User's Guide for Ground-Water Sources" for a list of government agencies and the programs they administer to control potential contamination sources. This guide may be obtained from DDW.

(a) Regulatory Controls - Identify the enforcement agency and verify that the hazard is being regulated by them; cite and/or quote applicable references in the regulation, rule or ordinance which pertain to controlling the hazard; explain how the regulatory control prevents ground-water contamination; assess the hazard; and set a date to reassess the hazard.

(b) Best Management/Pollution Prevention Practice Controls - List the specific best management/pollution prevention practices which have been implemented by potential contamination source management to control the hazard and indicate that they are willing to continue the use of these practices; explain how these practices prevent ground-water contamination; assess the hazard; and set a date to reassess the hazard.

(c) Physical Controls - Describe the physical control(s) which have been constructed to control the hazard; explain how these controls prevent contamination; assess the hazard; and set a date to reassess the hazard.

(d) Negligible Quantity Control - Identify the quantity of the hazard that is being used, disposed, stored, manufactured, and/or transported; explain why this amount should be considered a negligible quantity; assess the hazard; and set a date to reassess the hazard.

(3) For the purpose of meeting the requirements of R309-600, the Director will consider a PWS's assessment that a potential contamination source which is covered by a permit or approval under one of the regulatory programs listed below sufficient to demonstrate that the source is adequately controlled unless otherwise determined by the Director. For all other state programs, the PWS's assessment is subject to review by the Director; as a result, a PWS's DWSP Plan may be disapproved if the Director does not concur with its assessment(s).

(a) The Utah Ground-Water Quality Protection program established by Section 19-5-104 and R317-6;

(b) closure plans or Part B permits under authority of the Resource Conservation and Recovery Act (RCRA) of 1984 regarding the monitoring and treatment of ground water;

(c) the Utah Pollutant Discharge Elimination System (UPDES) established by Section 19-5-104 and R317-8;

(d) the Underground Storage Tank Program established by Section 19-6-403 and R311-200 through R311-208; and

(e) the Underground Injection Control (UIC) Program for classes I-IV established by Sections 19-5-104 and 40-6-5 and R317-7 and R649-5.

R309-600-11. Management Program to Control Each Preexisting Potential Contamination Source.

(1) PWSs shall plan land management strategies to control each preexisting potential contamination source in accordance with their authority and jurisdiction. Land management strategies must be consistent with the provisions of R309-600, designed to control potential contamination, and may be regulatory or non-regulatory. Each potential contamination source listed on the inventory required in R309-600-10(1) and assessed as "not adequately controlled" must be addressed. Land management strategies must be implemented according to the schedule required in R309-600-7(1)(e).

(2) PWSs with overlapping protection zones and management areas may cooperate in controlling a particular preexisting potential contamination source if one PWS will agree to take the lead in planning and implementing land management strategies and the remaining PWS(s) will assess the preexisting potential contamination source as "adequately controlled."

R309-600-12. Management Program to Control or Prohibit Future Potential Contamination Sources for Existing Drinking Water Sources.

(1) PWSs shall plan land management strategies to control or prohibit future potential contamination sources within each of its DWSP zones or management areas consistent with the provisions of R309-600 and to an extent allowed under its authority and jurisdiction. Land management strategies must be designed to control potential contamination and may be regulatory or non-regulatory. Additionally land management strategies must be implemented according to the schedule required in R309-600-7(1)(e).

(2) Protection areas may extend into neighboring cities, towns, and counties. Since it may not be possible for some PWSs to enact regulatory land management strategies outside of their jurisdiction, except as described below, it is recommended that these PWSs contact their neighboring cities, towns, and counties to see if they are willing to implement protective ordinances to prevent ground-water contamination under joint management agreements.

(3) Cities and towns have extraterritorial jurisdiction in accordance with Section 10-8-15 of the Utah Code Annotated to enact ordinances to protect a stream or "source" from which their water is taken... "for 15 miles above the point from which it is taken and for a distance of 300 feet on each side of such stream..." Section 10-8-15 includes ground-water sources.

(4) Zoning ordinances are an effective means to control potential contamination sources that may want to move into protection areas. They allow PWSs to prohibit facilities that would discharge contaminants directly to ground water. They also allow PWSs to review plans from potential contamination sources to ensure there will be adequate spill protection and waste disposal procedures, etc. If zoning ordinances are not used, PWSs must establish a plan to contact potential contamination sources individually as they move into protection areas, identify and assess their controls, and plan land management strategies if they are not adequately controlled.

R309-600-13. New Ground-water Sources of Drinking Water.

(1) Prior to constructing a new ground-water source of drinking water, each PWS shall develop a PER which demonstrates whether the source meets the requirements of this section and submit it to DDW.

Additionally, engineering information in accordance with R309-515-6(5)(a) or R309-515-7(4) must be submitted to DDW. The Director will not grant plan approval until both source protection and engineering requirements are met. Construction standards relating to protection zones and management areas (fencing, diversion channels, sewer line construction, and grouting, etc.) are found in R309-515. After the source is constructed a DWSP Plan must be developed, submitted, and implemented accordingly.

(2) Preliminary Evaluation Report for New Sources of Drinking Water - PERs shall cover all four zones or the entire management area. PERs should be developed in accordance with the "Standard Report Format for New Wells and Springs." This document may be obtained from DDW. PWSs shall include the following four sections in each PER:

(a) Delineation Report for Estimated DWSP Zones - The same requirements apply as in R309-600-9(6), except that the hydrogeologic data for the PER must be developed using the best available data which may be obtained from: surrounding wells, published information, or surface geologic mapping. PWSs must use the Preferred Delineation Procedure to delineate protection zones for new wells. The Delineation Report for Estimated DWSP Zones shall be stamped and signed by a professional geologist or professional engineer unless the Optional Two-Mile Radius Delineation Procedure is used for a new spring.

(b) Inventory of Potential Contamination Sources and Identification and Assessment of Controls - The same requirements apply as in R309-600-10(1) and (2). Additionally, the PER must demonstrate that the source meets the following requirements:

(i) Protection Areas Delineated using the Preferred Delineation Procedure in Protected Aquifers - A PWS shall not locate a new ground-water source of drinking water where an uncontrolled potential contamination source or a pollution source exists within zone one.

(ii) Protection Areas Delineated using the Preferred Delineation Procedure in Unprotected Aquifers - A PWS shall not locate a new ground-water source of drinking water where an uncontrolled potential contamination source or an uncontrolled pollution source exists within zone one. Additionally, a new ground-water source of drinking water may not be located where a pollution source exists within zone two unless the pollution source implements design standards which prevent contaminated discharges to ground water.

(iii) Management Areas Delineated using the Optional Two-Mile Radius Delineation Procedure - A PWS shall not locate a new spring where an uncontrolled potential contamination source or a pollution source exists within zone one. Additionally, a new spring may not be located where a pollution source exist within the management area unless: a hydrogeologic report in accordance with R309-600-9(6)(b)(ii) which verifies that it does not impact the spring; or the pollution source implements design standards which prevent contaminated discharges to ground water.

(c) Land Ownership Map - A land ownership map which includes all land within zones one and two or the entire management area. Additionally, include a list which exclusively identifies the land owners in zones one and two or the management area, the parcel(s) of land which they own, and the zone in which they own land. A land

ownership map and list are not required if ordinances are used to protect these areas.

(d) Land Use Agreements, Letters of Intent, or Zoning Ordinances - Land use agreements which meet the requirements of the definition in R309-600-6(1)(p). Zoning ordinances which are already in effect or letters of intent may be substituted for land use agreements; however, they must accomplish the same level of protection that is required in a land use agreement. Letters of intent must be notarized, include the same language that is required in land use agreements, and contain the statement that "the owner agrees to record the land use agreement in the county recorder's office, if the source proves to be an acceptable drinking water source." The PWS shall not introduce a new source into its system until copies of all applicable recorded land use agreements are submitted to DDW.

(3) Sewers Within DWSP Zones and Management Areas - Sewer lines may not be located within zones one and two or a management area unless the criteria identified below are met. If sewer lines are located or planned to be located within zones one and two or a management area, the PER must demonstrate that they comply with these criteria. Sewer lines that comply with these criteria may be assessed as adequately controlled potential contamination sources.

(a) Unprotected Aquifers -

(i) Zone one- all sewer lines and laterals shall be at least 50 feet from the wellhead or margin of the collection area, and be constructed in accordance to R309-515-6.

(ii) Zone two- all sewer lines and laterals within zone two or a management area shall be constructed in accordance with R309-515-6.

(b) Protected Aquifers - in zone one all sewer lines and laterals shall be constructed in accordance with R309-515-6, and shall be at least 10 feet from the wellhead or margin of the collection area.

(4) Use waivers for the VOC and pesticide parameter groups may be issued if the inventory of potential contamination sources indicates that the chemicals within these parameter groups are not used, disposed, stored, transported, or manufactured within zones one, two, and three or the management area.

(5) Replacement Wells - A PER is not required for proposed wells, if the PWS receives written notification from the Director that the well is classified as a replacement well. The PWS must submit a letter requesting that the well be classified as a replacement well and include documentation to show that the conditions required in R309-600-6(1)(y) are met. If a proposed well is classified as a replacement well, the PWS is still required to submit and obtain written approval for all other information as required in:

(a) DWSP Plan for New Sources of Drinking Water (refer to R309-600-13(6), and

(b) the Outline of Well Approval Process (refer to R309-515-6(5)).

(6) DWSP Plan for New Sources of Drinking Water - The PWS shall submit a DWSP Plan in accordance with R309-600-7(1) for any new ground-water source of drinking water within one year after the date of the Director's concurrence letter for the PER. In developing this DWSP Plan, PWSs shall refine the information in the PER by applying any new, as-constructed characteristics of the source (i.e., pumping

rate, aquifer test, etc.).

R309-600-14. Contingency Plans.

PWSs shall submit a Contingency Plan which includes all sources of drinking water for their entire water system to DDW concurrently with the submission of their first DWSP Plan. Guidance for developing Contingency Plans may be found in the "Source Protection User's Guide for Ground-Water Sources." This document may be obtained from DDW.

R309-600-15. Public Notification.

A PWSs consumers must be notified that its DWSP plans are available for their review. This notification must be released to the public by December 31, 2003. Public notifications shall address all of the PWS's sources and include the following:

(a) A discussion of the general types of potential contamination sources within the protection zones;

(b) an analysis that rates the system's susceptibility to contamination as low, medium, or high; and

(c) a statement that the system's complete DWSP plans are available to the public upon request.

Examples of means of notifying the public and examples of public notification material are discussed in the "Source Protection User's Guide for Ground-Water Sources" which may be obtained from DDW.

R309-600-16. Monitoring Reduction Waivers.

(1) Three types of monitoring waivers are available to PWSs. They are: a) reliably and consistently, b) use, and c) susceptibility. The criteria for establishing a reliably and consistently waiver is set forth in R309-205. The criteria for use and susceptibility waivers follow.

(2) If a source's DWSP plan is due according to the schedule in R309-600-3, and is not submitted to DDW, its use and susceptibility waivers for the VOC and pesticide parameter groups (refer to R309-205-6(1)(e) and (f); and (R309-205-6(2)(h) and (i)) will expire unless an exception (refer to R309-600-4) for a new due date has been granted. Additionally, current use and susceptibility waivers for the VOC, pesticide and unregulated parameter groups will expire upon review of a DWSP plan, if these waivers are not addressed in the plan. Monitoring reduction waivers must be renewed every six years at the time the PWSs Updated DWSP Plans are due and be addressed therein.

(3) Use Waivers - If the chemicals within the VOC and/or pesticide parameter group(s) (refer to R309-200 table 200-3 and 200-2) have not been used, disposed, stored, transported, or manufactured within the past five years within zones one, two, and three, the source may be eligible for a use waiver. To qualify for a VOC and/or pesticide use waiver, a PWS must complete the following two steps:

(a) List the chemicals which are used, disposed, stored, transported, and manufactured at each potential contamination source within zones one, two, and three where the use of the chemicals within the VOC and pesticide parameter groups are likely; and

(b) submit a dated statement which is signed by the system's designated person that none of the VOCs and pesticides within these respective parameter groups have been used, disposed, stored, transported, or manufactured within the past five years within zones

one, two, and three.

(4) Susceptibility Waivers - If a source does not qualify for use waivers, and if reliably and consistently waivers have not been issued, it may be eligible for susceptibility waivers. Susceptibility waivers tolerate the use, disposal, storage, transport, and manufacture of chemicals within zones one, two, and three as long as the PWS can demonstrate that the source is not susceptible to contamination from them. To qualify for a VOC and/or pesticide susceptibility waiver, a PWS must complete the following steps:

(a) Submit the monitoring results of at least one applicable sample from the VOC and/or pesticide parameter group(s) that has been taken within the past six years. A non-detectable analysis for each chemical within the parameter group(s) is required;

(b) submit a dated statement from the designated person verifying that the PWS is confident that a susceptibility waiver for the VOC and/or pesticide parameter group(s) will not threaten public health; and

(c) verify that the source is developed in a protected aquifer, as defined in R309-600-6(1)(x), and have a public education program which addresses proper use and disposal practices for pesticides and VOCs which is described in the management sections of the DWSP plan.

(5) Special Waiver Conditions - Special scientific or engineering studies or best management practices may be developed to support a request for an exception to paragraph R309-600-16(4)(c) due to special conditions. These studies must be approved by the Director before the PWS begins the study. Special waiver condition studies may include:

(a) geology and construction/grout seal of the well to demonstrate geologic protection;

(b) memoranda of agreement which addresses best management practices for VOCs and/or pesticides with industrial, agricultural, and commercial facilities which use, store, transport, manufacture, or dispose of the chemicals within these parameter groups;

(c) public education programs which address best management practices for VOCs and/or pesticides;

(d) contaminant quantities;

(e) affected land area; and/or

(f) fate and transport studies of the VOCs and/or pesticides which are listed as hazards at the PCSs within zones one, two, and three, and any other conditions which may be identified by the PWS and approved by the Director.

KEY: drinking water, environmental health
Date of Enactment or Last Substantive Amendment: ~~November 15, 2012~~
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104(1)(a)(iv)

Agenda Item 6(C)

Removal of the Specialist designation from the operator certification program

The Operator Certification Commission approved the removal of the Specialist designation on May 4, 2017. The rules affected would be R309-300-8 (e)(f) and R309-300-8.4 and 5. Recommendation to the Drinking Water Board to approve the removal to the Specialist designation and send to rule change.

R309-300. Certification Rules for Water Supply Operators

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R309-300. Certification Rules for Water Supply Operators.

R309-300-1. Objectives.

These certification rules are established to promote use of trained, experienced, and efficient personnel in charge of public waterworks and to establish standards whereby operating personnel can demonstrate competency to protect the public health through proficient operation of waterworks facilities.

R309-300-2. Authority.

Utah's Operator Certification Program is authorized by Section 19-4-104.

R309-300-3. Extent of Coverage - To Whom Rules Apply - Effective Date.

These rules shall apply to all community and non-transient non-community drinking water systems and all public drinking water systems that utilize treatment of the drinking water. This shall include both water treatment and distribution systems.

The certification requirements shall become effective February 1, 2001 for non-transient non-community drinking water systems and for community water systems serving less than 800 population utilizing only ground water or wholesale sources. These water systems shall have until February 1, 2003 to meet these requirements. For further information on this program, contact the Division of Drinking Water, telephone 536-4200.

R309-300-4. Definitions.

"Commission" see the definition of: Operator Certification Commission.

"Community Water System" means a public drinking water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

"Continuing Education Unit (CEU)" means ten contact hours of participation in, and successful completion of, an organized and approved continuing education experience under responsible sponsorship, capable direction, and qualified instruction. College credit in approved courses may be substituted for CEUs on an equivalency basis.

"Direct Employment" means that the operator is directly compensated by the drinking water system to operate that drinking water system.

"Direct Responsible Charge" means active on-site charge and performance of operation duties. A person in direct responsible charge is generally an operator of a water treatment plant or distribution system who independently makes decisions during normal operation which can affect the sanitary quality, safety, and adequacy of water delivered to customers. In cases where only one operator is employed by the system, this operator shall be considered to be in direct responsible charge.

"Director" means the Director of the Division of Drinking Water.

"Discipline" means type of certification (Distribution or Treatment).

"Distribution System" means the use of any spring or well source, distribution pipelines, appurtenances, and facilities which carry water for potable use to consumers through a public water supply. Systems which chlorinate groundwater are in this discipline.

"Distribution System Manager" means the individual responsible for all operations of a distribution system.

"Division of Drinking Water" means the Division within the Utah Department of Environmental Quality which regulates public water supplies.

"Grade" means any one of the possible steps within a certification discipline of either water distribution or water treatment. The water distribution discipline has five steps and the water treatment discipline has four steps. Treatment Grade I and Distribution Small System indicate knowledge and experience requirements for the smallest type of public water supply. Grade IV indicates knowledge and experience levels appropriate for the largest, most complex type of public water supply.

"Grandparent Certificate" means the operator has not been issued an Operator Certificate through the examination process and that a restricted certificate has been issued to the operator which is limited to his current position and system. These certificates cannot be used with any other system should the operator transfer.

"Non-Transient Non-Community Water System" means a public water system that is not a community water system and that regularly serves at least 25 of the same persons for more than six months per year. Examples are separate systems serving workers and schools.

"Operator" means a person who operates, repairs, maintains, and is directly employed by or an appointed volunteer for a public drinking water system.

"Operator Certification Commission" means the Commission appointed by the Director as an advisory Commission on certification.

"Public Drinking Water System" means any drinking water system, either publicly or privately owned, that has at least 15 connections or serves at least 25 people for at least 60 days a year.

"Regional Operator" means a certified operator who is in direct responsible charge of more than one public drinking water system.

"Restricted Certificate" means that the operator has qualified by passing an examination but is in a restricted certification status due to lack of experience as an operator.

"Secretary" means the Secretary to the Operator Certification Commission. This is an individual appointed by the Director to conduct the business of the Commission.

"Specialist" means a person who has successfully passed the written certification exam and meets the required experience, but who is not in direct employment with a Utah public drinking water system.

"Training Coordinating Committee" means the voluntary association of individuals responsible for environmental training in the state of Utah.

"Treatment Plant Manager" means the individual responsible for all operations of a treatment plant.

"Treatment Plant" means those facilities capable of delivering complete treatment to any water (the equivalent of coagulation and/or filtration) serving a public drinking water supply.

"Unrestricted Certificate" means that a certificate of competency has been issued by the Director after considering the recommendation of the Commission. This certificate acknowledges that the operator has passed the appropriate level written examination and has met all certification requirements at the discipline and grade stated on his certificate.

R309-300-5. General Policies.

1. In order to become a certified water operator or specialist, an individual shall pass an examination administered by the Division of Drinking Water or qualify for the grandparent provisions outlined in R309-300-13.

2. Any properly qualified operator (see Minimum Required Qualifications for Utah Waterworks Operators Table 5) may apply for unrestricted certification.

3. Any properly qualified person (see Minimum Required Qualifications for Water System Specialists Table 6) may apply for Specialist certification. A Specialist, regardless of discipline or grade, shall not act as a direct responsible charge operator, or be in direct operation or supervise the direct operation of, any public drinking water system.

4. An individual who holds a current Specialist Certificate may apply for an Operator Certificate of the same discipline and grade upon verification of direct employment with a public drinking water system. An individual who holds a current Operator Certificate (Restricted and Unrestricted) may apply for a Specialist Certificate of the same discipline and grade if that operator leaves the direct employment of a drinking water system.

5. All direct responsible charge operators shall be certified at a minimum of the grade level of the water system with an appropriate certificate. Where 24-hour shift operation is used or required, one operator per shift must be certified at the classification of the system operated.

6. The Director, upon recommendation from the Commission, may waive examination of applicants holding a valid certificate or license issued in compliance with other state certification plans having equivalent standards, and grant reciprocity.

7. A grandparent certificate will require normal renewal as with other certificates and will be restricted to the existing position, person, and system for which it was issued. No further examination will be required unless the grade of the drinking water system increases or the operator seeks to change the certificate discipline or grade. At that time, all normal certification requirements must be met.

8. Every community and non-transient non-community drinking water system and all public systems that utilize treatment/filtration of the drinking water shall have at least one operator certified at the classified grade of the water system. Certification must be appropriate for the type of system operated (treatment and/or distribution).

9. An individual who is issued an Operator Certificate shall be employed by, or an appointed volunteer for, a public drinking water supply located in Utah.

10. If the Distribution Manager, Treatment Plant Manager, or Direct Responsible Charge Operator is changed or leaves a particular water system, the water system management must notify the Secretary to the Operator Certification Commission within ten days by contacting the Division of Drinking Water in writing. Within one year, the person replacing the Distribution Manager, Treatment Plant Manager or Director Responsible Charge Operator must have passed an examination of the appropriate grade and discipline. Direct responsible charge experience may be gained later, together with unrestricted certification as experience is gained.

11. The Secretary to the Commission may suspend or revoke a certificate after due notice and opportunity for a hearing. See Section R309-300-9 for further details.

12. An operator may have the opportunity to take any grade of examination higher than the rating of the system which he operates. If passed, the operator shall be issued a restricted certificate at that higher grade. This certificate can be used to demonstrate that the operator has successfully passed all knowledge requirements for that discipline and grade, but that experience is lacking. This restricted certificate will become unrestricted when the

experience requirements are met with written verification for the appropriate discipline and grade, provided it is renewed at the required intervals.

13. The Commission will review on a periodic basis each system's compliance with these rules and will refer those systems in violation to the Director for appropriate action. Any requirement can be appealed as provided in R305-7.

14. An operator who is acting as the direct responsible charge operator for more than one drinking water system (regional operator) shall not be a grandparent certified operator.

15. The regional operator must have an unrestricted certificate equal to or higher than the grade and discipline of the rating applied to each system he is operating.

16. If the regional operator is operating any system(s) that have both disciplines involved in their rating, the operator must have unrestricted certificates in both disciplines and at the highest grade of the most complex system he is working with.

17. A regional operator shall be within a one hour travel time, under normal work and home conditions, of each drinking water system for which he is considered in direct responsible charge unless a longer travel time is approved by the Director based on availability of certified operators and the distance between community water systems in the area.

18. If the drinking water system has only one certified operator, with the exception of a drinking water system employing a regional operator, the operator must have a back up operator certified in the required discipline(s). The back up certified operator must be within one hour travel time of the drinking water system.

19. At no time will an uncertified operator be allowed to operate a drinking water system covered by these rules unless the operator is within the one year grace period specified in R309-300-5.10.

R309-300-6. Application for Examination.

1. Prior to taking an examination, the operator or specialist must file a written application with the Division of Drinking Water or apply for an online examination with the appropriate agency, accompanied by evidence of his qualifications for certification in accordance with provisions of this plan (see tables on minimum qualifications). Such applications shall be made on forms supplied by the Division.

2. An operator may elect to take any written examination which he believes can be successfully passed. Persons passing such an examination shall be issued restricted certificates for the appropriate discipline and grade.

R309-300-7. Examinations.

1. The time and place of the examination to qualify for a certificate shall be determined by the Commission or a proctor designated by the Commission. All examinations for certification shall be given not less than twice a year, generally at each of 12 district health department offices. All examinations will be conducted at sites designated by the Commission or designated by a proctor designated by the Commission. The written examinations will be graded, and the applicant notified of the results within 30 days. The online examinations will be graded at the site of the examination. If an operator taking the examination fails to pass, the operator may file an application for reexamination at the next available date.

2. The minimum passing grade for all certification exams shall be 70 percent correct on all questions asked.

3. An individual who has failed to pass at least two consecutive written exams, at the same grade level and discipline, may make an application for an oral exam. The oral exam will be administered by at least two Commission members or by other individuals approved by the Director. If the individual fails this exam, he will be given written notice of those areas deficient and asked to reapply for a written examination.

4. Examinations will be given in nine grades, four in water treatment and five water distribution. The examinations will cover, but not be limited to, the following areas:

(a) general water supply knowledge;

(b) control processes in water treatment or distribution;

(c) operation, maintenance, and emergency procedures in treatment or distribution;

(d) proper record keeping;

(e) laws and requirements, and water quality standards.

5. The written examination for specialist certification will be the same examination that is given for operator certification.

6. The written examination question bank and text matrix shall be reviewed periodically by the Commission.

R309-300-8. Certificates.

1. All certificates shall indicate the discipline for which they were issued as follows:

(a) Water Treatment Plant Operator, Unrestricted;

(b) Water Treatment Plant Operator, Restricted;

(c) Water Distribution Operator, Unrestricted;

(d) Water Distribution Operator, Restricted;

(e) Water Treatment Specialist;

(f) Water Distribution Specialist;

(g) Grandparent.

2. A restricted certificate will be issued to those operators who have passed a higher grade examination than the grade for which they have qualified in the experience category. Upon accumulating the necessary experience (see R309-300-19. Table 5 and Table 6), these restricted certificates will become unrestricted with the same renewal date. Certificates issued in the restricted status will be stamped with the word RESTRICTED on the bottom left corner of the certificate.

3. Grandparent certificates will be restricted to the person, position, and water system for which they were issued. These certificates will exempt the holder from further examination but will not be transferable to other persons, drinking water systems or positions.

4. A Specialist Certificate will be issued to those persons who have met the experience requirements and have successfully passed the written examination, but who are not in direct employment with a Utah Public Drinking Water System or in the case of requested conversion (see R309-300-8(5)).

5. An individual who currently holds a valid Utah Operator Certificate and who is no longer directly employed by a Utah drinking water system may request his Operator Certificate be converted to a Specialist Certificate with the same expiration date.

6. All certificates shall continue in effect for a period of three years unless suspended or revoked prior to that time. The certificate must be renewed every three years by payment of a renewal fee and evidence of required training (see R309-300-14). Certificates will expire on December 31, three years from the year of issuance.

7. Failure to remain active in the waterworks field during the three-year life of the Operator Certificate can be cause for denial of the application renewal.

8. Requests for renewal shall be made on the forms supplied by the Division of Drinking Water.

9. A lapsed certificate may be renewed within 6 months of the expiration date by making an application for renewal. A certificate that lapsed more than 6 months earlier, but less than 18

months earlier may be renewed by making application for renewal and by payment of the reinstatement fee or by passing an examination. A certificate that has lapsed 18 months or more may not be renewed and the former certificate holder will be required to meet all requirements for issuance of a new certificate.

R309-300-9. Certificate Suspension and Revocation Procedures.

1. The Secretary shall inform a certificate holder, in writing, if the certificate is being considered for suspension or revocation of an Operator's or Specialist's certificate. The communication shall state the reasons for considering such action and allow the individual an opportunity for a hearing.

2. Grounds for suspending or revoking an Operator's or a Specialist's certificate shall be any of the following:

(a) demonstrated disregard for the public health and safety;

(b) misrepresentation or falsification of figures and reports, or both, submitted to the State;

(c) cheating on a certification exam.

3. Suspension or revocation may be imposed when the circumstances and events were under the certificate holder's control. Disasters or "acts of God" which could not be reasonably anticipated will not be grounds for a suspension or a revocation action.

4. Following an appropriate hearing on these matters, the Commission will make a recommendation to the Director. The recommendation shall include a description of the findings of fact and shall be provided to the certificate holder. The information shall also outline the procedures to reapply for certification at the end of the specified disciplinary period.

5. Any suspension or revocation may be appealed as provided in R305-7.

R309-300-10. Fees.

1. Fees for operator and specialist certification shall be submitted in accordance with Section 63-38-3.

2. Examination fees from applicants who are rejected before examination will be returned to the applicant.

3. Application fees will not be returned.

R309-300-11. Facilities Classification System.

1. All treatment plants and distribution systems shall be classified in accordance with R309-300-19.

2. Classification will be made by either the point system or on a population-served basis, whichever results in a higher classification.

3. When the classification of a system is upgraded or added to existing system ratings, the Director shall make a determination on the timing to be allowed for operators to gain certification at the higher or different level.

R309-300-12. Qualifications of Operators.

1. Minimum qualifications are outlined in Minimum Required Qualifications for Utah Waterworks Operators, Table 5, and Minimum Certification Qualifications for Water System Specialists, Table 6, included with these rules (see Section R309-300-19).

2. Approved high school equivalencies can be substituted for the high school graduation requirement.

3. Education of an operator can be substituted for experience, but no more than 50 percent of the experience may be satisfied by education. Note: The exception to this is in grades I and II, where the "one year of experience" requirement cannot be reduced by any amount of education.

4. Education of a specialist cannot be substituted for the required experience (see Minimum Certification Qualifications for Water System Specialists Table 6).

R309-300-13. Grandparent Certification.

Some community and non-transient non-community water systems that serve a population of 800 or less have operators with Grandparent Certification. Grandparent Certifications will continue to be sufficient for these operators, with the following restrictions:

1. Grandparent Certificates are valid only for the person, position, water system, and classification of water system for which they were issued;

2. A Grandparent Certification that expires and is not renewed as provided in R309-300-8(9) may not be renewed and the operator will be required to apply for certification as provided in this rule; and

3. No new Grandparent Certificates will be issued.

R309-300-14. CEUs and Approved Training.

1. CEUs will be required for renewal of all certificates (grandparent, restricted and unrestricted) according to the following schedule:

TABLE 1	
CLASSIFICATION	CEUs REQUIRED IN A 3 YEAR PERIOD
Small System	2
Grade 1	2
Grade 2	2
Grade 3	3
Grade 4	3

2. Grandparent certificates are required to have 2.0 or 3.0 CEUs, as per the water system classification, for certificate renewal. Grandparent certificates issued after the calendar year of 2000 are required to obtain 0.7 CEUs of an approved pre-exam training course as part of the 2.0 CEU renewal requirement. These specific CEUs shall be obtained during the first renewal cycle of said certificate.

3. Groups that currently sponsor approved education activities in Utah are:

The Rural Water Association of Utah;

Salt Lake Community College

Utah Valley State College;

Utah State University at Logan;

Utah Department of Environmental Quality;

Manufacturer's Representatives;

American Water Works Association;

American Backflow Prevention Association.

4. A continuing education unit is defined as 10 contact hours of participation in, and successful completion of, an organized and approved training education experience under qualified instruction.

5. College level education is accepted in drinking water related disciplines upon approval of the Secretary to the Commission as to CEU credits (1 quarter credit hour will equal 1.0 CEU or 1 semester credit hour will equal 1.5 CEUs).

6. All CEUs for certificate renewal shall be subject to review for approval to insure that the training is applicable to waterworks operation and meets CEU criteria. Identification of approved training, appropriate CEU or credit assignment and verification of successful completion is the responsibility of the Secretary to the Commission. Training records will be maintained by the Division of Drinking Water.

7. All in-house or in-plant training which is intended to meet any part of the CEU requirements must be approved by the Secretary to the Commission in writing prior to the training.

8. In-house or in-plant training submitted to the Secretary of the Commission must meet the following general criteria to be approved:

(a) Instruction must be under the supervision of an approved instructor.

(b) An outline must be submitted of the subjects to be covered and the time to be allotted to each area.

(c) A list of the teacher's objectives shall be submitted which will document the essential points of the instruction ("need-to-know" information) and the methods used to illustrate these principles.

9. One CEU credit will be given for registration and attendance at the annual technical program meeting of the American Water Works Association (AWWA), the Intermountain Section of AWWA, the Rural Water Association of Utah, or the National Rural Water Association.

R309-300-15. Validation of Previously Issued Certificates.

1. All current certificates issued by the Director will remain in effect until their stated date of expiration and may be renewed at any time before this date in accordance with the rules established herein. Certificates will be issued for a three-year period.

2. Those individuals who were issued Grandparent Certificates and subsequently passed an examination within the same discipline, at the same grade, or a higher grade will be issued a new unrestricted certificate which will nullify the existing "Grandparent " certificate.

R309-300-16. Operator Certification Commission.

1. An Operator Certification Commission shall be appointed by the Director from recommendations made by the cooperating agencies. Cooperating agencies are the Utah Department of Environmental Quality, the Utah League of Cities and Towns, the Training Coordinating Committee of Utah, the Intermountain Section of the American Water Works

Association, the Civil or Environmental Engineering Departments of Utah's Universities, and the Rural Water Association of Utah.

2. The Commission is charged with the responsibility of conducting all work necessary to promote the program, recommend certification of operators, and oversee the maintenance of records.

3. The Commission shall consist of seven members as follows:

(a) One member shall be a certified operator from a town having a population under 10,000 and will be nominated by the Rural Water Association of Utah.

(b) One member shall be at least a grade III unrestricted certified distribution operator and will be nominated by the American Water Works Association.

(c) One member shall be at least a grade III unrestricted certified water treatment plant operator and will be nominated by the American Water Works Association.

(d) One member shall represent municipal water supply management and will be nominated by the Utah League of Cities and Towns.

(e) One member shall represent the civil or environmental engineering department of a Utah university cooperating with the certification program.

(f) One member shall represent water supply trainers and will be nominated by the Training Coordinating Committee (TCC).

(g) One member shall be a representative for the Division of Drinking Water.

4. Each group represented shall designate its nominee to the Director for a three-year term. Nominations may be accepted or rejected by the Director. Persons may be renominated for successive three-year terms by their sponsor groups. The Director shall notify the sponsoring groups one year in advance of the termination of the Commission member that a nominee will be needed. An appointment to succeed a Commission member who is unable to serve his full term shall be only for the remainder of the unexpired term and shall be submitted by the sponsor groups and approved by the Director as mentioned above.

5. Each year the Commission shall elect from its membership a chairperson and vice-chairperson and such other officers as may be needed to conduct its business.

6. It shall be the duty of the Commission to advise in the preparation of examinations for various grades of operators and advise on the certification criteria used by the Secretary. In addition to these duties, the Commission shall also advertise and promote the program, distribute applications and notices, maintain a register of certified Operators and Specialists, set examination dates and locations, and make recommendations regarding each drinking water system's compliance with these rules.

R309-300-17. Secretary to the Commission.

The Director shall designate a non-voting member of the Commission to serve as its Secretary, who shall be a senior public health representative from the Division of Drinking Water. This Secretary shall serve to coordinate the paperwork for the Commission and to bring issues before the Commission. His duties consist of the following:

1. acting as liaison between the Commission and the water suppliers, and generally promote the program;

2. maintaining records necessary to implement these rules;

3. classifying all water treatment plants and distribution systems in accordance with R309-300-19;

4. notifying sponsor groups of Commission nominations needed;

5. coordinating with Utah's Training Coordinating Committee (TCC) to ensure adequate operator training opportunities throughout the state;

6. serving as a source of public information for operator training opportunities and certified operators available for employment;

7. receiving applications for certification and screen, investigate, verify and evaluate all applications;

8. bringing issues to the Commission for their review;

9. developing and administering operator certification examinations.

R309-300-18. Non-compliance with Certification Program.

1. After appropriate consideration by the Commission, cases of non-compliance will be referred to the Director for appropriate enforcement action.

2. Non-compliance with the certification rules is a violation of R309-102-8. Whenever such a violation occurs, the water system management will be notified in writing by the Division of Drinking Water and will be required to correct the situation.

R309-300-19. Drinking Water System Classification.

This system applies only to those public water supplies operating coagulation and/or filtration treatment plants. This classification system does not apply to those systems operating only chlorination facilities on distribution systems.

TABLE 2		
	ITEM	**POINTS**
SIZE	Maximum population served, peak day	1 pt. per 5,000 or part thereof
	Design flow (avg. day) or peak month's	1 pt. per MGD or part thereof
WATER SUPPLY SOURCES	Groundwater	3
	Surface water	5
	Average raw water quality (0-10)	
	Little or no variation	0
	Raw water quality (other than turbidity) varies enough to require treatment changes less than 10% of the time	2
	Raw water quality including turbidity varies often enough to require frequent changes in the treatment process	5
	Raw water quality is subject to major changes and may be subject to periodic serious pollution	10
TREATMENT	Aeration for or with CO2	2
	pH adjustment	4
	Packed tower aeration	6
	Stability or corrosion control	4
	Taste and odor control	8
	Color control	4
	Iron or Iron/Mn, removal	10
	Ion exchange softening	10
	Chemical precipitation	
	Softening	20
	Coagulant addition	4
	Flocculation	6
	Sedimentation	5
	Upflow clarification	14
	Filtration	10

	Disinfection (0-10)	
	No disinfection	0
	Chlorination or comparable	5
	On-site generation of disinfectant	5
	Special processes (including reverse osmosis, electrodialysis, etc.	15
	Sludge/backwash waterdisposal (0-5)	
	No disposal to raw water source	0
	Any disposal to raw water source	2
	Any disposal to plant raw water	5
LABORATORY	**Laboratory control, Biological (0-10)**	
	All lab work done outside of plant	0
	Colilert process	2
	Membrane filter	3
	Multiple tube of fecal determination	5
	Biological identification	7
	Viral studies or similarly complex work done on-site	10
	Laboratory control, Chemical/physical (0-10)	
	All lab work done outside of plant	0
	Push button or colorimetric methods such as chlorine residual or pH	3
	Additional procedures such as titrations or jar tests	5
	More advanced determinations such as numerous organics	7
	Highly sophisticated instrumentation such as atomic absorption or gas chromatography	10

TABLE 3 SUMMARY OF UTAH WATER UTILITY CLASSIFICATION SYSTEM WATER TREATMENT PLANT CLASSIFICATION				
GRADE	1	2	3	4
Population Served	1500 or less	1501 to 5000	5001 to 15,000	Over 15,000

Plant Points	0 – 40	41 - 65	66 - 90	91 - Up

TABLE 4
SUMMARY OF UTAH
WATER UTILITY CLASSIFICATION SYSTEM
DISTRIBUTION CLASSIFICATION

GRADE	SMALL SYSTEM	1	2	3	4
Population Served	500 or less	501 to 1500	1501 to 5000	5001 to 15,000	Over 15,000
Distribution Points	0 - 10	0 - 10	10 - 25	26 – 50	51 - Up

Distribution systems are those which use groundwater sources (springs and wells) and which may or may not use chlorination. Classification will generally be made in accordance with the following five classes. The Commission may change the classification of a particular distribution system when there are unusual factors affecting the complexity of transmission, mixing of sources, or potential health hazards

TABLE 5
MINIMUM REQUIRED QUALIFICATIONS FOR
UTAH WATERWORKS OPERATORS

	EDUCATION				**EXPERIENCE**	
Certification Grade (Both Dist and Treatment)	Degree	Associate Degree	High School	Non High School	Direct Responsible Charge Years	Total Years
4	X				2	4
4		X			2	6
4			X		4	8
4				X	5	10
3	X				1	2
3		X			1	2
3			X		2	4
3				X	3	6

2	X				0	2
2		X			0	2
2			X		0	2
2				X	0	3
1 and Small Systems	X				0	1
1 and Small Systems		X			0	1
1 and Small Systems			X		0	1
1 and Small Systems				X	0	1
Note:(1) Experience requirements apply to all operators except those who have been issued "grandparent" certificates.(2) At least one half of all experience must be gained at the grade of certification desired.						

TABLE 6
Minimum Certification Qualifications
For Water System Specialists

CERTIFICATION GRADE (both Distribution and Treatment)	EXPERIENCE	
	"Hands On" Experience (Years)	Design or Associated Experience (Years)
4	8	10
3	4	8
2	2	4
1	0	0

Note:

1. All experience must be verifiable.
2. All "hands on" experience must be in the area of operation, repair, and maintenance of a public drinking water system.
3. Associated experience may be in the design, construction, and inspection of public drinking water systems and/or direct consultation for public drinking water systems.
4. The required experience, as outlined above, must be either in the "Hands On" category or in the Design or Associated category, not in combination.
5. Persons applying for and passing the specialist exam who do not meet the minimum qualifications will be issued a restricted certificate similar to the water system operator restricted certificate.
6. Restricted Specialist Certificate shall be changed to unrestricted status upon written request of certificate holder after minimum experience qualifications have been met.

KEY: drinking water, environmental protection, administrative procedures
Date of Enactment or Last Substantive Amendment: November 13, 2013
Notice of Continuation: March 22, 2010
Authorizing, and Implemented or Interpreted Law: 19-4-104; 63G-3

Agenda Item 6(D)

R309. Environmental Quality, Drinking Water.
R309-220. Monitoring and Water Quality: Public Notification Requirements.
R309-220-1. Purpose.

The purpose of this rule is to outline the public notification requirements for public water systems.

R309-220-2 Authority.
R309-220-3 Definitions.
R309-220-4 General public notification requirements.
R309-220-5 Tier 1 Public Notice - Form, manner, and frequency of notice.
R309-220-6 Tier 2 Public Notice - Form, manner, and frequency of notice.
R309-220-7 Tier 3 Public Notice - Form, manner, and frequency of notice.
R309-220-8 Content of the public notice.
R309-220-9 Notice to new billing units or new customers.
R309-220-10 Special notice of the availability of unregulated contaminant monitoring results.
R309-220-11 Special notice for exceedance of the SMCL for fluoride.
R309-220-12 Special notice for nitrate exceedances above MCL by non-community water systems (NCWS), where granted permission by the Director.
R309-220-13 Special Notice for Repeated Failure to Conduct Monitoring of the Source Water for Cryptosporidium and for Failure to Determine Bin Classification or Mean Cryptospridium Level.
R309-220-14 Notice by Director on behalf of the public water system.
R309-220-15 Standard Health Effects Language.

R309-220-2. 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 of the Utah Code and in accordance with 63G-3 of the same, known as the Administrative Rulemaking Act.

R309-220-3. Definitions.

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

R309-220-4. General Public Notification Requirements.

(1) Violation Categories and Other Situations Requiring a Public Notice:

Each owner or operator of a public water system (community water systems, non-transient non-community water systems, and transient non-community water systems) must give notice for all violations of these rules and for other situations, as listed below. The term "UPDWR violations" is used in this subpart to include violations of the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, and testing procedures contained in R309-100 through R309-215.

(a) UPDWR Violations:

(i) Failure to comply with an applicable maximum contaminant

level (MCL) or maximum residual disinfectant level (MRDL).

(ii) Failure to comply with a prescribed treatment technique (TT).

(iii) Failure to perform water quality monitoring, as required by the drinking water regulations.

(iv) Failure to comply with testing procedures as prescribed by a drinking water regulation.

(b) Variance and Exemptions Under R309-10 and R309-11.

(i) Operation under a variance or an exemption.

(ii) Failure to comply with the requirements of any schedule that has been set under a variance or exemption.

(c) Special Public Notices

(i) Occurrence of a waterborne disease outbreak or other waterborne emergency.

(ii) Exceedance of the nitrate MCL by non-community water systems (NCWS), where granted permission by the Director under R309-200-5(1)(c), Table 200-1, note (4)(b).

(iii) Exceedance of the secondary maximum contaminant level (SMCL) for fluoride.

(iv) Availability of unregulated contaminant monitoring data.

(v) Other violations and situations determined by the Director to require a public notice under this subpart.

(2) Definition of Public Notice Tiers:

Public notice requirements are divided into three tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in paragraph (1) of this section are determined by the tier to which it is assigned. Each tier is defined below:

(a) Tier 1 public notice -- required for UPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

(b) Tier 2 public notice -- required for all other UPDWR violations and situations with potential to have serious adverse effects on human health.

(c) Tier 3 public notice -- required for all other UPDWR violations and situations not included in Tier 1 and Tier 2.

(3) Required Distribution of Notice

(a) Each public water system must provide public notice to persons served by the water system, in accordance with this rule. Public water systems that sell or otherwise provide drinking water to other public water systems (i.e., to consecutive systems) are required to give public notice to the owner or operator of the consecutive system; the consecutive system is responsible for providing public notice to the persons it serves.

(b) If a public water system has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, the Director may allow the system to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. Permission by the Director for limiting distribution of the notice must be granted in writing.

(c) A copy of the notice must also be sent to the Director, in accordance with the requirements under R309-105-16.

R309-220-5. Tier 1 Public Notice -- Form, Manner and Frequency of Notice.

(1) Violation Categories and Other Situations Requiring a Tier 1 Public Notice:

(a) Violation of the MCL for total coliforms when E. coli are present, as defined in R309-211-9(1);

(b) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in R309-200-5(1)(c), Table 200-1, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in R309-205-5(1)(e)(ii);

(c) Exceedance of the nitrate MCL by non-community water systems, where permitted to exceed the MCL by the Director under R309-200-5(1)(c), Table 200-1, note (4)(b), as required under R309-220-12;

(d) Violation of the MRDL for chlorine dioxide, as defined in 40 CFR section 141.65(a), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water system does not take the required samples in the distribution system, as specified in 40 CFR section 141.133(c)(2)(i);

(e) Violation of the turbidity MCL under R309-200-5(5)(a), where the Director determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;

(f) Violation of the Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment rule (IESWTR) or the Long Term 1 Enhanced Surface Water Treatment rule (LT1ESWTR) treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit, where the Director determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;

(g) Occurrence of a waterborne disease outbreak, as defined in R309-110, or other waterborne emergency (such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination);

(h) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Director either in its rules or on a case-by-case basis.

(i) Detection of E. coli, enterococci, or coliphage in source water samples as specified in R309-215-16(2)(a) and R309-215-16(2)(b).

(2) Frequency of the Tier 1 Public Notice and Additional Steps Required:

Public water systems must:

(a) Provide a public notice as soon as practical but no later than 24 hours after the system learns of the violation;

(b) Initiate consultation with the Director as soon as

practical, but no later than 24 hours after the public water system learns of the violation or situation, to determine additional public notice requirements; and

(c) Comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Director. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all persons served.

(3) Form and Manner of the Public Notice:

Public water systems must provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the public water system are to fit the specific situation, but must be designed to reach residential, transient, and non-transient users of the water system. In order to reach all persons served, water systems are to use, at a minimum, one or more of the following forms of delivery:

(a) Appropriate broadcast media (such as radio and television);

(b) Posting of the notice in conspicuous locations throughout the area served by the water system;

(c) Hand delivery of the notice to persons served by the water system; or

(d) Another delivery method approved in writing by the Director.

R309-220-6. Tier 2 Public Notice -- Form, Manner and Frequency of Notice.

(1) Violation Categories And Other Situations Requiring a Tier 2 Public Notice:

(a) All violations of the MCL, MRDL, seasonal system treatment technique requirements, and treatment technique requirements, except where a Tier 1 notice is required under R309-220-5(1) or where the Director determines that a Tier 1 notice is required;

(b) Violations of the monitoring and testing procedure requirements, where the Director determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation; and

(c) Failure to comply with the terms and conditions of any variance or exemption in place.

(d) Failure to take corrective action or failure to maintain at least 4-log treatement of viruses (using inactivation, removal, or an Director-approved combination of 4-log virus inactiviation and removal) before or at the first customer under R309-215-16(3)(a).

(e) The Director's determination that any previously-unregulated water system qualifies as a public water system under R309-100-4. In such situations, the notice shall not be subject to repeat notice under subsection (2)(b), below, unless otherwise determined by the Director.

(f) Any change in a public water system's rating to Corrective Action or Not Approved under R309-400-4, except that the Director may determine that a public water system's rating change to Not Approved is subject to Tier 1 Public Notice, whereupon the Director shall so notify the public water system. Unless otherwise determined by the Director, a public water system's rating of Not Approved shall be subject to repeat notice every three months, and a public water

system's rating of Corrective Action shall be subject to repeat notice every 12 months, under subsection (2)(b), below.

(2) Frequency of the Tier 2 Public Notice:

(a) Public water systems must provide the public notice as soon as practical, but no later than 30 days after the system learns of the violation. If the public notice is posted, the notice must remain in place for as long as the violation or situation persists, but in no case for less than seven days, even if the violation or situation is resolved. The Director may, in appropriate circumstances, allow additional time for the initial notice of up to three months from the date the system learns of the violation. It is not appropriate for the Director to grant an extension to the 30-day deadline for any unresolved violation or to allow across-the-board extensions by rule or policy for other violations or situations requiring a Tier 2 public notice. Extensions granted by the Director must be in writing.

(b) The public water system must repeat the notice every three months as long as the violation or situation persists, unless the Director determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstance may the repeat notice be given less frequently than once per year. It is not appropriate for the Director to allow less frequent repeat notice for an MCL or treatment technique violation under the Total Coliform Rule or R309-211 or a treatment technique violation under the Surface Water Treatment Rule, Interim Enhanced Surface Water Treatment Rule or Filter Backwash Recycling Rule. It is also not appropriate for the Director to allow through its rules or policies across-the-board reductions in the repeat notice frequency for other ongoing violations requiring a Tier 2 repeat notice. Director determinations allowing repeat notices to be given less frequently than once every three months must be in writing.

(c) For the turbidity violations specified in this paragraph, public water systems must consult with the Director as soon as practical but no later than 24 hours after the public water system learns of the violation, to determine whether a Tier 1 public notice under R309-220-5(1) is required to protect public health. When consultation does not take place within the 24-hour period, the water system must distribute a Tier 1 notice of the violation within the next 24 hours (i.e., no later than 48 hours after the system learns of the violation), following the requirements under R309-220-5(2) and (3). Consultation with the Director is required for:

(i) Violation of the turbidity MCL under R309-200-5(5)(a); or

(ii) Violation of the SWTR, IESWTR or LT1ESWTR treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.

(3) Form and Manner of the Public Notice:

Public water systems must provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

(a) Unless directed otherwise by the Director in writing, community water systems must provide notice by:

(i) Mail or other direct delivery to each customer receiving

a bill and to other service connections to which water is delivered by the public water system; and

(ii) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in paragraph (3)(a)(i) of this section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places served by the system or on the Internet; or delivery to community organizations.

(b) Unless directed otherwise by the Director in writing, non-community water systems must provide notice by:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and

(ii) Any other method reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in paragraph (3)(b)(i) of this section. Such persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include: publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

R309-220-7. Tier 3 Public Notice -- Form, Manner and Frequency of Notice.

(1) Violation Categories And Other Situations Requiring a Tier 3 Public Notice:

(a) Monitoring violations under R309-205, R309-210 and R309-215, except where a Tier 1 notice is required under R309-220-5(1) or where the Director determines that a Tier 2 notice is required;

(b) Failure to comply with a testing procedure established in R309-205, R309-210 and R309-215, except where a Tier 1 notice is required under R309-220-5(1) or where the Director determines that a Tier 2 notice is required;

(c) Operation under a variance granted under R309-100-10;

(d) Availability of unregulated contaminant monitoring results, as required under R309-220-10; and

(e) Exceedance of the fluoride secondary maximum contaminant level (SMCL), as required under R309-220-11; and

(f) Reporting and Recordkeeping violations under R309-211.

(2) Frequency of the Tier 3 Public Notice:

(a) Public water systems must provide the public notice not later than one year after the public water system learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the public water system must repeat the notice annually for as long as the violation, variance, exemption, or other situation persists. If the public notice is

posted, the notice must remain in place for as long as the violation, variance, exemption, or other situation persists, but in no case less than seven days (even if the violation or situation is resolved).

(b) Instead of individual Tier 3 public notices, a public water system may use an annual report detailing all violations and situations that occurred during the previous twelve months, as long as the timing requirements of paragraph (2)(a) of this section are met.

(3) Form and Manner of the Public Notice:

Public water systems must provide the initial notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

(a) Unless directed otherwise by the Director in writing, community water systems must provide notice by:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system; and

(ii) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in paragraph (3)(a)(i) of this section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places or on the Internet; or delivery to community organizations.

(b) Unless directed otherwise by the Director in writing, non-community water systems must provide notice by:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and

(ii) Any other method reasonably calculated to reach other persons served by the system, if they would not normally be reached by the notice required in paragraph (3)(b)(i) of this section. Such persons may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include: publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

(4) Use of the Consumer Confidence Report to meet the Tier 3 public notice requirements:

For community water systems, the Consumer Confidence Report (CCR) required under R309-225 may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as:

(a) The CCR is provided to persons served no later than 12 months after the system learns of the violation or situation as required under R309-220-7(2);

(b) The Tier 3 notice contained in the CCR follows the content

requirements under R309-220-8; and

(c) The CCR is distributed following the delivery requirements under R309-220-7(3).

R309-220-8. Content of the Public Notice.

(1) When a public water system violates a UPDWR or has a situation requiring public notification, each public notice must include the following elements:

(a) A description of the violation or situation, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);

(b) When the violation or situation occurred;

(c) Any potential adverse health effects from the violation or situation, including the standard language under paragraph (4)(a) or (4)(b) of this section, whichever is applicable;

(d) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;

(e) Whether alternative water supplies should be used;

(f) What actions consumers should take, including when they should seek medical help, if known;

(g) What the system is doing to correct the violation or situation;

(h) When the water system expects to return to compliance or resolve the situation;

(i) The name, business address, and phone number of the water system owner, operator, or designee of the public water system as a source of additional information concerning the notice; and

(j) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under paragraph (4)(c) of this section, where applicable.

(2) Required elements to be included in the public notice for public water systems operating under a variance or exemption:

(a) If a public water system has been granted a variance or an exemption, the public notice must contain:

(i) An explanation of the reasons for the variance or exemption;

(ii) The date on which the variance or exemption was issued;

(iii) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and

(iv) A notice of any opportunity for public input in the review of the variance or exemption.

(b) If a public water system violates the conditions of a variance or exemption, the public notice must contain the ten elements listed in paragraph (1) of this section.

(3) Presentation of the public notice.

(a) Each public notice required by this section:

(i) Must be displayed in a conspicuous way when printed or posted;

(ii) Must not contain overly technical language or very small print;

(iii) Must not be formatted in a way that defeats the purpose of the notice;

(iv) Must not contain language which nullifies the purpose of the notice.

(b) Each public notice required by this section must comply with multilingual requirements, as follows:

(i) For public water systems serving a large proportion of non-English speaking consumers, as determined by the Director, the public notice must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the notice or to request assistance in the appropriate language.

(ii) In cases where the Director has not determined what constitutes a large proportion of non-English speaking consumers, the public water system must include in the public notice the same information as in paragraph (3)(b)(i) of this section, where appropriate to reach a large proportion of non-English speaking persons served by the water system.

(4) Public water systems are required to include the following standard language in their public notice:

(a) Standard health effects language for MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption. Public water systems must include in each public notice the health effects language specified in R309-220-14 corresponding to each MCL, MRDL, and treatment technique violation and for each violation of a condition of a variance or exemption.

(b) Standard language for monitoring and testing procedure violations.

Public water systems must include the following language in their notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During (compliance period), we ('did not monitor or test' or 'did not complete all monitoring or testing') for (contaminant(s)), and therefore cannot be sure of the quality of your drinking water during that time."

(c) Standard language to encourage the distribution of the public notice to all persons served. Public water systems must include in their notice the following language (where applicable): "Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail."

(5) When a public water system's rating is changed to Corrective Action or Not Approved under R309-400-4, the public notice must contain the following elements:

(a) the ten elements listed in paragraph (1) of this section, including, without limitation, the following information:

(i) all items with IPS points (R309-400-5) (quality violations, monitoring violations, facility deficiencies, etc.);

(ii) a description of each such deficiency or violation; and

(iii)for systems in Corrective Action status, a description of the approved corrective action plan and compliance schedule;

(b) the elements set forth in paragraphs (2)(a) and (3) of this section; and

(c) the following mandatory language: "The State of Utah uses a rating system to classify the quality and management of public drinking water systems. This rating system assess points based on: quality; monitoring; public notification; physical deficiencies; operator certification; cross connection control; source protection; administrative issues; and reporting and record maintenance (See UAC R309-400-4(2)). Our water system has exceeded the allowable point threshold and is currently rated ['Not Approved' or 'Corrective Action' as the case may be] by the Utah Division of Drinking Water."

R309-220-9. Notice to New Billing Units or New Customers.

(1) Community water systems must give a copy of the most recent public notice for any continuing violation, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

(2) Non-community water systems must continuously post the public notice in conspicuous locations in order to inform new consumers of any continuing violation, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption, or other situation persists.

R309-220-10. Special Notice of the Availability of Unregulated Contaminant Monitoring Results.

(1) Applicability of the special notice: The owner or operator of a community water system or non-transient, non-community water system required to monitor under 40 CFR section 141.40 must notify persons served by the system of the availability of the results of such sampling no later than 12 months after the monitoring results are known.

(2) Required form and manner of the special notice: The form and manner of the public notice must follow the requirements for a Tier 3 public notice prescribed in R309-220-7(3), (4)(a), and (4)(c). The notice must also identify a person and provide the telephone number to contact for information on the monitoring results.

R309-220-11. Special Notice for Exceedance of the Secondary MCL for Fluoride.

(1) Applicability of the special notice: Community water systems that exceed the fluoride secondary maximum contaminant level (SMCL) of 2 mg/l as specified in R309-200-6 (determined by the last single sample taken in accordance with R309-205-5), but do not exceed the maximum contaminant level (MCL) of 4 mg/l for fluoride (as specified in R309-200-5), must provide the public notice in paragraph (3) of this section to persons served. Public notice must be provided as soon as practical but no later than 12 months from the day the water system learns of the exceedance. A copy of the notice must also be sent to all new billing units and new customers at the time service begins and to the State public health officer. The public

water system must repeat the notice at least annually for as long as the SMCL is exceeded. If the public notice is posted, the notice must remain in place for as long as the SMCL is exceeded, but in no case less than seven days (even if the exceedance is eliminated). On a case-by-case basis, the Director may require an initial notice sooner than 12 months and repeat notices more frequently than annually.

(2) Required form and manner of the special notice: The form and manner of the public notice (including repeat notices) must follow the requirements for a Tier 3 public notice in R309-220-7(3), (4)(a), and (4)(c).

(3) Required mandatory language to be contained in the special notice: The notice must contain the following language, including the language necessary to fill in the blanks:

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system (name) has a fluoride concentration of (insert value) mg/l.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of this cosmetic dental problem.

For more information, please call (name of water system contact) of (name of community water system) at (phone number). Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

R309-220-12. Special Notice for Nitrate Exceedances above MCL by Non-Community Water Wystems (NCWS), where Granted Permission by the Director.

(1) Applicability of the special notice: The owner or operator of a non-community water system granted permission by the Director under R309-200-5(1)(c), Table 200-1, note (4)(b) to exceed the nitrate MCL must provide notice to persons served according to the requirements for a Tier 1 notice under R309-220-5 (1) and (2).

(2) Required form and manner of the special notice: Non-community water systems granted permission by the Director to exceed the nitrate MCL under R309-200-5(1)(c), Table 200-1, note (4)(b) must provide continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure, according

to the requirements for Tier 1 notice delivery under R309-220-5(3) and the content requirements under R309-220-8.

R309-220-13. Special Notice for Repeated Failure to Conduct Monitoring of the Source Water for Cryptosporidium and for Failure to Determine Bin Classification or Mean Cryptospridium Level.

(1) Applicability of the special notice for repeated failure to monitor: The owner or operator of a community or non-community water system that is required to monitor source water under R309-215-15(2) must notify persons served by the water system that monitoring has not been completed as specified no later than 30 days after the system has failed to collect any 3 months of monitoring as specified in R309-215-15(2)(c). The notice must be repeated as specified in R309-220-6(2).

(2) Applicability of the special notice for failure to determine bin classification: The owner or operator of a community or non-community water system that is required to determine a bin classification under R309-215-15(11) must notify persons served by the water system that the determination has not been made as required no later than 30 days after the system has failed report the determination as specified in R309-215-15(11)(e). The notice must be repeated as specified in R309-220-6(2). The notice is not required if the system is complying with a Director-approved schedule to address the violation.

(3) Required form and manner of the special notice: The form and manner of the public notice must follow the requirements for a Tier 2 public notice prescribed in R309-220-6(3). The public notice must be presented as required in R309-220-8(3).

(4) Required mandatory language to be contained in the special notice: The notice must contain the following language, including the language necessary to fill in the blanks.

(a) The special notice for repeated failure to conduct monitoring must contain the following language: We are required to monitor the source of your drinking water for Cryptosporidium. Results of the monitoring are to be used to determine whether water treatment at the (treatment plant name) is sufficient to adequately remove Cryptosporidium from your drinking water. We are required to complete this monitoring and make this determination by (required bin determination date). We "did not monitor or test" or "did not complete all monitoring or testing on schedule" and, therefore, we may not be able to determine by the required date what treatment modifications, if any, must be made to ensure adequate Cryptosporidium removal. Missing this deadline may, in turn, jeopardize our ability to have the required treatment modifications, if any, completed by the deadline required, (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).

(b) The special notice for failure to determine bin classification or mean Cryptosporidium level must contain the following language: We are required to monitor the source of your drinking water for Cryptosporidium in order to determine by (date) whether water treatment at the (treatment plant name) is sufficient to adequately remove Cryptosporidium from your drinking water. We have not made this determination by the required date. Our failure

to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).

(c) Each special notice must also include a description of what the system is doing to correct the violation and when the system expects to return to compliance or resolve the situation.

R309-220-14. Notice by Director on behalf of the Public Water System.

(1) The Director may give the notice required by this rule on behalf of the owner and operator of the public water system if the Director complies with the requirements of this rule.

(2) The owner or operator of the public water system remains responsible for ensuring that the requirements of this rule are met.

R309-220-15. Standard Health Effects Language.

Microbiological Contaminants:

(1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

(2) Coliform Assessment and/or Corrective Action Violation. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that are found. (THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).

(3) E.Coli Assessment and/or Corrective Action Violations. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. (THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.

(4) E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human

pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems

(5) Seasonal System TT Violations. When this violation includes the failure to monitor for total coliforms or E. coli prior to serving water to the public, the mandatory language found at R309-220-8(4)(b) must be used. When this violation includes failure to complete other actions, the appropriate elements found in R309-220-8(1) to describe the violation must be used.

(6) Total organic carbon. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acides (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

(7) Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1) and Filter Backwash Recycling Rule (FBRR) violations.

(8) Giardia lamblia. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(9) Viruses. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(10) Heterotrophic plate count (HPC) bacteria. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(11) Legionella. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(12) Cryptosporidium. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

(13) Fecal Indicators. Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these waste can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Radioactive Contaminants:

(14) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

(15) Beta/photon emitters. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

(16) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

(17) Uranium. Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Inorganic Contaminants:

(18) Antimony. Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

(19) Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

(20) Asbestos. Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.

(21) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

(22) Beryllium. Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

(23) Cadmium. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

(24) Chromium. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

(25) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

(26) Cyanide. Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

(27) Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorisis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

(28) Lead. Infants and children who drink water containing

lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

(29) Mercury (inorganic). Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

(30) Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

(31) Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

(32) Selenium. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

(33) Thallium. Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Synthetic organic contaminants including pesticides and herbicides:

(34) 2,4-D. Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.

(35) 2,4,5-TP (Silvex). Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

(36) Acrylamide. Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.

(37) Alachlor. Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.

(38) Atrazine. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

(39) Benzo(a)pyrene (PAH). Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

(40) Carbofuran. Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.

(41) Chlordane. Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.

(42) Dalapon. Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney

changes.

(43) Di (2-ethylhexyl) adipate. Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.

(44) Di (2-ethylhexyl) phthalate. Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.

(45) Dibromochloropropane (DBCP). Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

(46) Dinoseb. Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.

(47) Dioxin (2,3,7,8-TCDD). Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

(48) Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

(49) Endothall. Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.

(50) Endrin. Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.

(51) Epichlorohydrin. Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

(52) Ethylene dibromide. Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.

(53) Glyphosate. Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.

(54) Heptachlor. Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.

(55) Heptachlor epoxide. Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.

(56) Hexachlorobenzene. Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.

(57) Hexachlorocyclopentadiene. Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.

(58) Lindane. Some people who drink water containing lindane in excess of the MCL over many years could experience problems with

their kidneys or liver.

(59) Methoxychlor. Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

(60) Oxamyl (Vydate). Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.

(61) PCBs (Polychlorinated biphenyls). Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

(62) Pentachlorophenol. Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.

(63) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

(64) Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

(65) Toxaphene. Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

Volatile Organic Contaminants:

(66) Benzene. Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

(67) Bromate. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

(68) Carbon Tetrachloride. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(69) Chloramines. Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

(70) Chlorine. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

(71) Chlorite. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

(72) Chlorine dioxide. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could

experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

(73) Chlorobenzene. Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

(74) o-Dichlorobenzene. Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

(75) p-Dichlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

(76) 1,2-Dichloroethane. Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

(77) 1,1-Dichloroethylene. Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

(78) cis-1,2-Dichloroethylene. Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

(79) trans-1,2-Dicholoroethylene. Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.

(80) Dichloromethane. Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

(81) 1,2-Dichloropropane. Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

(82) Ethylbenzene. Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

(83) Haloacetic Acids (HAA). Some piple who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

(84) Styrene. Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

(85) Tetrachloroethylene. Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

(86) 1,2,4-Trichlorobenzene. Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

(87) 1,1,1,-Trichloroethane. Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

(88) 1,1,2-Trichloroethane. Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many

years could have problems with their liver, kidneys, or immune systems.

(89) Trichloroethylene. Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(90) TTHMs (Total Trihalomethanes). Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

(91) Toluene. Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

(92) Vinyl Chloride. Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

(93) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

KEY: drinking water, public notification, health effects
Date of Enactment or Last Substantive Amendment: May 1, 2016
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

Agenda Item 8(A)

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
DRINKING WATER

Title 19-4-104(2), (4)

(2) (a) The board may adopt and enforce standards and establish fees for certification of operators of any public water system.

(b) The board may not require certification of operators for a water system serving a population of 800 or less except:

(i) to the extent required for compliance with Section 1419 of the federal Safe Drinking Water Act, 42 U.S.C. Sec. 300f et seq.; and

(ii) for a system that is required to treat its drinking water.

(c) The certification program shall be funded from certification and renewal fees.

(4) (a) The board may adopt and enforce standards and establish fees for certification of persons engaged in administering cross connection control programs or backflow prevention assembly training, repair, and maintenance testing.

(b) The certification program shall be funded from certification and renewal fees.

DDW FEES RECEIVED IN 2017

Type of Fee	Fee Code	Fee Amt	Unit	Subtotal	Totals
Op Cert Exam	3C01	$ 100	402	$ 40,200	
Op Cert Renewal	3C02	$ 100	637	$ 63,700	
Op Cert Reinstatement	3C03	$ 200	12	$ 2,400	
Op Cert Reciprocity	3C04	$ 100	13	$ 1,300	
Op Cert Conversion	3C05	$ 20	4	$ 80	
Total Op Cert Fees			1,068		$ 107,680
Cross Conn Class I	3D01	$ 175	61	$ 10,675	
Cross Conn Class II & III and Renewals	3D02	$ 225	244	$ 54,900	
Cross Conn Retest	3D03	$ 145	47	$ 6,815	
Cross Conn Reciprocity	3D04	$ 225	1	$ 225	
Total Cross Conn Fees			353		$ 72,615
Grama	3A03			$ 94	
Well Grout	3B03	$ 90	50.5	$ 4,545	
Total Other Fees					$ 4,639
TOTAL DDW FEES					$ 184,934

2017 CERTIFICATION SUMMARY REPORT

Operator Certification Program	Amount	Total
Operator Certification Revenue		
Approp from Fund 5235 (state match)	$ 50,000	
10% Set-Aside SRF Capitalization Grant	100,000	
Op Cert Fees	107,680	
Total Op Cert Revenue		$ 257,680
Actual + Estimated Expenses thru 6/30/17		
Personnel	$ 197,737	
In-State Travel	808	
Out-State Travel	-	
Current Expense	25,830	
DP Expense	9,002	
DEQ Indirect Charge	12,502	
Total Op Cert Expense		$ 245,879
Extra funds used to cover overages in other areas		$ 11,801

Cross Connection / Backflow Program	Amount	Total
Cross Connection Revenue		
Cross Connection Fees	$ 72,615	
Total Cross Conn Revenue		$ 72,615
Actual + Estimated Expenses thru 6/30/17		
Personnel	$ 81,899	
In-State Travel	-	
Out-State Travel	-	
Current Expense	38,858	
DP Expense	661	
DEQ Indirect Charge	-	
Total Cross Conn Expense		$ 121,418
Other DDW Funds are used to cover overage		$ (48,803)

Agenda Item 9

DRINKING WATER BOARD
BOARD PACKET
DEVELOPMENT SPECIALIST CONTRACT

SUMMARY

The Development Specialist Contract with Rural Water Association of Utah will expire in February 2018. Information will be provided on the Development Specialist position, the impetus for implementing the position, funding the position, and work products and expected results.

Staff requests that the Drinking Water Board provide guidance with respect to this program and the direction the Board would like this program to take. Especially with respect to the following:

- Does the current approach meet the Board's expectations?
- Is there a different approach the Board wishes Staff to explore?
- Does the Board wish to continue funding the program/position?
- Is the current funding level sufficient?

STATE OF UTAH

REQUEST FOR PROPOSAL

DEVELOPMENT SPECIALIST
COUNTY-LEVEL TRAINING TO IMPROVE PUBLIC WATER SYSTEM CAPABILITIES (CAPACITY DEVELOPMENT) AND SUSTAINABILITY

Solicitation # (to be inserted by the Division of Purchasing)

PURPOSE OF REQUEST FOR PROPOSAL (RFP)

The purpose of this request for proposal is to enter into a contract with a qualified firm to provide education, training, and assistance to county officials and other local authorities on proper development and sustainability of public drinking water systems. It is anticipated that this RFP may result in a contract award to a single contractor.

This RFP is designed to provide interested offerors with sufficient basic information to submit proposals meeting minimum requirements, but is not intended to limit a proposal's content or exclude any relevant or essential data. Offerors are at liberty and are encouraged to expand upon the specifications to evidence service capability under any agreement.

ISSUING OFFICE AND RFP REFERENCE NUMBER

The State of Utah Division of Purchasing is the issuing office for this document and all subsequent addenda relating to it, on behalf of the Department of Environmental Quality, Division of Drinking Water. The reference number for the transaction is Solicitation # (inserted by Division of Purchasing). This number must be referred to on all proposals, correspondence, and documentation relating to the RFP.

SUBMITTING YOUR PROPOSAL

Proposals must be received by the posted due date and time. Proposals received after the deadline will be late and ineligible for consideration.

The preferred method of submitting your proposal is electronically through BidSync. However, if you choose to submit hard copies, one original and seven (7) identical copies of your proposal must be received at the State of Utah Division of Purchasing, 3150 State Office Building, Capitol Hill, PO Box 141061, Salt Lake City, Utah 84114-1061.

When submitting a proposal electronically through BidSync, please allow sufficient time to complete the online forms and upload documents. The solicitation will end at the closing time listed in the RFP. If you are in the middle of uploading your proposal at the closing time, the system will stop the process and your proposal will not be received by the system.

Electronic proposals may require uploading of electronic attachments. BidSync's site will accept a wide variety of document types as attachments. However, the submission of documents

containing embedded documents (zip files), mov, wmp, and mp3 files are prohibited. All documents should be attached as separate files.

Failure to follow submittal instructions explicitly may result in the proposal being deemed unresponsive and removed from further consideration.

LENGTH OF CONTRACT

The Contract resulting from this RFP will be for a period of five (5) years.

PRICE GUARANTEE PERIOD

All pricing must be guaranteed for the entire term of the contract. Should the contract be extended as indicated above, new pricing may be considered for each year of the extension. Requests for price adjustment must include sufficient documentation supporting the request. Any adjustment or amendment to the contract will not be effective unless approved by the State Director of Purchasing. The State will be given the immediate benefit of any decrease in the market, or allowable discount.

STANDARD CONTRACT TERMS AND CONDITIONS

Any contract resulting from this RFP will include, but not be limited to, the State's standard terms and conditions. A copy of the terms and conditions are provided elsewhere in this solicitation document.

QUESTIONS

Offeror must submit all questions through BidSync. Answers to offeror's questions will be given via the BidSync site. Questions will be accepted up to the Q&A deadline posted in this solicitation.

DISCUSSIONS WITH OFFERORS (ORAL PRESENTATION)

An oral presentation by an offeror to clarify a proposal may be required at the sole discretion of the State. However, the State may award a contract based on the initial proposals received without discussion with the offeror. If oral presentations are required, they will be scheduled after the proposals are submitted and will be held at DDW offices. Any oral presentation will be made solely at the offeror's expense.

PROTECTED INFORMATION

The Government Records Access and Management Act (GRAMA), Utah Code Ann., Subsection 63G-2-305 Protected Records, provides in part:

> *The following records are protected if properly classified by a government entity:*
> *(1) trade secrets as defined in Section 13-24-2 if the person submitting the trade secret has provided the governmental entity with the information specified in Section 63G-2-309 (Business Confidentiality Claims);*

> *(2) commercial information or non-individual financial information obtained from a person if:*
>
> *(a) disclosure of the information could reasonably be expected to result in unfair competitive injury to the person submitting the information or would impair the ability of the governmental entity to obtain necessary information in the future;*
>
> *(b) the person submitting the information has a greater interest in prohibiting access than the public in obtaining access; and*
>
> *(c) the person submitting the information has provided the governmental entity with the information specified in Section 63G-2-309;*
>
> * * * * *
>
> *(6) records the disclosure of which would impair governmental procurement proceedings or give an unfair advantage to any person proposing to enter into a contract or agreement with a governmental entity, except, subject to Subsections (1) and (2), that this Subsection (6) does not restrict the right of a person to have access to, once the contract or grant has been awarded, a bid, proposal, or application submitted to or by a governmental entity ...*

GRAMA provides that trade secrets, commercial information or non-individual financial information may be protected by submitting a Claim of Business Confidentiality. See Utah Code Ann. 63G-2-309.

To protect information under a Claim of Business Confidentiality, the offeror must:

1. provide a written Claim of Business Confidentiality *at the time the information (proposal) is provided to the state* (Subsection 63G-2-309(1)(a)), and
2. include a concise statement of reasons supporting the claim of business confidentiality (Subsection 63G-2-309(1)(b)),
3. submit an electronic "redacted" (excluding protected information) copy of your proposal response. Copy must clearly be marked "Redacted Version."

A Claim of Business Confidentiality may be appropriate for information such as client lists and non-public financial statements. Pricing and service elements may not be protected. An entire proposal may not be protected under a Claim of Business Confidentiality. The claim of business confidentiality must be submitted with your proposal on the form which may be accessed at:

http://www.purchasing.utah.gov/contract/documents/confidentialityclaimform.doc

To ensure the information is protected, the Division of Purchasing asks the offeror to clearly identify in the Executive Summary and in the body of the proposal any specific information for which an offeror claims business confidentiality protection as "PROTECTED".

The full text of GRAMA is available at:

http://le.utah.gov/UtahCode/section.jsp?code=63G-2.

All materials submitted become the property of the state of Utah. Materials may be evaluated by anyone designated by the state as part of the proposal evaluation committee. Materials submitted may be returned solely at the State's option.

DETAILED SCOPE OF WORK

1. Coordinate with Utah Division of Drinking Water (DDW) staff to prioritize counties needing assistance and as mutually agreed upon, attend meetings of and present Capacity Development Ordinance needs to County Commissions/Councils. Invite and encourage DDW staff attendance at these meetings.

    a. DDW expects that meetings/trainings will be conducted with at least 12 counties per year of the contract. Specific counties to be visited will be determined during meetings held between DDW and the Awardee. Additional counties or additional meetings with counties previously trained may be necessary and will be determined by the Division and mutually agreed to by the Parties.

2. Work with DDW staff and DEQ District Engineers to modify and improve model County Ordinance for Drinking Water System Capacity Development for new development/water systems as necessary.

3. Work with DDW staff and DEQ District Engineers to modify and improve model Minimum Construction Standards for Counties based on DDW Construction Standards as necessary.

4. Facilitate general meetings with County Officials in conjunction with DDW Staff and Board as necessary.

5. As mutually agreed upon, present Capacity Development and Drinking Water Authority needs to County Planning Commissions or Planners.

6. As mutually agreed upon, present Capacity Development and Drinking Water Authority needs to County/Local Health Departments.

7. In meetings with local planners and building permit officials, demonstrate the secure web site that displays source protection areas, explain minimum recommendations for source protection ordinances and/or provide copies of the Department's model source protection ordinance, provide education on proper management practices for development in source protection areas and encourage support for local source protection efforts as necessary.

8. Advise local planners and building permit officials of the authority of the Utah Division of Public Utilities over proposed developments and the need to submit plans to the Division of Public Utilities for review and approval prior to new development platting.

9. As opportunities are available, work with local entities to provide education to any or all parties that might be involved in expanding drinking water system service areas or developing/creating new drinking water systems (drinking water systems, developers, general public, etc.)

10. Coordinate interaction and issue resolution between Counties and local water systems of all types as circumstances require.

11. Attend additional training as required and approved by the Director of DDW

12. Provide Capacity Development assistance to drinking water systems as occasion and circumstance allows. It is anticipated that such assistance will be made available to water

systems in areas already scheduled for other training meetings or during transit between those areas and offeror's base of operations.

13. Perform other work as authorized, requested or required by the Director of DDW.

14. Respond to water system emergencies as directed by the Director of DDW.

15. Meet at least quarterly with Drinking Water program representatives to identify and discuss entities in need of assistance and progress with entities previously identified.

16. Attend Drinking Water Board meetings at least quarterly to give the Board updates and answer questions.

17. Provide monthly reports to DDW showing which entities were visited during the month, the nature of the contact, and progress made with these entities.

18. Report expenditures for reimbursement to DDW on a monthly basis.

19. Track work efforts and reference contract stipulation that applies to work performed on an hour-by-hour basis to document time spent.

20. Comply with all applicable state and federal requirements concerning cost principals, audit requirements, and grant administration requirements. If the selected contractor is a non-profit organization, the contractor will be subject to the following requirements:

    a. For Cost Principles, OMB Circular A-122
    b. For Federal Audit requirements, OMB Circular A-133
    c. For State Audit Requirements, State Legal Compliance Audit Guide (SLCAG)
    d. For Grant Administration Requirements, OMB Circular A-110

    As of October 12, 2010, documentation for these requirements can be found at:

    OMB Circulars: http://www.whitehouse.gov/omb/circulars/
    OMB Common Rule: http://www.whitehouse.gov/omb/grants/attach.html
    CFRs: http://www.gpoaccess.gov/cfr/index.html
    SLCAG: http://www.sao.utah.gov/lgResources.html

21. All work under this contract shall be performed in a skillful and professional manner. The State may require, in writing, that the offeror remove from the work any employee deemed by the State to be incompetent, careless, or otherwise objectionable.

22. With the exception of meeting attendance at Division offices, the State will not provide any equipment or facilities, nor access to State-owned equipment or facilities, to complete any work associated with this contract.

PROPOSAL REQUIREMENTS AND COMPANY QUALIFICATIONS

An acceptable Proposal shall include the following:

A statement outlining offeror's detailed knowledge of DDW's Rules regulating drinking water system infrastructure construction.

A statement outlining offeror's detailed knowledge of DDW's Capacity Development Rule and the U.S. Environmental Protection Agency's Capacity Development Program.

A comprehensive list describing past experience working with state, county, and/or local planning and zoning authorities, specifically with respect to developing ordinances dealing with planning, siting, constructing, and operating drinking water systems. List the states, counties, and/or local authorities, and describe the relationships offeror has within those entities, including contact names and titles.

A comprehensive list describing experience working with individual drinking water systems specifically with respect to capacity assessment, capacity development, construction standards, system operations, maintenance, and management, asset management, and system expansion. List the water systems and describe the relationships offeror has with those systems, including contact names and titles.

A list of all personnel who will be assigned to perform the work including any licenses, certifications, or training said personnel have relative to the work, and the tasks they will perform.

A statement of qualifications for each individual working under the contract, including detailed descriptions of:

- Experience with planning and zoning ordinances;
- Knowledge of local and/or county planning and zoning processes and procedures;
- Knowledge of and experience with capacity development and asset management;
- Experience negotiating with elected officials and/or water system management;
- Experience making presentations to elected officials and/or water system personnel;
- Related training received

A list of references from similar completed projects. Include entity name, a brief project description, contact name and title, and contact information.

PROPOSAL RESPONSE FORMAT

All proposals must include:

1. **RFP Form**. The State's Request for Proposal form completed and signed.

2. **Executive Summary.** The one or two page executive summary is to briefly describe the offeror's proposal. This summary should highlight the major features of the proposal. It must indicate any requirements that cannot be met by the offeror. The reader should be able to determine the essence of the proposal by reading the executive summary. Protected information requests should be identified in this section.

3. **Detailed Response.** This section should constitute the major portion of the proposal and must contain at least the following information:

   A. A complete narrative of the offeror's assessment of the work to be performed, the offeror's ability and approach, and the resources necessary to fulfill the requirements. This should demonstrate the offeror's understanding of the desired overall performance expectations. Clearly indicate any options or alternatives proposed.

   B. A specific point-by-point response, in the order listed, to each requirement in the RFP.

   C. The detailed response, comprising of both A and B above, must not contain more than 50 pages in total length. Any portfolio cover, title page, table of contents, tab, separation page, appendix, or other document page will be counted as part of this 50-page limit.

4. **Cost Proposal.** Cost will be evaluated independently from the technical proposal. Please enumerate all costs on the attached Cost Proposal Form.

PROPOSAL EVALUATION CRITERIA

A committee will evaluate proposals against the following weighted criteria. Each area of the evaluation criteria must be addressed in detail in the proposal.

WEIGHT	EVALUATION CRITERIA
35 %	Demonstrated ability to meet the scope of work
20 %	Demonstrated technical capability (proven track record), etc.
15 %	Qualification and expertise of staff proposed for this project.
10 %	Performance references for similar projects.
20 %	Cost

RFP DEBRIEFING

It is the policy that State Purchasing does not conduct face to face or teleconference debriefings. All debriefings are conducted in writing. All questions must be submitted in writing within seven (7) days of the award notification or rejection notification.

The State of Utah reserves the right not to respond to certain questions.

While the State may on occasion elect to send out separate award notifications, the official notification of a bid or proposal award will be on BidSync. In calculating the beginning of the seven-day time frame noted above, the BidSync notification date will be used.

COST PROPOSAL

HOURLY RATE: $_____ per hour

Offeror understands that the contract will be based on a 40 hour work week and includes travel time for work associated with the contract. While an offeror may anticipate more than one employee being assigned to this project, it is anticipated that only one employee will be required at any given performance time. Therefore, this hourly rate shall apply to any employee performing under this contract.

Premium hours are those hours worked over and above 40 hours per week, including Saturdays, Sundays, and Holidays. Premium hours shall not be billed at more than 1.5 times the regular hourly rate. Offeror also understands that hourly rates shall be calculated to include all fixed costs associated with performing work outlined in the RFP and agreed to in the contract including, but not limited to: direct labor, administrative and overhead costs; office equipment and supplies; insurance; building rental costs; etc.

Offeror understands that lodging, meals, and vehicle mileage incurred while performing the work shall be reimbursed in accordance with policies and rates published by the Utah State Travel Office. These rates are available at http://fleet.utah.gov/travel/.

Offeror understands that the State shall be invoiced only for actual expenses (hours and travel expenses) incurred while performing the work associated with the contract.

TITLE OF PROJECT AND
SOLICITATION # *(to be inserted by the Division of Purchasing)*
RFP EVALUATION SCORESHEET

Firm Name: _____

Evaluator: _____

Date: _____

Score will be assigned as follows:
0 = Failure, no response
1 = Poor, inadequate, fails to meet requirement
2 = Fair, only partially responsive
3 = Average, meets minimum requirement
4 = Above average, exceeds minimum requirement
5 = Superior

		Score (0-5)	Weight	Points
1. Demonstrated Ability to meet scope of work (35 points possible)				
Experience working with elected officials	15 points possible		X 3	
Knowledge of DDW rules & programs	10 points possible		X 2	
Experience working with water systems	5 points possible		X 1	
Outline of suggested ordinances	5 points possible		X 1	
2. Demonstrated Technical Capability (20 points possible)				
Experience with ordinances	10 points possible		X 2	
Experience with Capacity Development	10 points possible		X 2	
3. Qualification and Expertise of Staff (15 points possible)				
Staff licenses, certification, training	5 points possible		X 1	
Experience giving presentations	5 points possible		X 1	
Negotiating skills	5 points possible		X 1	
4. References (10 points possible)	10 points possible		X 2	
5. Cost (20 points possible)	20 points possible			* Inserted by Purchasing
TOTAL EVALUATION POINTS	100 points possible		**Total**	

* Purchasing will use the following cost formula: The points assigned to each offerors cost proposal will be based on the lowest proposal price. The offeror with the lowest Proposed Price will receive 100% of the price points. All other offerors will receive a portion of the total cost points based on what percentage higher their Proposed Price is than the Lowest Proposed Price. An offeror whose Proposed Price is more than double (200%) the Lowest Proposed Price will receive no points. The formula to compute the points is: Cost Points x (2- Proposed Price/Lowest Proposed Price).