Drinking Water Board Packet

May 8, 2015

Agenda

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

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

Drinking Water Board
Paul Hansen, P.E., *Chair*
Betty Naylor, *Vice-Chair*
Brett Chynoweth
Tage Flint
Roger G. Fridal
Brad Johnson
David L. Sakrison
David Stevens, Ph.D.
Mark Stevens, M.D.
Kenneth H. Bousfield, P.E.
Executive Secretary

DRINKING WATER BOARD MEETING
May 8, 2015
1:30 pm
Woods Cross City Hall
1555 South 800 West
Woods Cross, Utah 84087

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

1. Call to Order – Chairman Hansen

2. Roll Call – Ken Bousfield

3. Approval of the Minutes:

   A. February 26, 2015
   B. April 17, 2015

4. Election of Board Chairman and Vice-Chairman

5. Financial Assistance Committee Report

   A. Status Report – Michael Grange
   B. Project Priority List – Michael Grange
   C. SRF Applications
      i. STATE:
         a) Cedarview Montwell : Planning – Julie Cobleigh
         b) Corinne City – Julie Cobliegh
         c) Oak City – Nathan Hall
         d) Plymouth Town – Gary Kobzeff
      ii. FEDERAL:
         a) Pine Meadow Mutual Water Co – Gary Kobzeff
         b) Liberty Pipeline – Gary Kobzeff
         c) Eureka – Julie Cobliegh
         d) Greendale Water Co – Gary Kobzeff
      iii. OTHER:

6. Authorization to Initiate:

   A. Changes to proposed amendments to R309-500 Facility Design and Operation: Plan Review, Operation and Maintenance Requirements – Bernie Clark
   B. Revision of R309-510 Facility Design and Operation: Minimum Sizing Requirements – Ying-Ying Macauley
   C. Change to R309-700 Financial Assistance: State Drinking Water State Revolving Fund (SRF) Loan Program to include energy efficiency incentives in calculating financial assistance – Michael Grange
   D. Change to R309-705 Financial Assistance: Federal Drinking Water Project Revolving Loan Program to include energy efficiency incentives in calculating financial assistance – Michael Grange

7. Rural Water Association Report – Dale Pierson

8. Chairman's Report

9. Directors Report

   A. Emerging Contaminants in Drinking Water
   B. Report on Resource Need presented by the Association of State Drinking Water Administrators

10. Next Board Meeting:

Date:	July 10, 2015
Time:	1:00 pm
Place:	Multi Agency State Office Building Room 1015 195 North 1950 West Salt Lake City, Utah 84116

11. Other

12. Adjourn

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Dana Powers, Office of Human Resources, at: (801) 499-2117, TDD (801) 536-4414, at least five working days prior to the scheduled meeting.

Agenda Item 3(A)

State of Utah

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Environmental Quality

Amanda Smith
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Kenneth H. Bousfield, P.E.
Executive Secretary

DRINKING WATER BOARD MEETING
February 26, 2015 - 2:00 pm
The Dixie Convention Center - Garden Room
1835 Convention Center Drive
St. George, Utah 84790

DRAFT MINUTES

1. Call to Order – Chairman Hansen

Paul Hansen, Board Chairman, called the meeting to order at 2:00 pm.

2. Roll Call – Ken Bousfield

Board Members present: Paul Hansen, Betty Naylor, Brett Chynoweth, David Stevens, and Roger Fridal.

Board Members excused: Tage Flint, Brad Johnson, Mark Stevens, and David Sakrison.

Division Staff present: Ken Bousfield, Michael Grange, Heather Bobb, Marianne Booth, Gary Kobzeff, Jesse Johnson, and Camron Harry.

3. Introductions – Chairman Hansen

In the interest of time, this item was skipped.

4. Approval of the Minutes:

A. January 9, 2015

- Roger Fridal moved to approve the minutes. Betty Naylor seconded. The motion was carried unanimously by the Board.

5. Financial Assistance Committee Report

A. Status Report – Michael Grange

Michael Grange, Construction Assistance Section Manager with the Division of Drinking Water (DDW, the Division) reported that currently there is $3.2 million in the State SRF fund and over the course of the next year the Division is expecting an additional $5.3 million to come into the fund, for a total of $8.5 million to be available for funding of projects. He also noted that the Division is currently working with 3 systems to close their loans and there are a number of planning loans and construction projects that are in progress.

Michael went on to report that there is currently $33.5 million in the Federal SRF fund and over the course of the next year the Division is expecting an additional $17 million to come into the fund; $6.8 million of which will be from the fiscal year '15 Federal grant, $1.8 million from State match, $6.2 million in principal payments, and $1.5 million in interest; for a total of $50.5 million to be available for funding of projects.

In response to questions from the Drinking Water Board (DWB, the Board) regarding those planning projects that were coming up on their 2 year mark, Michael stated that he would look into their progress and email their status to the Board Members.

B. Project Priority List – Michael Grange

Michael Grange proposed that 2 new projects be added to the project priority list. The first being Taylor West Weber, with 22.9 points, and a project consisting of a 3 million gallon tank addition, a transmission line, and a new well. The second being the Town of Plymouth, with 10.7 points, and a project consisting of a 500,000 gallon tank. 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) Grand Water and Sewer Service Agency – Jesse Johnson

Representing Grand Water and Sewer Service Agency (Grand Water, GWSSA) was Mark Sovine and Robert Worley of Sunrise Engineering.

Jesse Johnson, Environmental Engineer with DDW, informed the Board that Grand Water and Sewer Service Agency is requesting $242,323 in assistance in order to replace their transmission lines. Grand Water will be contributing an additional $30,000 toward the project. GWSSA has a local MAGI of $30,300 or 77% of the State MAGI. Their current water bill is $49.84, which is 1.97% of the local MAGI. Due to the fact that their transmission line has broken 3 times in the last 18 months this is considered an emergency project. The FAC recommends that the DWB authorize a $121,000 loan at 1.29% interest or fee per annum for 5 years, with an additional $121,323 in grant.

- Brett Chynoweth moved to authorize a construction loan of $121,000 at 1.39% interest for 5 years with an additional $121,323 in grant to the Grand Water Sewer and Service Agency. David Stevens seconded. The motion was carried unanimously by the Board.

b) Plymouth Town – Gary Kobzeff

Representing Plymouth Town (Plymouth) was Curtis Murray, Mayor of Plymouth, Wes Udy, water operator for Plymouth, and Scott Archibald of Sunrise Engineering.

Gary Kobzeff informed the Board that Plymouth is requesting $880,000 in assistance to construct a new 500,000 gallon water tank. Plymouth has a local MAGI of $43,284 or107% of the State MAGI. Their current water bill is $24.94 which is .69% of the local MAGI. The proposed financial assistance would raise their water bill to $51.38 or 1.42% of the local MAGI. The FAC recommends the DWB authorize an $880,000 construction loan to Plymouth Town with 3.29% interest or fee per annum for 20 years on the condition that they resolve all issues on their compliance report.

There was discussion between the Board, Division Staff, and those representing Plymouth Town regarding the water bill with the proposed funding increase; and whether it would be possible to lower the interest rate and increase the term of the loan to lower that amount.

- Paul Hansen moved to table this item and turn it back to Division Staff to re-evaluate the potential for interest rate reduction and a longer term on the loan; and bring it back before the Board at a later date. Brett Chynoweth seconded. The motion was carried unanimously by the Board.

ii. FEDERAL:

a) Pleasant View , De-authorization – Michael Grange

Michael Grange informed the Board that on January 17, 2014 Pleasant View City was authorized a $1.977 million construction loan at 2.65% interest for 15 years to drill a new well and construct a 500,000 gallon storage tank but due to the increased costs associated with the new Federal requirements; they are now requesting de-authorization as stated in the attached letter. The FAC recommends that the DWB de-authorize the $1.977 million construction loan at 2.65% interest for 15 years to Pleasant View City.

Paul Hansen noted that the new Federal requirements would be discussed during the DWB Working Session immediately following the Board meeting.

- Paul Hansen moved to de-authorize a construction loan of $1.977 million at 2.65% interest for 15 years to Pleasant View City. David Stevens seconded. The motion was carried unanimously by the Board.

b) Sheep Creek Cove HOA, De-authorization – Jesse Johnson

Jesse Johnson informed the Board that on January 17, 2014 Sheep Creek Cove HOA was authorized a $90,000 construction loan at 4.82% for 20 years but due to the increased costs

associated with the new Federal requirements; they are now requesting de-authorization as stated in the attached letter. The FAC recommends that the DWB de-authorize the $90,000 construction loan at 4.82% interest for 20 years to Sheep Creek Cove HOA.

- Roger Fridal moved to de-authorize a construction loan of $90,000 at 4.82% interest for 20 years to the Sheep Creek Cove HOA. Brett Chynoweth seconded. The motion was carried unanimously by the Board.

c) Taylor-West Weber Water – Jesse Johnson

Representing Taylor-West Weber Water Improvement District (TWWWID) was Val Syrrage, manager of TWWWID, and Cody Deeter of Lewis, Young, Robertson, & Burningham.

Jesse informed the Board that TWWWID is requesting $7,636,391 in assistance to drill and equip a new well, construct a 3 million gallon storage tank, and add approximately 12,000 feet of transmission and distribution lines to their system. TWWW will be contributing an additional $88,711 toward the project. TWWWID has a local MAGI of $31,991 or 79% of the State MAGI. The proposed financial assistance would raise their water bill to $50.91 or 1.91% of the local MAGI. The FAC recommends the DWB authorize a $6.091 million construction loan at 2.26% interest or fee per annum for 30 years with an additional $1,545,391 in principal forgiveness to the Taylor West Weber Water Improvement District.

There was discussion between the Board, Division Staff, and those representing TWWWID. It was determined that the new Federal requirements that had caused other systems to request de-authorization had been taken into consideration prior to this request being made and that TWWWID has, by resolution, an annual 3% or cost of living increase to their water bill.

- Brett Chynoweth moved to authorize a construction loan of $6.091 million construction loan at 2.26% interest for 30 years with an additional $1,545,391 in principal forgiveness to Taylor West Weber Water Improvement District. David Stevens seconded. The motion was carried unanimously by the Board.

iii. OTHER:

6. Intended Use Plan – Michael Grange

Michael Grange informed the Board that one requirement the Division must comply with every year in order to apply to receive their Federal Capitalization Grant is to prepare an Intended Use Plan (IUP) and submit it for public comment. The IUP informs the Environmental Protection Agency (EPA) on how the Division intends to use Federal funds and includes the current project priority list. Michael stated that due to changes, the deadline for application submittal has been moved to the end of February; therefore, with apologies to the Board, the IUP has already been posted for public comment. Division Staff is requesting that the Board authorize after-the-fact approval to submit the IUP for public comment and approval to submit the IUP and Federal Capitalization Grant application to the EPA.

After discussion between the Board and Division Staff it was determined that public comments can be made for 30 days and an amended IUP can be submitted to the EPA as the Division amends their IUP regularly with their updated project priority list. It was noted that Utah has in excess of $3 million in its Federal SRF program for projects, of which the EPA likes to see an 85% use rate; and that now is a really good time for water systems to make use of those funds because the bidding environment is favorable due to low construction and material costs.

- Paul Hansen moved to ratify approval of the posting of the Intended Use Plan for public comment and approve the submittal of the Intended Use Plan and Federal Capitalization Grant application. David Stevens seconded. The motion was carried unanimously by the Board.

7. Rural Water Association of Utah Energy Efficiency Equipment Purchase Proposal – Michael Grange

Representing the Rural Water Association of Utah (RWAU) was Dale Pierson, Executive Director, and Vern Steele, Chief Financial Officer/Deputy Director.

Michael Grange presented to the Board the RWAU Equipment Purchase Proposal which would allow the use of State set-aside funds, with concurrence from EPA Region 8 personnel, for the purchase of leak detectors, pipeline cameras, an infrared camera, and a trailer; to be used to assist the small and very small water systems within the State to identify and repair water leaks; ultimately saving energy and improving system efficiency in accordance with the Division's Energy Efficiency Initiative. The estimated cost is less than $50,000 and the expected useful life of the equipment is up to 10 years with proper maintenance and care. Division Staff recommends that the DWB authorize the allocation of up to $50,000 from the Federal SRF program set-asides to finance the proposed contract with RWAU and purchase the equipment, authorize Division Staff to prepare a draft proposal and contract and submit it to State Finance for review and comment, and upon approval by State Finance, authorize the Executive Secretary to enact the contract.

In response to questions from the Board, Dale Pierson noted that the use of this equipment and the service of knowledgeable and experienced circuit writers will be at no charge to the water systems. He also informed the Board that once approved and enacted; he will give updates on the use at each Board meeting.

- Betty Naylor moved to authorize the allocation of up to $50,000 from the Federal SRF program set-asides to finance the proposed contract with RWAU and purchase the equipment, authorize Division Staff to prepare a draft proposal and contract and submit it to State Finance for review and comment, and upon approval by State Finance, authorize the Executive Secretary to enact the contract. Brett Chynoweth seconded. The motion was carried unanimously by the Board.

8. Division Rulemaking Action – Michael Grange

Michael Grange reported to the Board that the Division is required by Utah Code Title 63G to review each of its rules every 5 years; either within the 5 years after the rules original effective date or within the 5 years after filing the last Five Year Review. The Division last filed Five

Year Review notices for each of its rules in March of 2010, and must again submit a new Five Year Review and Statement of Continuation for each rule. He noted that if these notices are not filed, all of the Divisions rules will expire, be removed from the Utah Administrative Code, and become unenforceable. Division Staff recommends that the Board authorize the Division Director to sign each notice and for Division Staff to file the required Five Year Notice of Review and Statement of Continuation for each of the referenced DDW rules with the Department of Administrative Rules.

Ken Bousfield, Division Director of DDW, noted that the establishment of these rules is also federally required as part of the Division's primacy applications. He also reported that without the re-adoption of these Rules, the Division would lose all federal funding, including SRF funding.

- Paul Hansen moved to authorize the Division Director to sign each notice and for Division Staff to file the required Five Year Notice of Review and Statement of Continuation for each of the referenced DDW rules with the Department of Administrative Rules. David Stevens seconded. The motion was carried unanimously by the Board.

9. Rural Water Association Report – Dale Pierson

Dale Pierson, Executive Director of RWAU, thanked the Board members for holding their meeting at their 2015 Annual Conference and reported the following:

- Kim Dyches, Environmental Program Manager with DDW, being a great attribute to both the Division and RWAU in regards to Operator Certification Program that he oversees, was awarded the Friend of Rural Water Award.
- Charles Jeffs, who has been with RWAU for 31 years, will retire at the close of the conference, and that he, his experience, and his expertise will be missed immensely.
- The results of the Water Taste Test were:
  - 3rd Place – The Town of Francis.
  - 2nd Place – Upper Country Water
  - 1st Place – West Bountiful.
- 3 news channels and 1 newspaper had reporters covering the conference.
- Scott Anderson was elected the new RWAU president, replacing Paul Fulgum.
- 82 people took the Water Operator Certification test.
- Attendance at the conference is 1,872 people.

10. Directors Report

Ken Bousfield, Division Director of DDW, introduced and welcomed the Division's newest employee, Camron Harry, who is in the Engineering Section, under Ying-Ying Macauley. Camron is a Professional Engineer who comes to the Division with experience from the private sector and the Division of Air Quality.

A. The Division's participation at the RWAU Conference

Ken Bousfield reported the following regarding Division Staff's participation at the RWAU 2015 Annual Conference:

- 13 Division Staff members presented 24 different presentations.

- 82 Water Operators took the Water Operator Certification Exam.
- Division Staff assisted 120 water systems in preparing their Consumer Confidence Reports, which is roughly a little over ¼ of the water systems that are required to do so.
- Division Staff distributed over 140 reports to water systems; including inventory reports, monitoring schedules, IPS reports (report cards), and bacteriologic summaries.
- Division Staff provided 70 consultations to water systems and or engineers to discuss issues about physical facilities.
- Division Staff provided 16 consultations to water systems regarding their Source Protection Plans.
- 32 correction notifications, either on inventory information or on physical facility deficiencies, were received.
- Division Staff also provided several consultations regarding operator certification issues, cross connection issues, rule compliance issues, financial assistance, physical deficiency resolutions, and source protection.

B. Possible Board tour in connection with the Board's May meeting

Ken Bousfield informed the Board that he, Michael Grange, and Jesse Johnson, had the opportunity to tour the Woods Cross Water Treatment Plant during their Open House; and that Michael will be working to set up a tour of that facility for Board Members in conjunction with the May Board meeting.

Michael Grange also informed the Board that in conjunction with the tour of the Woods Cross facility, their City Manager had extended an invitation to hold the May Board meeting at the Woods Cross City Hall. The Board agreed that they would be amenable to this.

C. Board Appointments

Ken Bousfield informed the Board that Tage Flint, David Stevens, Betty Naylor, and Brett Chynoweth's appointments to the Drinking Water Board will expire on May 8, 2015. He noted that included in the Board packet were instructions on how to apply/re-apply and encouraged them to do so. Ken also stated that applications need to be made well in advance of the May 8, 2015 deadline and that by Statute Board members can continue in their duties 60 days beyond their term expiration date.

Paul Hansen noted that the Board Chairman and Vice Chairman elections will be postponed until the May Board meeting.

11. Next Board Meeting:

Date: Friday, May 8, 2015
Time: 1:30 pm
Place: Woods Cross City Hall
1555 South 800 West
Woods Cross, Utah 84087

12. Other

13. Adjourn

- Paul Hansen, Board Chairman, moved to adjourn the meeting. The motion was carried unanimously by the Board

The meeting adjourned at 3:15 pm.

❖ **A Board Member Work Session was held at 3:25, following the Drinking Water Board Meeting. SRF Financial Assistance was discussed. No Board actions were conducted during this time.**

Board Members present: Paul Hansen, Betty Naylor, Brett Chynoweth, David Stevens, and Roger Fridal.

Division Staff present: Ken Bousfield, Michael Grange, Heather Bobb, and Marianne Booth.

Others present: Kelly Crane with Ensign Engineering.

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Dana Powers, Office of Human Resources, at: (801) 499-2117, TDD (801) 536-4414, at least five working days prior to the scheduled meeting.

Agenda Item 3(B)

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF DRINKING WATER
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David L. Sakrison
David Stevens, Ph.D.
Mark Stevens, M.D.
Kenneth H. Bousfield, P.E.
Executive Secretary

DRINKING WATER BOARD MEETING
Friday, April 17, 2015 – 9:00 am
Multi Agency State Office Building - Arches South Conference Room
195 N 1950 W
Salt Lake City, Utah 84116
Teleconference - 1-877-820-7831 - Pin#: 878776#

DRAFT MINUTES

1. Call to Order – Chairman Hansen

Paul Hansen, Board Chairman called the meeting to order at 9:00 am.

2. Roll Call – Ken Bousfield

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

Board Members excused: Tage Flint and Mark Stevens.

Division Staff present: Ken Bousfield and Michael Grange

3. Financial Assistance Committee Report

A. SRF Applications

i. STATE:

ii. FEDERAL:

a) Boulder Farmstead: Authorization of Modified Repayment Schedule – Michael Grange

Michael Grange, Construction Assistance Section Manager with the Division of Drinking Water (DDW, the Division), reminded the Board that Boulder Farmstead (Boulder) had been previously approved a loan of $2 million at 0% interest for 30 years, with $1 million

in principal forgiveness. He then reported that Boulder had expressed concern over the repayment schedule as they have repayment obligations to other entities as well. Division Staff recommends that the Board authorize the repayment schedule be modified to allow a graduated repayment stream.

It was noted that repayment modification is something that the Division and the Board will consider only if the water system is in a disadvantaged state. It was also noted that this loan is scheduled to close on April 23, 2015.

- Roger Fridal moved to authorize the modified repayment schedule for Boulder Farmstead. David Stevens seconded. The motion was carried unanimously by the Board.

iii. OTHER:

4. Next Board Meeting:

Date: May 8, 2015
Time: 1:30 pm
Place: Woods Cross City Hall
1555 South 800 West
Woods Cross, Utah 84087

5. Other

It was discussed that in conjunction with the May 8, 2015 Board meeting there will be a tour of the Woods Cross City water treatment facility for Board members only. There will also be a Board Working Session held at the Woods Cross City Hall prior to the Board meeting to discuss Table 2 language relative to Energy Efficiency incentives as well as cost increases due to Federal "American Iron and Steel" requirements.

6. Adjourn

Meeting adjourned at 9:08 am

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Dana Powers, Office of Human Resources, at: (801) 499-2117, TDD (801) 536-4414, at least five working days prior to the scheduled meeting.

Agenda Item 4

STATE OF UTAH

GARY R. HERBERT
GOVERNOR

OFFICE OF THE GOVERNOR
SALT LAKE CITY, UTAH
84114-2220

SPENCER J. COX
LIEUTENANT GOVERNOR

April 20, 2015

The Honorable Wayne Niederhauser
and Members of the Utah State Senate
320 State Capitol
Salt Lake City, Utah 84114

Dear President Niederhauser and Members of the Senate:

In accordance with Utah Code §§ 67-1-1 and 67-1-2, I propose and transmit the following appointments:

State Money Management Council:

Marina Scott is reappointed as a member of the State Money Management Council, a term to expire March 1, 2019. *See* Utah Code § 51-7-16.

Mark David Watkins is reappointed as a member of the State Money Management Council, a term to expire March 1, 2019. *See* Utah Code § 51-7-16.

Board of Aging and Adult Services:

Richard Kirkham Jolley is reappointed as a member of the Board of Aging and Adult Services, a term to expire April 1, 2019. *See* Utah Code § 62A-1-107.

Water Quality Board:

Myron E. Bateman is reappointed as a member of the Water Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-5-103.

Clyde Bunker is reappointed as a member of the Water Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-5-103.

Steven K. Earley is appointed to replace Merritt Frey as a member of the Water Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-5-103.

Michael David Luers is appointed to replace Leland Myers as a member of the Water Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-5-103.

Drinking Water Board:

Tage I. Flint is reappointed as a member of the Drinking Water Board, a term to expire May 8, 2019. *See* Utah Code § 19-4-103.

David King Stevens is reappointed as a member of the Drinking Water Board, a term to expire May 8, 2019. *See* Utah Code § 19-4-103.

Brett Harvey Chynoweth is reappointed as a member of the Drinking Water Board, a term to expire May 8, 2019. *See* Utah Code § 19-4-103.

Betty G. Naylor is reappointed as a member of the Drinking Water Board, a term to expire May 8, 2019. *See* Utah Code § 19-4-103.

Air Quality Board:

Michael William Smith is reappointed as a member of the Air Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-2-103.

Erin Mendenhall is reappointed as a member of the Air Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-2-103.

Arnold W. Reitze, Jr. is appointed to replace Kathy Van Dame as a member of the Air Quality Board, a term to expire March 1, 2019. *See* Utah Code § 19-2-103.

Child Care Center Licensing Committee:

Scott Smith is appointed to replace Fred Cox as a member of the Child Care Center Licensing Committee, the remaining portion of the term to expire June 30, 2018. *See* Utah Code § 26-39-200.

Naysla Anderson is appointed to replace Joan Nichol as a member of the Child Care Center Licensing Committee, the remaining portion of the term to expire June 30, 2018. *See* Utah Code § 26-39-200.

Utah Digital Health Service Commission:

Teresa Hughes Rivera is appointed to replace Jan Root as a member of the Utah Digital Health Service Commission, a term to expire October 1, 2018. *See* Utah Code § 26-9f-103.

Lisa Marie Nichols is appointed to replace Mark Probst as a member of the Utah Digital Health Service Commission, a term to expire October 1, 2018. *See* Utah Code § 26-9f-103.

Health Data Committee:

Justin Darrel Jones is appointed to replace Bill Crim as a member of the Health Data Committee, the remaining portion of the term to expire June 30, 2016. *See* Utah Code § 26-33a-103.

Quality Growth Commission:

Jae Potter is reappointed as a member of the Quality Growth Commission, a term to expire April 15, 2019. *See* Utah Code § 11-38-201.

University of Utah Board of Trustees:

Phillip W. Clinger is reappointed as a member of the University of Utah Board of Trustees, a term to expire June 30, 2019. *See* Utah Code § 53B-2-104.

Christian Gardner is reappointed as a member of the University of Utah Board of Trustees, a term to expire June 30, 2019. *See* Utah Code § 53B-2-104.

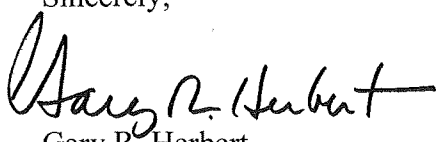
Board of Juvenile Justice Services:

Robert Lynn Flores is reappointed as a member of the Board of Juvenile Justice Services, a term to expire April 1, 2019. *See* Utah Code § 62A-1-107 (3).

David B. Harper is reappointed as a member of the Board of Juvenile Justice Services, a term to expire April 1, 2019. *See* Utah Code § 62A-1-107 (3).

Thank you for your timely consideration and confirmation of the above appointments.

Sincerely,



Gary R. Herbert
Governor

Agenda Item 5(A)

DIVISION OF DRINKING WATER

STATE LOAN FUNDS

AS OF April 30, 2015

	SUMMARY		
	Total State Fund:	$6,982,226	
	Total State Hardship Fund:	$1,552,559	
	Subtotal:	$8,534,785	
LESS AUTHORIZED	Less:		
	Authorized Loans & Closed loans in construction:	$1,852,000	*(see Page 2 for details)*
	Authorized Hardship:	$1,306,393	
	Subtotal:	$3,158,393	
	Total available after Authorized deducted	**$5,376,392**	
PROPOSED	**Proposed Loan Project(s):**	**$1,790,000**	*(see Page 2 for details)*
	Proposed Hardship Project(s):	**$645,000**	
	Subtotal:	**$2,435,000**	
AS OF:			
April 30, 2015	**TOTAL REMAINING STATE LOAN FUNDS:**	**$3,340,226**	
	TOTAL REMAINING STATE HARDSHIP FUNDS:	**-$398,834**	

Total Balance of ALL Funds: **$2,941,392**

Projected Receipts Next Twelve Months:			
and Sales Tax Revenue			
Annual Maximum Sales Tax Projection	**$3,587,500**		
	$0		
Less State Match for 2015 Federal Grant	($1,845,800)		
Less Appropriation to DDW	($200,000)		
Less Administration Fees	($150,800)		
SUBTOTAL Sales Tax Revenue including adjustments:		$1,390,900	
Payment:			
Interest on Investments (Both Loan and Hardship Accounts)		$19,200	
Principal payments		$3,270,254	**Receive 80% in January**
Interest payments		$936,255	
Total Projections:		$5,616,608	

Total Estimated State SRF Funds Available through 5-01-2016	**$8,558,000**

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF April 30, 2015

Community	Loan #	Cost Estimate	Date Authorized	Date Closed/Anticipated	Authorized Funding Loan	Authorized Funding Grant	Authorized Funding Total
Daggett County - Dutch John	3S216	1,020,000			510,000	510,000	1,020,000
Trenton Town 1.5% int 30 yrs	3S196	422,139	May-14		145,000	145,075	290,075
Ticaboo 0.0% 30 yrs	3S206	650,000			350,000	300,000	650,000
Grand Water and sewer 1.39% int 5 yrs	3S215	242,323	Feb-15		121,000	121,323	242,323
Subtotal Loans and Grants Authorized					1,126,000	1,076,398	2,202,398
PLANNING LOANS / GRANTS IN PROCESS							
Henrieville Town 0% int 5 yrs	3S189P	36,000	Jun-13	Sep-13	36,000		36,000
Coalville pl loan 5 yrs 0% int	3S186P	32,000	Jul-13	Sep-13	32,000		32,000
Hanksville	3S199P	40,000	Jul-14	Jul-14		40,000	40,000
Glen Canyon-Big Water Town	3S200P	40,000	Jul-14	Jul-14		6,495	6,495
Wendover City	3S207P	38,500	Nov-14	Feb-15		38,500	38,500
Grand Water & Sewer	3S212	48,000	Jan-15	Feb-15		48,000	48,000
Moroni Municpal Water System	3S213P	40,000	Dec-14	Feb-15		40,000	40,000
Springdale Town	3S214P	40,000	Jan-15	Mar-15		40,000	40,000
					68,000	212,995	280,995
CLOSED LOANS (partially disbursed)							
Payson, 3.46% int, 20 yrs	3S170	3,404,000	Nov-11	Apr-12	658,000		658,000
Paunsaugunt Cliffs SSD emergency	3S209P	17,000	Dec-14	Dec-14		17,000	17,000
							0
Subtotal Planning Loans/Grants Auth					658,000	17,000	675,000
Total authorized or closed but not yet funded					$1,852,000	$1,306,393	$3,158,393
PROPOSED PROJECTS for May 2015							
Cedarview-Montwell	3S219P	65,000				65,000	
Corinne	3S221	70,000				70,000	
Dagget Co - Dutch John		1,020,000			510,000	510,000	1,020,000
Plymouth Town	3S217	880,000			880,000		880,000
Oak City	3S220	400,000			400,000		
Total Proposed Projects					1,790,000	645,000	1,900,000

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
AS OF April 30, 2015

	5235	5240	
	Loan	Interest	
	Funds	(use for Grants)	Total
Cash:	$6,982,226	$1,552,559	$8,534,785
Less:			
Loans & Grants authorized but not yet closed (schedule attached)	(1,194,000)	(1,289,393)	(2,483,393)
Loans & Grants closed but not fully disbursed (schedule attached)	(658,000)	(17,000)	(675,000)
Proposed loans & grants	(1,790,000)	(645,000)	(2,435,000)
Administrative quarterly charge for entire year	(150,800)		(150,800)
Appropriation to DDW	(200,000)		(200,000)
	0		0
FY 2015 Federal SRF 20% match of $7,570,000	(1,845,800)		(1,845,800)
	1,143,626	**(398,834)**	**744,792**
Projected repayments during the next twelve months			
Thru 05-01-2016			
Principal	3,270,254		3,270,254
Interest		936,255	936,255
Projected annual investment earnings on invested cash balance		19,200	19,200
Sales Tax allocation thru May-01-2016	3,587,500		3,587,500
Total	**$8,001,380**	**$556,620**	**$8,558,000**

* All interest is added to the Hardship Fee account.

DIVISION OF DRINKING WATER

FEDERAL SRF

AS OF April 30, 2015

FIRST ROUND FUND	
1997 thru 2014 SRF Grants	
Net Federal SRF Grants:	$144,595,581
Total State Matches:	$31,540,300
Closed Loans:	-$176,135,881
Total Grant Dollars:	**$0**

FEDERAL SECOND ROUND FUND	
Principal Repayments	
Principal (P):	$39,693,879
Interest (I):	$10,383,557
Total P & I:	**$50,077,436**

Earnings on Invested Cash Balance	
Total:	**$1,152,145**

Hardship Fund	
Total:	**$3,134,017**

SUMMARY		
Total Federal State Revolving Fund:	$51,229,581	
Total Federal Hardship Fund:	$3,134,017	
Subtotal:	$54,363,598	
LESS AUTHORIZED & PARTIALLY DISBURSED	Less:	
Authorized & Partially Disbursed Closed Loans:	$20,184,977	*(see Page 2 for details)*
Authorized Federal Hardship:	$631,262	
Subtotal:	$20,816,239	
PROPOSED	**Proposed Federal Project(s):**	**$1,638,095** *(see Page 2 for details)*
	Proposed Federal Hardship Project(s):	**$0**
	Subtotal:	**$1,638,095**
AS OF: April 30, 2015	**TOTAL REMAINING LOAN FUNDS:**	**$29,406,509**
	TOTAL REMAINING HARDSHIP FUNDS:	**$2,502,755**

Total Balance of ALL Funds after deducting proposed actions: $31,909,264

Projected Receipts thru April 30, 2016		
2015 Fed SRF Grant	$6,689,460	
2015 State Match	$1,845,800	
Interest on Investments	$225,600	
Principal Payments	$5,900,246	**Receive 60% in January**
Interest	$1,351,185	
Hardship & Technical Assistance fees	$364,051	
Total:	$16,376,342	

Total Estimated Federal SRF Funds Available through: 4/30/2016 **$48,285,606**

DIVISION OF DRINKING WATER
FEDERAL STATE REVOVING FUND

PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF April 30, 2015

COMMUNITY	Project			Authorized Date	Closing Date Scheduled	Authorized From Loan Funds (1st or 2nd Round)			Hardship Fund
	Total Project	Terms	Loan #			Loan	Forgiveness	Total	
Herriman	8,375,000	2.25% hgf, 20 yrs	3F194	Mar-12	May-15	4,682,000		4,682,000	
Greendale Water Co	1,385,000	3.92 int/hgf, 20 yrs	3F213	Jul-13	Sep-15	1,145,000		1,145,000	
White Hills Wtr Co	1,047,000	1% int, 30 yr	3F226	Jul-14		519,000	518,000	1,037,000	
West Erda Improvement District	1,622,600	0% int, 30 yr	3F233	Nov-14		883,000	739,600	1,622,600	
Boulder Farmstead Wtr Co	2,000,000	0% INT, 30 yrs	3F225	May-14	Apr-15	1,000,000	1,000,000	2,000,000	
Taylor West Weber Water Improvement Dis	7,636,391	2.26% hgf, 30 yr	3F234	Feb-15	Apr-15	6,091,000	1,545,391	7,636,391	
								0	
								0	
								0	
					TOTAL CONSTRUCTION AUTHORIZED:	**$ 14,320,000**	**$ 3,802,991**	**$ 18,122,991**	**$ -**
COMMITTED PLANNING 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	408,262
Lyman Water System	40,000	100% pf eng study	3F232P	Sep-14	Oct-14			0	40,000
Cedar Point - Big Plains	83,000	0.0% 5 yrs $42,000 PF Aquafer study	3F224P	May-14			0	0	83,000
Central Iron County WCD	100,000	0.0% 5 yrs $50,000 PF Aquafer study	3F230	Nov-14			0	0	100,000
Forest Glen Plat A HOA	1,438,986	0% int, 30 yrs	3F222	Feb-14	Dec-14	650,000	288,986	938,986	
Kane Co WCD-Johnson	1,401,020	1.93% int, 30 yrs	3F165	Mar-11	Dec-11	974,000	149,000	1,123,000	
		.							
					TOTAL PLANNING AUTHORIZED:	**$1,624,000**	**$437,986**	**$2,061,986**	**$631,262**
				TOTAL CONSTRUCTION & PLANNING:				**$20,184,977**	**$631,262**
							AVAILABLE PROJECT FUNDS:		**$31,044,604**
							AVAILABLE HARDSHIP FUNDS:		**$2,502,755**
PROPOSED PROJECTS FOR MAY 2015:									
Eureka	694,095	Principal forgiveness	3F235				694,095	694,095	
Liberty Pipeline	699,000	$699,000 2.83% 20 years	3F236			699,000		699,000	
Greendale Water Co	245,000		3F213			245,000		245,000	
					TOTAL PROPOSED PROJECTS FOR THIS MEETING:	**$944,000**	**$694,095**	**$1,638,095**	**$0**
*RWAU hardship grant is being disbursed monthly									
			TOTAL FUNDS AFTER PROPOSED PROJECTS ARE FUNDED:						**$29,406,509**
			TOTAL FUNDS AFTER PROPOSED HS PROJECTS ARE FUNDED:						**$2,502,755**
NOTES OF LOAN CLOSINGS SINCE LAST BOARD MEETING:									
Total Recent Loan Closings						**$0**	**$0**	**$0**	**$0**

DIVISION OF DRINKING WATER
FEDERAL SRF LOAN FUNDS
AS OF April 30, 2015

	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 2013	$176,135,881				
Earnings on Invested 1st Round Funds			1,152,145		
Repayments (including interest earnings on 2nd round receipts)		39,693,879	10,383,557	3,134,017	230,499,479
Less:					
Closed loans and grants	-176,135,881				-176,135,881
SUBTOTAL of Funds Available	**$0**	**$39,693,879**	**$11,535,702**	**$3,134,017**	**$54,363,598**
Loans & Grants authorized but not yet closed or fully disbursed	-15,342,991	-4,404,000	-437,986	-631,262	-20,816,239
SUBTOTAL of Funds Available less Authorized	**-$15,342,991**	**$35,289,879**	**$11,097,716**	**$2,502,755**	**$33,547,359**
Future Estimates:					
Proposed Loans/Grants for current board package	-1,638,095			0	-1,638,095
SUBTOTAL of Funds Available less Proposed Loans & Grants	**-$16,981,086**	**$35,289,879**	**$11,097,716**	**$2,502,755**	**$31,909,264**
PROJECTIONS THRU April-2016					
2015 Grant proceeds estimate (inc state match)	0				
2014 Grant $9,000,000 less set-asides	6,689,460				
2014 State Match for Grant	1,845,800				
Projected repayments & revenue during the next twelve months		5,900,246	1,351,185	364,051	7,615,482
Projected annual investment earnings on invested cash balance		204,000	12,000	9,600	225,600
TOTAL	**-$8,445,826**	**$41,394,124**	**$12,460,901**	**$2,876,406**	**$48,285,606**

Agenda Item 5(B)

Project Priority List
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST
INTRODUCTION TO THE FINANCIAL ASSISTANCE COMITTEE

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

Eureka Town is being added to the Project Priority List with 50.9 points. Their project consists of a waterline, meters and 2 generators.

Liberty Pipeline is being added to the Project Priority List with 4.8 points. Their project consists of a new well.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board approve the updated Project Priority List.

March 9, 2015

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$232,059,074** **Total Needs, incl. Recent funding** **$242,545,674** **Authorized** **$214,727,690**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
N				50.9	Eureka City	Juab	669	Waterline, meters, 2 generators	$7,417,246.00	701,106	
N				22.9	Taylor West Weber ID	Weber	6,927	3-MG tank, transmission line, new well	$7,233,375	7,144,664	
N				18.5	Ticaboo Utility Imp Dist	Garfield	83	New well pump and pump house	$707,071	707,071	
N				18.4	Dutch John	Daggett	185	Tank repair, treatment upgrades, meters	$361,313	331,313	
N				10.7	Plymouth	Box Elder	411	.5-MG tank	$880,303	880,303	
N				4.8	Liberty Pipeline Company	Weber	2,504	New Well	$743,954	$698,647	
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				50.0	Boulder Farmstead	Garfield	226	Water line, spring upgrades and chlorination	$2,000,000	$2,000,000	$2,000,000
A				22.5	White Hills Water	Utah	419	Water line replacement, tank rehab, new PRV	$1,047,168	1,047,168	$1,037,000
A				13.7	Greendale	Daggett	500	New water treatment system, 50,000-gal tank	$1,384,444	$1,144,444	$1,145,000
A				8.9	Herriman	Salt Lake	24,000	New 3 MG tank and pump station	$8,325,000	$5,000,000	$4,682,000

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

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

I= **Environmentally Innovative**

GREEN PROJECTS

EMERGENCY FUNDING

N				100	Trenton Town	Cache	466	Spring Re-development	$401,150.00	$241,150	
N				100	Marble Hills	Box Elder	250	Pump replacement	$152,167.00	$28,170	

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		

March 9, 2015

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$232,059,074** **Total Needs, incl. Recent funding** **$242,545,674** **Authorized** **$214,727,690**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
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		
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		
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		

March 9, 2015

Utah Federal SRF Program

Project Priority List

				Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
					Total Unmet Needs:	**$232,059,074**		**Total Needs, incl. Recent funding**	**$242,545,674**		**Authorized $214,727,690**
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)

Cedarview Montwell SSD
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR PLANNING ADVANCE

APPLICANT'S REQUEST:

Cedarview Montwell SSD (CMSSD) is requesting a Planning Advance in the amount of $65,000 to create a basic Regional Culinary Water Master Plan.

STAFF COMMENTS:

On July 25, 2014, the Drinking Water Board authorized a $40,000 Planning Grant to complete a Culinary Water Master Plan, which outlined and identified the needs within the District boundaries. As this planning was competed and CMSSD began to develop plans for implementing new improvements, it became clear that coordination with surrounding entities would be necessary and advantageous to the decision making process. The proposed plan will gather information from CMSSD, Neola Water and Sewer District (NWSD), and the other surrounding water systems. The goal is to identify potential connection locations, shared waterline locations, shared storage locations, and other potentially mutually beneficial improvements that could be made in the area. The plan will also look into the projected costs and feasibility of each of the potential shared improvements.

CMSSD and NWSD will be the primary beneficiaries of the plan, and each of the other surrounding entities will be able to use the information provided to evaluate against other options they may have outside this area and scope of this plan.

CMSSD has a local MAGI of $54,694 which is approximately 136% of the State's MAGI. Currently, CMSSD has 11 connections and they anticipate having 90 by May 2015. They anticipate having 200 more connections in the next 5 years. The average water rate is expected to be approximately $100 per ERC which is 2.19% of the local MAGI. This water bill includes a portion of their property tax ($25/month/ERC) that goes to the District. With 90 connections and their current debt service and operation and maintenance costs, a planning loan at 0% interest for 5 years would result in an average water bill of approximately $101, which is 2.21% of their local MAGI. The District qualifies to be considered for a planning grant.

Fincanical Assistance Committee Recommends:

The Drinking Water Board authorize a $65,000 planning grant to the Cedarview Montwell SSD.

APPLICANT'S LOCATION:

Cedarview-Montwell SSD is located in Duchesne County, north of Roosevelt.

MAP OF APPLICANT'S LOCATION:

POPULATION GROWTH:

	Year	Population	*Connections
Current:	2015	1750	90
Projected:	2030	2375	563

* Engineer's estimated growth

IMPLEMENTATION SCHEDULE:

Apply to DWB for Planning Funds:	March 2015
Division Funding Authorization:	May 2015
Completion of Planning Study:	September 2015

COST ESTIMATE:

Engineering Study:	$65,000
Total Planning Cost:	$65,000

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB Grant:	$65,000	100%
Total Amount:	$65,000	100%

APPLICANT:	Cedarview-Montwell Special Service District 270 North 500 West Roosevelt, UT 84066 435-353-4630
PRESIDING OFFICIAL & CONTACT PERSON:	Lars Powell, Chairman Rt. 1 Box 1474A Roosevelt, UT 84066 435-353-4753 lapowell@ubtanet.com
TREASURER/RECORDER:	Jerold Baum 435-725-5323 (ph) jerinb@stratarocks.com
CONSULTING ENGINEER:	Aaron Averett Sunrise Engineering 363 E Main, Ste 201 Vernal, UT 84078 801-367-9251 aaverett@sunrise-eng.com

Upper Chain Lake

Duchesne County Water Conservancy District

275 West 800 South
Roosevelt, Utah 84066
General Manager: R. Scott Wilson
Admin. Assistant: Adrienne S. Marett

Office: (435) 722-4977
Cellular: (435) 823-5726
Fax: (435) 722-4827

Board Members:
Moreen Henderson, Chairman
Larry Ross, Vice-Chairman
Kelly Crozier, Member
LaVon Giles, Member
Kevin Rowley, Member
Clyde Watkins, Member
Don Winterton, Member

April 17, 2015

Utah Division of Drinking Water
P.O. Box 144830
Salt Lake City, Utah
84114-4830

Attention: Michael Grange, P.E.

Subject: Cedarview/Montwell Master Plan

The Duchesne County Water Conservancy District provides this letter of support to accompany the Cedarview/Montwell Master Plan request of funds regarding the Cederview/Montwell master plan. The District appreciates the regional planning emphasis of the Cerview/Montewell master planning effort. The District expects that this regional planning effort will benefit a broad region of Duchesne and Western Uintah County.

The District looks forward to working with Cedarview/Montwell to complete this important master planning effort.

Sincerely,

R. Scott Wilson, General Manager

Agenda Item 5(C)(i)(b)

Corinne City
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Corinne City is requesting financial assistance in the amount of $70,000 to upgrade their water meters to automated read meters.

STAFF COMMENTS:

The 2014 Legislative Auditor's Report to the Division of Drinking Water identified the need for better water use data to determine the validity of the Division's minimum source sizing rule. In order to gather this data and comply with the audit's recommendations the Division is seeking water systems of varying sizes and locales that are willing to install or upgrade existing metering and data recording systems to provide the required data. Corinne City has approached the Division and is willing to upgrade its current water use data collection system. The City will also provide water use data in the format and at the resolution necessary to assist the Division with its data collection and response to the Legislative Auditor.

Corinne City would like to replace and retrofit their existing water meters with automated read meters and data collection. This will also allow the city to collect better quality data to analyze current water use and estimate future water use as the City grows.

The local MAGI for Corinne City is $39,861, which is 98% of the State MAGI. The average water bill is approximately $47 per month, which is 1.43% of local MAGI. With a full loan of $70,000 at 2.93% interest for 20 years, the City would need to increase their average water bill to approximately $56/ERC which is 1.74% of their local MAGI.

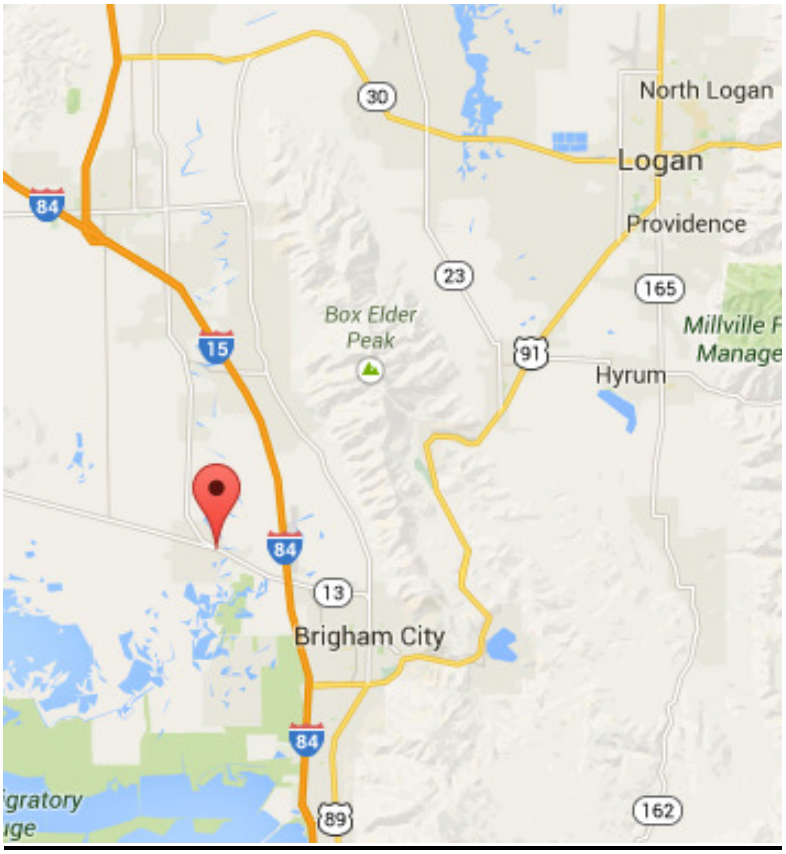
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

In recognition of Corinne City's willingness to participate in the Division's state-wide water use study, the Financial Assistance Committee recommends that the Drinking Water Board authorize a $70,000 grant to Corinne City.

APPLICANT'S LOCATION:

Corinne City is located in Box Elder.

MAP OF APPLICANT'S LOCATION:



POPULATION GROWTH:

According to the Utah State Governor's Office of Planning and Budgeting, the anticipated growth rate for Corinne City is approximately 1.89% per year over the next 40 years

	Year	Population
Current:	2014	700
Projected:	2050	1,432

IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	March 2015
SRF Committee Conference Call:	April 2015
Complete Design:	May 2015
Plan Approval:	May 2015
Advertise for Bids:	May 2015
Bid Opening:	June 2015
Loan Closing:	June 2015
Begin Construction:	July 2015
Complete Construction:	August 2015
Receive Operating Permit:	September 2015

COST ESTIMATE:

Smart Meters and Retrofit	$70,000
Total Project Cost	**$70,000**

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB Grant	$70,000	100%
Total Amount	$70,000	100%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance plus Depreciation: $102,620
Existing DW Debt Service: $135,046.25
Replacement Reserve Account: $10,769.92
Monthly Cost/ERC: $56.51/ERC
Cost as % MAGI : 1.70%

APPLICANT: Corinne City
2420 North 4000 West
Corinne, Utah 84307

PRESIDING OFFICIAL &
CONTACT PERSON: Brett Merkley, Mayor
4278 Corinne Cutoff
Corinne, Utah 84307
435-730-1407
brettmerkley@msn.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Corinne City
COUNTY: Box Elder
PROJECT DESCRIPTION: Water meter replacement

FUNDING SOURCE: State SRF

100 % Loan & 0 % Grant

ESTIMATED POPULATION:	700	NO. OF CONNECTIONS:	366 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$47.37 *			PROJECT TOTAL:	$70,000
CURRENT % OF AGI:	1.43%	FINANCIAL PTS:	39	LOAN AMOUNT:	$70,000
ESTIMATED MEDIAN AGI:	$39,861			GRANT AMOUNT:	$0
STATE AGI:	$40,489			TOTAL REQUEST:	$70,000
SYSTEM % OF STATE AGI:	98%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.31%		2.93%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.31%		2.93%
REQUIRED DEBT SERVICE:	$3,500.00	$5,293.10		$4,674.70
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$350.00	$529.31		$467.47
ANNUAL NEW DEBT PER CONNECTION:	$10.52	$15.91		$14.05
O & M + FUNDED DEPRECIATION:	$102,620.00	$102,620.00		$102,620.00
OTHER DEBT + COVERAGE:	$135,046.25	$135,046.25		$135,046.25
REPLACEMENT RESERVE ACCOUNT:	$10,707.85	$10,797.50		$10,766.59
ANNUAL EXPENSES PER CONNECTION:	$678.62	$678.86		$678.78
TOTAL SYSTEM EXPENSES	$252,224.10	$254,286.16		$253,575.01
TAX REVENUE:	$6,000.00	$6,000.00		$6,000.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$57.43	$57.90		$57.74
% OF ADJUSTED GROSS INCOME:	1.73%	1.74%		1.74%

* Equivalent Residential Connections

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Corinne City
COUNTY: Box Elder
PROJECT DESCRIPTION: Water meter replacement

FUNDING SOURCE: State SRF

0 % Loan & 100 % Grant

ESTIMATED POPULATION:	700	NO. OF CONNECTIONS:	366 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$47.37 *			PROJECT TOTAL:	$70,000
CURRENT % OF AGI:	1.43%	FINANCIAL PTS:	39	LOAN AMOUNT:	$0
ESTIMATED MEDIAN AGI:	$39,861			GRANT AMOUNT:	$70,000
STATE AGI:	$40,489			TOTAL REQUEST:	$70,000
SYSTEM % OF STATE AGI:	98%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.31%		2.93%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.31%		2.93%
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:	$102,620.00	$102,620.00		$102,620.00
OTHER DEBT + COVERAGE:	$135,046.25	$135,046.25		$135,046.25
REPLACEMENT RESERVE ACCOUNT:	$10,532.85	$10,532.85		$10,532.85
ANNUAL EXPENSES PER CONNECTION:	$678.14	$678.14		$678.14
TOTAL SYSTEM EXPENSES	$248,199.10	$248,199.10		$248,199.10
TAX REVENUE:	$6,000.00	$6,000.00		$6,000.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$56.51	$56.51		$56.51
% OF ADJUSTED GROSS INCOME:	1.70%	1.70%		1.70%

* Equivalent Residential Connections

Agenda Item 5(C)(i)(c)

Oak City
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST

Oak City is requesting $400,000 in financial assistance from the Drinking Water Board for a project consisting of a new well and well-house, re-equipping the existing well, chlorination facilities at the old well and new well, a 30,000 gallon chlorine contact time tank, a booster pump to increase pressures on the south end of the water system and connecting waterlines.

Total water system improvement costs are estimated to be $814,000. Oak City is planning on contributing $14,000 and has requested the remaining funds from the Community Impact Board (CIB). The CIB currently intends to act on the project at their June 11, 2015 funding meeting.

STAFF COMMENTS:

Based on information from the Utah State Tax commission, the 2013 MAGI for Oak City is $47,199, which is 117% of the State MAGI of $40,489. The current average monthly water bill is calculated as $30.07, or 0.76% of the local MAGI.

The base evaluation as outlined in the table below returned an interest rate of 3.17% for 20 years and resulted in a water bill of 1.11% of the local MAGI. Therefore Oak City does not qualify for additional subsidization.

	Description	Repayable Loan Amount	Interest Rate	Term	Principal Forgiveness	Monthly Water Rate	% Local MAGI
1	Base Evaluat.	$400,000	3.17%	20 yrs	$0	$43.72	1.11%

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a $400,000 construction loan at 3.17% interest for 20 years to Oak City. Oak City must resolve any and all issues on their compliance report.

APPLICANT'S LOCATION:

Oak City is located in Millard County, approximately 15 miles east of Delta.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

Re-equip old Well: The current well currently pumps approximately 200 gpm to the existing storage tank. Wall Engineering has proposed to construct and pump into a 30,000 gallon tank at ground level. In addition to serving as a chlorination contact chamber, the engineer has calculated that by not pumping against the pressure head created by the existing elevated tank, the well pump will produce 400 gpm. The proposed design includes a booster pump to pump water to the existing elevated storage tank.

New Well: 10-inch diameter well, well-house with chlorination facilities and connecting water line, to provide 400 gpm to the new 30,000 gallon tank.

Booster Pump: The application indicates that a booster pump is needed on the south end of the water system to increase pressures to the minimums required by Division of Drinking Water rules.

POPULATION GROWTH:

A growth rate of 1.0% is used to in the population projects show in the table below.

	Year	Population	Connections
Current	2015	584	294
Projected	2035	713	359

IMPLEMENTATION SCHEDULE:

Apply to DWB for Funding:	March 2015
DWB Funding Authorization:	May 2015
CIB Funding Authorization	June 2015
Plans Submitted:	August 2015
Plan Approval:	September 2015
Advertise for Bids:	September 2015
Bid Opening:	October 2015
Loan Closing:	October 2015
Begin Construction:	October 2015
Complete Construction:	January 2015

COST ESTIMATE:

Construction:	$599,611
Engineering, Environmental and CM:	$94,400
Contigency:	$68,989
Land Acquisition	$25,000
Legal/Bonding:	$12,000
Administrative:	$14,000
Total Cost:	$814,000

CONTACT INFORMATION:

APPLICANT:	Oak City 30 West Center Street P.O. Box 217 Oak City, UT 84649 435-846-3807 oakcitytown@hotmail.com
PRESIDING OFFICIAL & CONTACT PERSON:	Ken Christensen, Mayor 30 West Center Street P.O. Box 217 Oak City, UT 84649 435-846-3807
Treasurer/Recorder	DeAnn Steel 30 West Center Street P.O. Box 217 Oak City, UT 84649 435-846-2018
CONSULTING ENGINEER:	Lynn Wall Wall Engineering, Inc. 55 South Main #2 P.O. Box 39 Fillmore, Utah 84631 435-864-7503 wallengineering@frontiernet.net
BOND ATTORNEY	Richard Chamberlain Chamberlain Associates 225 N 100 E Richfield, UT 84701 435-896-4461 Rchamberlain13@gmail.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Oak City
FUNDING SOURCE: State SRF
COUNTY: Millard
PROJECT DESCRIPTION: New Well and Re-Equip old Well, Pump Station, Chlorinator and 30K Gallon contact time tank

100 % Loan & 0 % Grant

ESTIMATED POPULATION:	592	NO. OF CONNECTIONS:	294 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$30.07 *			PROJECT TOTAL:	$814,000
CURRENT % OF AGI:	0.76%	FINANCIAL PTS:	33	LOAN AMOUNT:	$400,000
ESTIMATED MEDIAN AGI:	$47,199			GRANT AMOUNT:	$0
STATE AGI:	$40,489			TOTAL REQUEST:	$400,000
SYSTEM % OF STATE AGI:	117%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.28%		3.17%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.28%		3.17%
REQUIRED DEBT SERVICE:	$20,000.00	$30,167.05		$27,310.64
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$2,000.00	$3,016.71		$2,731.06
ANNUAL NEW DEBT PER CONNECTION:	$74.83	$112.87		$102.18
O & M + FUNDED DEPRECIATION:	$14,500.00	$14,500.00		$14,500.00
OTHER DEBT + COVERAGE:	$103,488.75	$103,488.75		$103,488.75
REPLACEMENT RESERVE ACCOUNT:	$5,864.55	$6,372.90		$6,230.08
ANNUAL EXPENSES PER CONNECTION:	$421.27	$423.00		$422.51
TOTAL SYSTEM EXPENSES	$145,853.30	$157,545.41		$154,260.53
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$41.34	$44.66		$43.72
% OF ADJUSTED GROSS INCOME:	1.05%	1.14%		1.11%

* Residential Connections

R309-700-5

Oak City
Millard
March 19, 2014

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	X
E. $3,001 to $5,000		4	
F. $5,001 to $10,000		1	
G. Over $10,000		0	
	$2,769		
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	X
E. 131 to 150% of State Median AGI		3	
F. Greater than 150% of State Median AGI		0	
	117%		
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
	1.7%		
4. ABILITY TO REPAY LOAN			
4. WATER BILL (INCLUDING TAXES) AFTER PROJECT IS BUILT RELATIVE TO LOCAL MEDIAN ADJUSTED GROSS INCOME (SELECT ONE)			
a. Greater than 2.50% of local median AGI		16	
b. 2.01 to 2.50% of local median AGI		12	
c. 1.51 to 2.00% of local median AGI		8	
d. 1.01 to 1.50% of local median AGI		3	X
e. 0 to 1.00% of local median AGI		0	
	1.11%		
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	X
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	X
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		33	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Oak City

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % Grant

PRINCIPAL	$400,000.00	ANTICIPATED CLOSING DATE	02-Oct-15
INTEREST	3.17%	FIRST P&I PAYMENT DUE	10-Jan-17
TERM	20	REVENUE BOND	
NOMIN. PAYMENT	$27,310.64	GRANT AMOUNT:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2016	$400,000.00		$3,451.78	*	$0.00	$3,451.78	$400,000.00	0
2017	$400,000.00		$27,680.00		$15,000.00	$12,680.00	$385,000.00	1
2018	$385,000.00		$27,204.50		$15,000.00	$12,204.50	$370,000.00	2
2019	$370,000.00		$27,729.00		$16,000.00	$11,729.00	$354,000.00	3
2020	$354,000.00		$27,221.80		$16,000.00	$11,221.80	$338,000.00	4
2021	$338,000.00		$27,714.60		$17,000.00	$10,714.60	$321,000.00	5
2022	$321,000.00		$27,175.70		$17,000.00	$10,175.70	$304,000.00	6
2023	$304,000.00		$27,636.80		$18,000.00	$9,636.80	$286,000.00	7
2024	$286,000.00		$27,066.20		$18,000.00	$9,066.20	$268,000.00	8
2025	$268,000.00		$27,495.60		$19,000.00	$8,495.60	$249,000.00	9
2026	$249,000.00		$26,893.30		$19,000.00	$7,893.30	$230,000.00	10
2027	$230,000.00		$27,291.00		$20,000.00	$7,291.00	$210,000.00	11
2028	$210,000.00		$27,657.00		$21,000.00	$6,657.00	$189,000.00	12
2029	$189,000.00		$26,991.30		$21,000.00	$5,991.30	$168,000.00	13
2030	$168,000.00		$27,325.60		$22,000.00	$5,325.60	$146,000.00	14
2031	$146,000.00		$26,628.20		$22,000.00	$4,628.20	$124,000.00	15
2032	$124,000.00		$26,930.80		$23,000.00	$3,930.80	$101,000.00	16
2033	$101,000.00		$27,201.70		$24,000.00	$3,201.70	$77,000.00	17
2034	$77,000.00		$27,440.90		$25,000.00	$2,440.90	$52,000.00	18
2035	$52,000.00		$27,648.40		$26,000.00	$1,648.40	$26,000.00	19
2036	$26,000.00		$26,824.20		$26,000.00	$824.20	$0.00	20
			$549,208.38		$400,000.00	$149,208.38		

*Interest Only Payment

Oak City

DWB Loan Terms		
Local Share (total):	$	14,000
Other Agency Funding:	$	400,000
DWB Grant Amount:	$	-
DWB Loan Amount:	$	400,000
DWB Loan Term:		20
DWB Loan Interest:		**3.17%**
DWB Loan Payment:	$	27,311

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	822,140
Existing Facility O&M Expense:	$	14,500
Proposed Facility O&M Expense:	$	14,500
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	82,791

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		294
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	2,700
Current Monthly User Charge:	$	30.07
Needed Average Monthly User Charge:	$	43.72

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	1.0%	3	294	106,088	8,100	-	114,188	**-**	**-**	400,000	-	-	82,791	14,500	97,291	-
1	1.0%	3	297	155,835	8,100	-	163,935	**27,680**	**2,731**	385,000	15,000	12,680	82,791	14,500	127,702	1.35
2	1.0%	3	300	157,409	8,100	-	165,509	**27,205**	**2,731**	370,000	15,000	12,205	82,791	14,645	127,372	1.37
3	1.0%	3	303	158,983	8,100	-	167,083	**27,729**	**2,731**	354,000	16,000	11,729	82,791	14,791	128,043	1.38
4	1.0%	3	306	160,557	8,100	-	168,657	**27,222**	**2,731**	338,000	16,000	11,222	82,791	14,939	127,683	1.40
5	1.0%	3	309	162,131	8,100	-	170,231	**27,715**	**2,731**	321,000	17,000	10,715	82,791	15,089	128,325	1.40
6	1.0%	3	312	163,705	8,100	-	171,805	**27,176**	**2,731**	304,000	17,000	10,176	82,791	15,240	127,937	1.42
7	1.0%	3	315	165,279	8,100	-	173,379	**27,637**	**2,731**	286,000	18,000	9,637	82,791	15,392	128,551	1.43
8	1.0%	3	318	166,853	8,100	-	174,953	**27,066**	**2,731**	268,000	18,000	9,066	82,791	15,546	128,134	1.45
9	1.0%	4	322	168,952	10,800	-	179,752	**27,496**	**2,731**	249,000	19,000	8,496	82,791	15,701	128,719	1.49
10	1.0%	3	325	170,526	8,100	-	178,626	**26,893**	**2,731**	230,000	19,000	7,893	82,791	15,858	128,274	1.48
11	1.0%	3	328	172,100	8,100	-	180,200	**27,291**		210,000	20,000	7,291	82,791	16,017	126,099	1.49
12	1.0%	3	331	173,674	8,100	-	181,774	**27,657**		189,000	21,000	6,657	82,791	16,177	126,625	1.50
13	1.0%	4	335	175,773	10,800	-	186,573	**26,991**		168,000	21,000	5,991	82,791	16,339	126,121	1.55
14	1.0%	3	338	177,347	8,100	-	185,447	**27,326**		146,000	22,000	5,326	82,791	16,502	126,619	1.53
15	1.0%	3	341	178,921	8,100	-	187,021	**26,628**		124,000	22,000	4,628	82,791	16,667	126,087	1.56
16	1.0%	4	345	181,020	10,800	-	191,820	**26,931**		101,000	23,000	3,931	82,791	16,834	126,556	1.59
17	1.0%	3	348	182,594	8,100	-	190,694	**27,202**		77,000	24,000	3,202	82,791	17,002	126,995	1.58
18	1.0%	4	352	184,693	10,800	-	195,493	**27,441**		52,000	25,000	2,441	82,791	17,172	127,404	1.62
19	1.0%	3	355	186,267	8,100	-	194,367	**27,648**		26,000	26,000	1,648	82,791	17,344	127,784	1.60
20	1.0%	4	359	188,366	10,800	-	199,166	**26,824**		-	26,000	824	82,791	17,518	127,133	1.66
										Total Paid in Debt Service =	400,000	145,757				

DEQ | Drinking Water

Public Water System Custom Report

Oak City Water System PWS ID: UTAH14010 Rating: Approved 03/30/1999

Status: Active

Contacts

Type: Administrative Contact
Name: JEFFREY MASON LYMAN
Office: 435-864-2701
Emergency:
Email: jmlyman@gmail.com

Site Information

Address: PO BOX 53 , OAK CITY, UT 84649
Phone: 435-846-2841
County: MILLARD COUNTY
System Type: Community
Population: 700

Site Updates

Last Inventory Update: 09/26/2013
Last Surveyor Update: 07/22/2013
Surveyor: JJ TRUSSELL
Operating Period: 1/1 - 12/31
Last IPS Update: 03/19/2015 12:00:00

Consumptive Use Zone

Irrigation Zone: 4
Date: 02/15/2013

IPS SUMMARY

Total IPS Points	Admin & Physical Facilities	Quality & Monitoring	Operator Certifications	Significant Deficiency Violations
62	27	0	0	35

PHYSICAL FACILITY POINTS

Code	Description	Severity	Points Effective	Details
M001	CURRENT EMERGENCY RESPONSE PROGRAM	REC	-10	**View Details (1)**
SS03	SPRING COLLECTION AREA LACKS A DIVERSION CHANNEL	MIN	5	**View Details (1)**
SS04	SPRING BOX DRAIN/OVERFLOW LACKS PROPER SCREEN	SIG	5	**View Details (1)**
SS07	DEEP ROOTED VEGETATION IN SPRING COLLECTION AREA	MIN	10	**View Details (1)**
SS14	SPRING BOX DRAIN/OVERFLOW LACKS PROPER FREEFALL	MIN	5	**View Details (1)**
TD20	CL2 NO PRESSURE GUAGE AT IN/OUT OF INJECTOR	MIN	2	**View Details (1)**
TD22	CL2 INSUFFICIENT BACK UP EQUIPMENT	MIN	10	**View Details (1)**

Total Effective Points: 27

SIGNIFICANT DEFICIENCY VIOLATIONS

ID	Violation	Code	Deficiency	Determined	Points Effective
WS002	45 FAILURE ADDRESS DEFICIENCY (GWR)	SS04	SPRING BOX DRAIN/OVERFLOW LACKS PROPER SCREEN	01/30/2014	35

Total Effective Points: 35

Agenda Item 5(C)(i)(d)

Plymouth Town
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Plymouth Town is requesting financial assistance in the amount of $880,000 to construct a new 500,000 gallon water tank. During the summer months, Plymouth's water demand during the peak hours has drained their existing water tanks on multiple occasions.

STAFF COMMENTS:

The local MAGI for Plymouth is $43,284 which is 107% of the State MAGI. They currently have a water bill of approximately $24.94 per month, which is 0.69% of local MAGI. Due to Plymouth Town's high MAGI and low water bill relative to its MAGI the town doesn't qualify for grant. A loan of $880,000 for 30 years with a 3.49% interest rate would require the District to maintain an average water bill of $45.22, 1.25% of local MAGI.

At the February 26, Drinking Water Board Meeting Plymouth Town representatives requested the Board consider authorizing funds at a lower interest rate and a longer loan term of 30 years to ease the rate increase burden on their users. The Drinking Water Board agreed to review funding options with a 30 year term and multiple interest rates at the May 8, Board meeting.

	Total Request	Term (Yr)	Interest	Water Bill	% of MAGI
1	$880,000*	20	3.29%	$51.38	1.42%
2	$880,000*	30	3.49%	$45.22	1.25%
3	$880,000	30	3.00%	$43.85	1.22%
4	$880,000	30	2.00%	$42.32	1.17%
5	$880,000	30	1.00%	$39.85	1.10%

*These are standard evaluations with no manual adjustments made to the interest rates.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize an $880,000 construction loan to Plymouth Town with a 3.49% interest/fee per annum, for 30 years, with the condition that they resolve all issues on their compliance report. A 1% loan origination fee of $8,800 will be assessed which can be either absorbed by the authorized loan amount or paid by the water system, out of the system funds at closing.

APPLICANT'S LOCATION:

Plymouth Town is located in Box Elder County.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

Plymouth Town proposes to construct a new 500,000 gallon water tank. During the summer months, Plymouth's water demand during the peak hours has drained their existing water tanks on multiple occasions. During this time, if there were to be a fire, Plymouth would not have adequate water. A new 500,000 gallon water tank would provide the adequate water storage and fire protection to meet the needs of the City. The project will include building a new 500,000 gallon water tank adjacent to the existing water tanks which have a capacity of 240,000 gallons.

POPULATION GROWTH:

According to the Utah State Governor's Office of Planning and Budgeting, the anticipated growth rate for Plymouth Town is approximately 1.5 % per year over the next 20 years.

	Year	Population
Current:	2014	411
Projected:	2030	553

IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	November 25, 2014
SRF Committee Conference Call:	April 8, 2015
DWB Funding Authorization:	May 8, 2015
Complete Design:	May 1, 2015
Plan Approval:	June 1, 2015
Advertise for Bids:	June 15, 2015
Bid Opening:	July 15, 2015
Loan Closing:	July 20, 2015
Begin Construction:	August 1, 2015
Complete Construction:	October 30, 2015
Receive Operating Permit:	December 1, 2015

COST ESTIMATE:

Legal and Bonding	$14,500
Administrative- Environmental	$15,000
Administrative- Funding Assistance	$5,000
Engineering- Design	$55,000
Engineering- CMS	$62,000
Engineering- Geotechnical	$9,000
Construction-Storage Tank	$596,000
Contingency	$90,000
Land Acquisition	$25,000
Loan Origination Fee 1%	$8,715
Total Project Cost	**$880,000**

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB Loan (3.49%, 30-yr)	$880,000	100%
DWB Grant	$0	0%
Total Amount	$880,000	100%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance plus Depreciation: $51,111.00
Existing DW Debt Service: $0
DDW Debt Service (3.49%, 30-yrs): $47,786.84
DDW Debt Reserve: $4,778.68
Replacement Reserve Account: $0.00
Annual Cost/ERC: $272.76
Monthly Cost/ERC: $45.22
Cost as % MAGI: 1.25%

APPLICANT:	Plymouth Town 20120 North 5200 West P.O. Box 130 Plymouth, Utah 84330 plytown@digis.net 435-239-8389
PRESIDING OFFICIAL & CONTACT PERSON:	Curtis Murray-Mayor 20120 North 5200 West P.O. Box 130 Plymouth, Utah 84330 plytown@digis.net 435-239-8389
TREASURER/RECORDER:	Sharon Hess 435-788-8343 plytown@digis.net 435-239-8389
CONSULTING ENGINEER:	Ryan Jolley Jones & Demille Engineering, Inc. 1535 South 100 West Richfield, Utah 84701 435-896-8266 ryanj@jonesanddemille.com
FINANCIAL CONSULTANT:	Scott Archibald, P.E Sunrise Engineering 26 South Main Smithfield, Utah 84335 435-563-3734 sarchibald@sunrise-eng.com
BOND ATTORNEY:	None Specified

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Plymouth
COUNTY: Box Elder
PROJECT DESCRIPTION: Storage Tank

FUNDING SOURCE: State SRF

100 % Loan & 0 % Grant

ESTIMATED POPULATION:	411	NO. OF CONNECTIONS:	219 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$24.94 *			PROJECT TOTAL:	$880,000
CURRENT % OF AGI:	0.69%	FINANCIAL PTS:	32	LOAN AMOUNT:	$880,000
ESTIMATED MEDIAN AGI:	$43,284			GRANT AMOUNT:	$0
STATE AGI:	$40,489			TOTAL REQUEST:	$880,000
SYSTEM % OF STATE AGI:	107%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.39%		3.49%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.39%		3.49%
REQUIRED DEBT SERVICE:	$29,333.33	$53,327.50		$47,786.84
*PARTIAL COVERAGE (15%):	$4,400.00	$7,999.12		$7,168.03
*ADD. COVERAGE AND RESERVE (10%):	$2,933.33	$5,332.75		$4,778.68
ANNUAL NEW DEBT PER CONNECTION:	$167.43	$304.38		$272.76
O & M + FUNDED DEPRECIATION:	$51,111.00	$51,111.00		$51,111.00
OTHER DEBT + COVERAGE:	$7,993.75	$7,993.75		$7,993.75
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$269.88	$269.88		$269.88
TOTAL SYSTEM EXPENSES	$95,771.42	$125,764.12		$118,838.30
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$36.44	$47.86		$45.22
% OF ADJUSTED GROSS INCOME:	1.01%	1.33%		1.25%

* Equivalent Residential Connections

R309-700-5

Plymouth
Box Elder
January 15, 2015

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	X
F. $5,001 to $10,000		1	
G. Over $10,000		0	
	$4,018		
2. CURRENT LOCAL MEDIAN ADJUSTED GROSS INCOME (AGI) (SELECT ONE)			
A. Less than 70% of State Median AGI		19	
B. 71 to 80% of State Median AGI		16	
C. 81 to 95% of State Median AGI		13	
D. 96 to 110% of State Median AGI		9	X
E. 111 to 130% of State Median AGI		6	
E. 131 to 150% of State Median AGI		3	
F. Greater than 150% of State Median AGI		0	
	107%		
3. PROJECT FUNDING CONTRIBUTED BY APPLICANT (SELECT ONE)			
a. Greater than 25% of project funds		17	
b. 15 to 25% of project funds		14	
c. 10 to 15% of project funds		11	
c. 5 to 10% of project funds		8	
d. 2 to 5% of project funds		4	
e. Less than 2% of project funds		0	X
	0.0%		
4. ABILITY TO REPAY LOAN			
4. WATER BILL (INCLUDING TAXES) AFTER PROJECT IS BUILT RELATIVE TO LOCAL MEDIAN ADJUSTED GROSS INCOME (SELECT ONE)			
a. Greater than 2.50% of local median AGI		16	
b. 2.01 to 2.50% of local median AGI		12	
c. 1.51 to 2.00% of local median AGI		8	
d. 1.01 to 1.50% of local median AGI		3	X
e. 0 to 1.00% of local median AGI		0	
	1.25%		
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	X
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	X
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		32	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Plymouth

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % Grant

PRINCIPAL	$880,000.00	ANTICIPATED CLOSING DATE	15-Aug-15
INTEREST	3.49%	FIRST P&I PAYMENT DUE	15-Aug-16
TERM	30	REVENUE BOND	
NOMIN. PAYMENT	$47,786.84	GRANT AMOUNT:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$880,000.00		$0.00	*	$0.00	$0.00	$880,000.00	0
2016	$880,000.00		$47,712.00		$17,000.00	$30,712.00	$863,000.00	1
2017	$863,000.00		$48,118.70		$18,000.00	$30,118.70	$845,000.00	2
2018	$845,000.00		$47,490.50		$18,000.00	$29,490.50	$827,000.00	3
2019	$827,000.00		$47,862.30		$19,000.00	$28,862.30	$808,000.00	4
2020	$808,000.00		$48,199.20		$20,000.00	$28,199.20	$788,000.00	5
2021	$788,000.00		$47,501.20		$20,000.00	$27,501.20	$768,000.00	6
2022	$768,000.00		$47,803.20		$21,000.00	$26,803.20	$747,000.00	7
2023	$747,000.00		$48,070.30		$22,000.00	$26,070.30	$725,000.00	8
2024	$725,000.00		$47,302.50		$22,000.00	$25,302.50	$703,000.00	9
2025	$703,000.00		$47,534.70		$23,000.00	$24,534.70	$680,000.00	10
2026	$680,000.00		$47,732.00		$24,000.00	$23,732.00	$656,000.00	11
2027	$656,000.00		$47,894.40		$25,000.00	$22,894.40	$631,000.00	12
2028	$631,000.00		$48,021.90		$26,000.00	$22,021.90	$605,000.00	13
2029	$605,000.00		$48,114.50		$27,000.00	$21,114.50	$578,000.00	14
2030	$578,000.00		$48,172.20		$28,000.00	$20,172.20	$550,000.00	15
2031	$550,000.00		$48,195.00		$29,000.00	$19,195.00	$521,000.00	16
2032	$521,000.00		$47,182.90		$29,000.00	$18,182.90	$492,000.00	17
2033	$492,000.00		$48,170.80		$31,000.00	$17,170.80	$461,000.00	18
2034	$461,000.00		$48,088.90		$32,000.00	$16,088.90	$429,000.00	19
2035	$429,000.00		$47,972.10		$33,000.00	$14,972.10	$396,000.00	20
2036	$396,000.00		$47,820.40		$34,000.00	$13,820.40	$362,000.00	21
2037	$362,000.00		$47,633.80		$35,000.00	$12,633.80	$327,000.00	22
2038	$327,000.00		$47,412.30		$36,000.00	$11,412.30	$291,000.00	23
2039	$291,000.00		$47,155.90		$37,000.00	$10,155.90	$254,000.00	24
2040	$254,000.00		$47,864.60		$39,000.00	$8,864.60	$215,000.00	25
2041	$215,000.00		$47,503.50		$40,000.00	$7,503.50	$175,000.00	26
2042	$175,000.00		$48,107.50		$42,000.00	$6,107.50	$133,000.00	27
2043	$133,000.00		$47,641.70		$43,000.00	$4,641.70	$90,000.00	28
2044	$90,000.00		$47,141.00		$44,000.00	$3,141.00	$46,000.00	29
2045	$46,000.00		$47,605.40		$46,000.00	$1,605.40	$0.00	30
			$1,433,025.40		$880,000.00	$553,025.40		

*Interest Only Payment

Plymouth

DWB Loan Terms		
Local Share (total):	$	-
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	880,000
DWB Loan Term:		30
DWB Loan Interest:		**3.49%**
DWB Loan Payment:	$	47,787

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	888,800
Existing Facility O&M Expense:	$	35,124
Proposed Facility O&M Expense:	$	35,124
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	6,395

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		219
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	5,000
Current Monthly User Charge:	$	24.94
Needed Average Monthly User Charge:	$	45.22

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	1.0%	2	219	65,554	10,000	-	75,554	**-**	**-**	880,000	-	-	6,395	35,124	41,519	-
1	1.0%	2	221	119,924	10,000	-	129,924	**47,712**	**4,779**	863,000	17,000	30,712	6,395	35,124	94,010	1.75
2	1.0%	2	223	121,009	10,000	-	131,009	**48,119**	**4,779**	845,000	18,000	30,119	6,395	35,475	94,768	1.75
3	1.0%	3	226	122,637	15,000	-	137,637	**47,491**	**4,779**	827,000	18,000	29,491	6,395	35,830	94,494	1.89
4	1.0%	2	228	123,722	10,000	-	133,722	**47,862**	**4,779**	808,000	19,000	28,862	6,395	36,188	95,224	1.80
5	1.0%	2	230	124,807	10,000	-	134,807	**48,199**	**4,779**	788,000	20,000	28,199	6,395	36,550	95,923	1.80
6	1.0%	2	232	125,893	10,000	-	135,893	**47,501**	**4,779**	768,000	20,000	27,501	6,395	36,916	95,591	1.84
7	1.0%	3	235	127,521	15,000	-	142,521	**47,803**	**4,779**	747,000	21,000	26,803	6,395	37,285	96,262	1.94
8	1.0%	2	237	128,606	10,000	-	138,606	**48,070**	**4,779**	725,000	22,000	26,070	6,395	37,658	96,902	1.85
9	1.0%	3	240	130,234	15,000	-	145,234	**47,303**	**4,779**	703,000	22,000	25,303	6,395	38,034	96,510	2.00
10	1.0%	2	242	131,319	10,000	-	141,319	**47,535**	**4,779**	680,000	23,000	24,535	6,395	38,415	97,123	1.91
11	1.0%	2	244	132,404	10,000	-	142,404	**47,732**		656,000	24,000	23,732	6,395	38,799	92,926	1.91
12	1.0%	3	247	134,032	15,000	-	149,032	**47,894**		631,000	25,000	22,894	6,395	39,187	93,476	2.02
13	1.0%	2	249	135,118	10,000	-	145,118	**48,022**		605,000	26,000	22,022	6,395	39,579	93,996	1.94
14	1.0%	3	252	136,745	15,000	-	151,745	**48,115**		578,000	27,000	21,115	6,395	39,974	94,484	2.05
15	1.0%	2	254	137,831	10,000	-	147,831	**48,172**		550,000	28,000	20,172	6,395	40,374	94,941	1.97
16	1.0%	3	257	139,459	15,000	-	154,459	**48,195**		521,000	29,000	19,195	6,395	40,778	95,368	2.08
17	1.0%	2	259	140,544	10,000	-	150,544	**47,183**		492,000	29,000	18,183	6,395	41,186	94,764	2.04
18	1.0%	3	262	142,172	15,000	-	157,172	**48,171**		461,000	31,000	17,171	6,395	41,598	96,163	2.12
19	1.0%	3	265	143,800	15,000	-	158,800	**48,089**		429,000	32,000	16,089	6,395	42,013	96,497	2.14
20	1.0%	2	267	144,885	10,000	-	154,885	**47,972**		396,000	33,000	14,972	6,395	42,434	96,801	2.07
21	1.0%	3	270	146,513	15,000	-	161,513	**47,820**		362,000	34,000	13,820	6,395	42,858	97,073	2.19
22	1.0%	3	273	148,141	15,000	-	163,141	**47,634**		327,000	35,000	12,634	6,395	43,287	97,315	2.22
23	1.0%	2	275	149,226	10,000	-	159,226	**47,412**		291,000	36,000	11,412	6,395	43,719	97,527	2.15
24	1.0%	3	278	150,854	15,000	-	165,854	**47,156**		254,000	37,000	10,156	6,395	44,157	97,707	2.27
25	1.0%	3	281	152,482	15,000	-	167,482	**47,865**		215,000	39,000	8,865	6,395	44,598	98,858	2.26
26	1.0%	3	284	154,110	15,000	-	169,110	**47,504**		175,000	40,000	7,504	6,395	45,044	98,943	2.30
27	1.0%	2	286	155,195	10,000	-	165,195	**48,108**		133,000	42,000	6,108	6,395	45,495	99,997	2.20
28	1.0%	3	289	156,823	15,000	-	171,823	**47,642**		90,000	43,000	4,642	6,395	45,950	99,986	2.33
29	1.0%	3	292	158,451	15,000	-	173,451	**47,141**		46,000	44,000	3,141	6,395	46,409	99,945	2.37
30	1.0%	3	295	160,079	15,000	-	175,079	**47,605**		-	46,000	1,605	6,395	46,873	100,874	2.37
									Total Paid in Debt Service =		880,000	553,025				

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

Pine Meadow Mutual Water Company
Presented to the Drinking Water Board
May 8, 2015

FINANCIAL ASSISTANCE COMMITTEE
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Pine Meadow is requesting a change of scope to their $3,068,000 construction loan approved on May 3, 2011. Pine Meadow has approximately $240,000 remaining and would like to use it to replace an existing booster pump station. The existing booster pump station provides 45 gpm to the upper 200,000 gallon tank. The proposed pump station will be capable of pumping 250 gpm, which will allow the system to recover the upper zone quicker in the event of a major drawdown to the 200,000 gallon tank.

FINANCIAL ASSISSTANCE COMMITTEE RECOMENDATION:

The Drinking Water Board authorize the change of scope for Pine Meadow's remaining funds to replace an existing pump station.

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

Liberty Pipeline Company
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Liberty Pipeline Company is requesting financial assistance in the amount of $699,000 to construct a new 8-inch well and well house.

STAFF COMMENTS:

The local MAGI for Liberty is $56,611 which is 140% of the State MAGI. They currently have an average water bill of approximately $29.64 per month, which is 0.63% of local MAGI. Due to Liberty's high MAGI and low water bill relative to its MAGI the company doesn't qualify for principal forgiveness. A loan of $699,000 for 20 years with a 2.83% interest rate would require the District to maintain an average water bill of $37.47, 0.79% of local MAGI.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a $699,000 construction loan to Liberty Pipeline with a 2.83% interest/fee per annum, for 20 years, with the condition that they resolve all issues on their compliance report. A 1.0% loan origination fee of $6,990 will be assessed which can be either absorbed by the authorized loan amount or paid by the water system, out of the system funds at loan closing.

APPLICANT'S LOCATION:

Liberty Water Company is located in Weber County.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

The new Camp Lomondi Well project is for an 8" well drilled to an estimated 1,000'. Also included in the project will be a well house with chlorination capabilities if needed, plus large diameter piping to act as a contact chamber. The well is intended to replace the low-water-quality Durfee Creek Well, with the intent to also increase overall source capacity in the Company.

POPULATION GROWTH:

According to the Utah State Governor's Office of Planning and Budgeting, the anticipated growth rate for Liberty's service area is approximately 1 % per year over the next 20 years.

	Year	Population
Current:	2015	2,544
Projected:	2035	3,104

IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	March 6, 2015
SRF Committee Conference Call:	April 8, 2015
DWB Funding Authorization:	May 8, 2015
Complete Design:	May 1, 2015
Plan Approval:	June 1, 2015
Advertise for Bids:	June 1, 2015
Bid Opening:	June 15, 2015
Loan Closing:	July 20, 2015
Begin Construction:	August 1, 2015
Complete Construction:	May 1, 2016
Receive Operating Permit:	June 1, 2016

COST ESTIMATE:

Legal-Bonding	$14,086
Legal-Water Rights	$8,000
Legal-R/W	$10,600
Administrative- Environmental	$5,000
Administrative- Financial Consultants	$5,000
Engineering- Design	$44,602
Engineering- CMS	$27,688
Engineering- Planning	$26,650
Construction-Well	$541,262
Contingency 10%	$54,122
Loan Origination Fee 1%	$6,990
Total Project Cost	**$744,000**

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB Loan (2.83%, 20-yr)	$699,000	94%
DWB Grant	$0	0%
System Contribution	$45,000	6%
Total Amount	$744,000	100%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance plus Depreciation: $222,933.00
Existing DW Debt Service: $0
DDW Debt Service (2.83%, 20-yrs): $46,248.43
DDW Debt Reserve: $4,624.84
Replacement Reserve Account: $19,846.87
Annual Cost/ERC: $371.79
Monthly Cost/ERC: $37.47
Cost as % MAGI: 0.79%

APPLICANT:	Liberty Pipeline Company 3707 North 3500 East Liberty, Utah 84310 801-745-3649 mike@rhodeslane.net
PRESIDING OFFICIAL & CONTACT PERSON:	Michael Rhodes-President 3707 North 3500 East Liberty, Utah 84310 801-745-3649 mike@rhodeslane.net
TREASURER/RECORDER:	Morgan Toomer 801-710-9951 Morgan.libertypipeline@gmail.com
CONSULTING ENGINEER:	Dan White Gardner Engineering 5150 South 375 East Ogden, Utah 84405 801-476-0202 ext. 9211 dan@gardnerengineering.net
FINANCIAL CONSULTANT:	Fred Philpot Lewis Young Robertson & Burningham Inc. 41 North Rio Grande, Suite 101 Salt Lake City, Utah 84101 801-596-0700 fred@lewisyoung.com
CITY ATTORNEY:	Wendy Crowther Parsons, Behle & Latimer 201 South Main Street, Suite 1800 Salt Lake City, Utah 84111 801-536-6724 wcrowther@parsonbehle.com
OTHER:	Robert Froerer- General Counsel Froerer & Miles 2661 Washington Boulevard, Suite 201 Ogden, Utah 84401 801-621-2690 rlfroerer@froererandmiles.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Liberty Pipeline
COUNTY: Weber
PROJECT DESCRIPTION: New Well

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	2,504	NO. OF CONNECTIONS:	653 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$29.64 *			PROJECT TOTAL:	$744,000
CURRENT % OF AGI:	0.63%	FINANCIAL PTS:	41	LOAN AMOUNT:	$699,000
ESTIMATED MEDIAN AGI:	$56,611			PRINC. FORGIVE.:	$0
STATE AGI:	$40,489			TOTAL REQUEST:	$699,000
SYSTEM % OF STATE AGI:	140%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.28%		2.83%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.28%		2.83%
REQUIRED DEBT SERVICE:	$34,950.00	$52,716.93		$46,248.43
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$3,495.00	$5,271.69		$4,624.84
ANNUAL NEW DEBT PER CONNECTION:	$58.87	$88.80		$77.91
O & M + FUNDED DEPRECIATION:	$222,933.00	$222,933.00		$222,933.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$19,281.95	$20,170.30		$19,846.87
ANNUAL EXPENSES PER CONNECTION:	$370.93	$372.29		$371.79
TOTAL SYSTEM EXPENSES	$280,659.95	$301,091.91		$293,653.14
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$35.82	$38.42		$37.47
% OF ADJUSTED GROSS INCOME:	0.76%	0.81%		0.79%

* Equivalent Residential Connections

R309-700-5

Liberty Pipeline
Weber
March 23, 2015

TABLE 2
FINANCIAL CONSIDERATIONS

		POINTS	
1. COST EFFECTIVENESS RATIO (SELECT ONE)			
A. Project cost $0 to $500 per benefitting connection		16	
B. $501 to $1,500		14	X
C. $1,501 to $2,000		11	
D. $2,001 to $3,000		8	
E. $3,001 to $5,000		4	
F. $5,001 to $10,000		1	
G. Over $10,000		0	
	$1,139		
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	X
F. Greater than 150% of State Median AGI		0	
	140%		
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	X
d. 2 to 5% of project funds		4	
e. Less than 2% of project funds		0	
	6.0%		
4. ABILITY TO REPAY LOAN			
4. WATER BILL (INCLUDING TAXES) AFTER PROJECT IS BUILT RELATIVE TO LOCAL MEDIAN ADJUSTED GROSS INCOME (SELECT ONE)			
a. Greater than 2.50% of local median AGI		16	
b. 2.01 to 2.50% of local median AGI		12	
c. 1.51 to 2.00% of local median AGI		8	
d. 1.01 to 1.50% of local median AGI		3	
e. 0 to 1.00% of local median AGI		0	X
	0.79%		
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	X
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	X
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		41	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Liberty Pipeline

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$699,000.00	ANTICIPATED CLOSING DATE	15-Jul-15
INTEREST	2.83%	FIRST P&I PAYMENT DUE	15-Jul-16
TERM	20	REVENUE BOND	
NOMIN. PAYMENT	$46,248.43	PRINC. FORGIVE.:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$699,000.00		$0.00	*	$0.00	$0.00	$699,000.00	0
2016	$699,000.00		$45,781.70		$26,000.00	$19,781.70	$673,000.00	1
2017	$673,000.00		$46,045.90		$27,000.00	$19,045.90	$646,000.00	2
2018	$646,000.00		$46,281.80		$28,000.00	$18,281.80	$618,000.00	3
2019	$618,000.00		$46,489.40		$29,000.00	$17,489.40	$589,000.00	4
2020	$589,000.00		$46,668.70		$30,000.00	$16,668.70	$559,000.00	5
2021	$559,000.00		$45,819.70		$30,000.00	$15,819.70	$529,000.00	6
2022	$529,000.00		$45,970.70		$31,000.00	$14,970.70	$498,000.00	7
2023	$498,000.00		$46,093.40		$32,000.00	$14,093.40	$466,000.00	8
2024	$466,000.00		$46,187.80		$33,000.00	$13,187.80	$433,000.00	9
2025	$433,000.00		$46,253.90		$34,000.00	$12,253.90	$399,000.00	10
2026	$399,000.00		$46,291.70		$35,000.00	$11,291.70	$364,000.00	11
2027	$364,000.00		$46,301.20		$36,000.00	$10,301.20	$328,000.00	12
2028	$328,000.00		$46,282.40		$37,000.00	$9,282.40	$291,000.00	13
2029	$291,000.00		$46,235.30		$38,000.00	$8,235.30	$253,000.00	14
2030	$253,000.00		$46,159.90		$39,000.00	$7,159.90	$214,000.00	15
2031	$214,000.00		$46,056.20		$40,000.00	$6,056.20	$174,000.00	16
2032	$174,000.00		$46,924.20		$42,000.00	$4,924.20	$132,000.00	17
2033	$132,000.00		$46,735.60		$43,000.00	$3,735.60	$89,000.00	18
2034	$89,000.00		$46,518.70		$44,000.00	$2,518.70	$45,000.00	19
2035	$45,000.00		$46,273.50		$45,000.00	$1,273.50	$0.00	20
			$925,371.70		$699,000.00	$226,371.70		

*Interest Only Payment

Liberty Pipeline

DWB Loan Terms		
Local Share (total):	$	45,000
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	699,000
DWB Loan Term:		20
DWB Loan Interest:		**2.83%**
DWB Loan Payment:	$	46,248

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	751,440
Existing Facility O&M Expense:	$	222,933
Proposed Facility O&M Expense:	$	222,933
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	-

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		653
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	5,000
Current Monthly User Charge:	$	29.64
Needed Average Monthly User Charge:	$	37.47

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	1.0%	7	653	232,225	35,000	-	267,225	**-**	**-**	699,000	-	-	-	222,933	222,933	-
1	1.0%	7	660	296,801	35,000	-	331,801	**45,782**	**4,625**	673,000	26,000	19,782	-	222,933	273,340	2.38
2	1.0%	6	666	299,499	30,000	-	329,499	**46,046**	**4,625**	646,000	27,000	19,046	-	225,162	275,833	2.27
3	1.0%	7	673	302,647	35,000	-	337,647	**46,282**	**4,625**	618,000	28,000	18,282	-	227,414	278,321	2.38
4	1.0%	7	680	305,795	35,000	-	340,795	**46,489**	**4,625**	589,000	29,000	17,489	-	229,688	280,802	2.39
5	1.0%	6	686	308,493	30,000	-	338,493	**46,669**	**4,625**	559,000	30,000	16,669	-	231,985	283,279	2.28
6	1.0%	7	693	311,641	35,000	-	346,641	**45,820**	**4,625**	529,000	30,000	15,820	-	234,305	284,749	2.45
7	1.0%	7	700	314,789	35,000	-	349,789	**45,971**	**4,625**	498,000	31,000	14,971	-	236,648	287,243	2.46
8	1.0%	7	707	317,937	35,000	-	352,937	**46,093**	**4,625**	466,000	32,000	14,093	-	239,014	289,733	2.47
9	1.0%	7	714	321,085	35,000	-	356,085	**46,188**	**4,625**	433,000	33,000	13,188	-	241,404	292,217	2.48
10	1.0%	7	721	324,233	35,000	-	359,233	**46,254**	**4,625**	399,000	34,000	12,254	-	243,819	294,697	2.50
11	1.0%	8	729	327,830	40,000	-	367,830	**46,292**		364,000	35,000	11,292	-	246,257	292,548	2.63
12	1.0%	7	736	330,978	35,000	-	365,978	**46,301**		328,000	36,000	10,301	-	248,719	295,020	2.53
13	1.0%	7	743	334,126	35,000	-	369,126	**46,282**		291,000	37,000	9,282	-	251,206	297,489	2.55
14	1.0%	8	751	337,724	40,000	-	377,724	**46,235**		253,000	38,000	8,235	-	253,719	299,954	2.68
15	1.0%	7	758	340,871	35,000	-	375,871	**46,160**		214,000	39,000	7,160	-	256,256	302,416	2.59
16	1.0%	8	766	344,469	40,000	-	384,469	**46,056**		174,000	40,000	6,056	-	258,818	304,874	2.73
17	1.0%	7	773	347,617	35,000	-	382,617	**46,924**		132,000	42,000	4,924	-	261,406	308,331	2.58
18	1.0%	8	781	351,215	40,000	-	391,215	**46,736**		89,000	43,000	3,736	-	264,021	310,756	2.72
19	1.0%	8	789	354,812	40,000	-	394,812	**46,519**		45,000	44,000	2,519	-	266,661	313,179	2.75
20	1.0%	8	797	358,410	40,000	-	398,410	**46,274**		-	45,000	1,274	-	269,327	315,601	2.79
										Total Paid in Debt Service =	699,000	226,372				

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

Eureka City
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Eureka City is requesting financial assistance in the amount of $694,095 to cover an unexpected increase in project costs. The City has received $6,716,140 in funding from the Community Impact Board, USDA Rural Development and the Army Corp of Engineers for a water and wastewater improvement project. They scored 50.9 points on the project priority list.

STAFF COMMENTS:

The original project cost was $7,410,235, and included both the Eureka City Water Improvements Project and the Eureka City Wastewater Improvements Project under a single contract. Each individual project has its own respective set of plans and specifications, and different funding agencies are involved with each project.

The Eureka City Water Improvements Project includes the replacement of approximately 27,000 feet of existing water lines, the installation of approximately 80 gate valves, addition of 36 fire hydrants, the construction of approximately 10,000 feet of new water lines, and implementing a new water metering system. The project also includes the construction of a new well and well building, an upgrade to the existing booster station, and the construction of a new booster station which will supply water to a new 300,000 gallon storage tank on the south side of the City.

Upon receiving bids for the project, in order to keep the project within the budget, approximately 2,500 feet of new waterline, the water meter installation and the back-up generators were removed from the contract. The City is requesting funding in order to add these project elements back in.

The local MAGI for Eureka City is $38,512, which is 95% of the State MAGI. Based on 342 residential connections and the reported annual water sales revenue for 2014, the average water bill for Eureka City is approximately $49 per month, which is 1.52% of local MAGI. Their base rate is $56/month (1.74% MAGI) and they have a tiered water rate structure to account for overages. Currently, not all of the 342 connections are actually connected and paying the base rate. With a loan of $347,000 at 1.8% interest for 20 years, and a grant of $347,095, the City would need to increase their average water bill to approximately $75/ERC which is 2.34% of their local MAGI. Based on this information, staff recommends a full grant.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of $694,095 with $694,095 in principle forgiveness to Eureka City.

APPLICANT'S LOCATION:

Eureka City is located in Juab County.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

The Eureka City Water Improvements Project includes the replacement of approximately 27,000 feet of existing water lines, the installation of approximately 80 gate valves, addition of 36 fire hydrants, the construction of approximately 10,000 feet of new water lines, and implementing a new water metering system. The project also includes the construction of a new well and well building, an upgrade to the existing booster station, and the construction of a new booster station which will supply water to a new 300,000 gallon storage tank on the south side of the City.

In order to keep the project within the budget, approximately 2,500 feet of new waterline, the water meter installation and the back-up generators were removed from the contract. The City is requesting funding at to add these project elements back in.

Of the 10,000 feet of new water line, approximately 1,200 feet is being installed to connect the new well to the existing supply line. Approximately 5,000 feet of pipe is being installed in order to supply water to the new water storage tank. The remainder of the new pipe is being installed to provide a more efficient means of supplying water to existing residents. Many residents have long service lines that actually run through other owner's property, or under existing structures. The remainder of the new pipe will run

new lines in front of residences and would move the service meters to the fronts of the houses so the City can manage them more efficiently.

POPULATION GROWTH:

According to the Utah State Governor's Office of Planning and Budgeting, the anticipated growth rate for Eureka City is approximately 2.76% per year over the next 40 years

	Year	Population
Current:	2014	670
Projected:	2050	2,544

IMPLEMENTATION SCHEDULE:

Apply to DWB for Construction Funds:	March 2015
SRF Committee Conference Call:	April 2015
DWB Funding Authorization:	May 2015
Advertise Environmental Assessment:	August 2014
Complete Design:	November 2014
Plan Approval:	November 2014
Advertise for Bids:	December 2014
Bid Opening:	January 2015
Loan Closing:	March 2015
Begin Construction:	May 2015
Complete Construction:	October 2015
Receive Operating Permit:	November 2015

COST ESTIMATE:

Legal and Bonding	$25,000
Administrative	$295,244
Engineering	$747,000
Construction	$5,735,570
Contingency	$154,000
Land Acquisition	$70,756
Total Project Cost	**$7,410,235**

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
CIB Loan (0%, 30 yrs)	$519,000	7%
CIB Grant	$519,600	7%
RD Loan (3.25%, 40 yrs)	$1,511,000	20%
RD Grant	$3,022,040	41%
Army Corps Grant	$1,144,500	16%
DWB Grant	$694,095	9%
Total Amount	$7,410,235	100%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance plus Depreciation: $113,000
Existing DW Debt Service: $159,171.25
Replacement Reserve Account: $12,016.85
Annual Cost/ERC: $830.96
Monthly Cost/ERC: $69.25/ERC
Cost as % MAGI : 2.16%

APPLICANT: Eureka City Corporation
15 North Church Street
P.O. Box 156
Eureka, Utah 84628

PRESIDING OFFICIAL &
CONTACT PERSON: J. Nichloson Castleton
15 North Church Street
P.O. Box 156
Eureka, Utah 84628
435-433-6915
eureka15@cut.net

CONSULTING ENGINEER: Jeff Albrecht
Sunrise Engineering Inc.
494 North Main
Richfield, UT 84701
jalbrecht@sunrise-eng.com
435-896-8857

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Eureka City
COUNTY: Juab
PROJECT DESCRIPTION: Waterline, meters, 2 generators

FUNDING SOURCE: Federal SRF

50 % Loan & 50 % P.F.

ESTIMATED POPULATION:	669	NO. OF CONNECTIONS:	342 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$48.91 *			PROJECT TOTAL:	$694,095
CURRENT % OF AGI:	1.52%	FINANCIAL PTS:	65	LOAN AMOUNT:	$347,000
ESTIMATED MEDIAN AGI:	$38,512			PRINC. FORGIVE.:	$347,095
STATE AGI:	$40,489			TOTAL REQUEST:	$694,095
SYSTEM % OF STATE AGI:	95%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.28%		1.80%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.28%		1.80%
REQUIRED DEBT SERVICE:	$17,350.00	$26,169.92		$20,814.01
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$1,735.00	$2,616.99		$2,081.40
ANNUAL NEW DEBT PER CONNECTION:	$55.80	$84.17		$66.95
O & M + FUNDED DEPRECIATION:	$113,000.00	$113,000.00		$113,000.00
OTHER DEBT + COVERAGE:	$159,171.25	$159,171.25		$159,171.25
REPLACEMENT RESERVE ACCOUNT:	$12,884.35	$13,325.35		$13,057.55
ANNUAL EXPENSES PER CONNECTION:	$833.50	$834.79		$834.00
TOTAL SYSTEM EXPENSES	$304,140.60	$314,283.51		$308,124.21
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$74.11	$76.58		$75.08
% OF ADJUSTED GROSS INCOME:	2.31%	2.39%		2.34%

* Equivalent Residential Connections

R309-700-5

Eureka City
Juab
March 31, 2015

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	X
E. $3,001 to $5,000		4	
F. $5,001 to $10,000		1	
G. Over $10,000		0	
	$2,030		
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	X
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	
	95%		
3. PROJECT FUNDING CONTRIBUTED BY APPLICANT (SELECT ONE)			
a. Greater than 25% of project funds		17	
b. 15 to 25% of project funds		14	
c. 10 to 15% of project funds		11	
c. 5 to 10% of project funds		8	
d. 2 to 5% of project funds		4	
e. Less than 2% of project funds		0	X
	0.0%		
4. ABILITY TO REPAY LOAN			
4. WATER BILL (INCLUDING TAXES) AFTER PROJECT IS BUILT RELATIVE TO LOCAL MEDIAN ADJUSTED GROSS INCOME (SELECT ONE)			
a. Greater than 2.50% of local median AGI		16	
b. 2.01 to 2.50% of local median AGI		12	X
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	
	2.34%		
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	X
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	X
C. Is creating or enhancing a regionalization plan		16	X
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		65	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Eureka City

PROPOSED BOND REPAYMENT SCHEDULE

50 % Loan & 50 % P.F.

PRINCIPAL	$347,000.00	ANTICIPATED CLOSING DATE	15-May-15
INTEREST	1.80%	FIRST P&I PAYMENT DUE	01-Jan-16
TERM	20	REVENUE BOND	
NOMIN. PAYMENT	$20,814.01	PRINC. FORGIVE.:	$347,095.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$347,000.00		($2,324.90)	*	$0.00	($2,324.90)	$347,000.00	0
2016	$347,000.00		$21,246.00		$15,000.00	$6,246.00	$332,000.00	1
2017	$332,000.00		$20,976.00		$15,000.00	$5,976.00	$317,000.00	2
2018	$317,000.00		$20,706.00		$15,000.00	$5,706.00	$302,000.00	3
2019	$302,000.00		$20,436.00		$15,000.00	$5,436.00	$287,000.00	4
2020	$287,000.00		$21,166.00		$16,000.00	$5,166.00	$271,000.00	5
2021	$271,000.00		$20,878.00		$16,000.00	$4,878.00	$255,000.00	6
2022	$255,000.00		$20,590.00		$16,000.00	$4,590.00	$239,000.00	7
2023	$239,000.00		$20,302.00		$16,000.00	$4,302.00	$223,000.00	8
2024	$223,000.00		$21,014.00		$17,000.00	$4,014.00	$206,000.00	9
2025	$206,000.00		$20,708.00		$17,000.00	$3,708.00	$189,000.00	10
2026	$189,000.00		$20,402.00		$17,000.00	$3,402.00	$172,000.00	11
2027	$172,000.00		$21,096.00		$18,000.00	$3,096.00	$154,000.00	12
2028	$154,000.00		$20,772.00		$18,000.00	$2,772.00	$136,000.00	13
2029	$136,000.00		$20,448.00		$18,000.00	$2,448.00	$118,000.00	14
2030	$118,000.00		$21,124.00		$19,000.00	$2,124.00	$99,000.00	15
2031	$99,000.00		$20,782.00		$19,000.00	$1,782.00	$80,000.00	16
2032	$80,000.00		$20,440.00		$19,000.00	$1,440.00	$61,000.00	17
2033	$61,000.00		$21,098.00		$20,000.00	$1,098.00	$41,000.00	18
2034	$41,000.00		$20,738.00		$20,000.00	$738.00	$21,000.00	19
2035	$21,000.00		$21,378.00		$21,000.00	$378.00	$0.00	20
			$413,975.10		$347,000.00	$66,975.10		

*Interest Only Payment

Eureka City

DWB Loan Terms		
Local Share (total):	$	-
Other Agency Funding:	$	-
DWB Grant Amount:	$	347,095
DWB Loan Amount:	$	347,000
DWB Loan Term:		20
DWB Loan Interest:		**1.80%**
DWB Loan Payment:	$	20,814

DW Expenses (Estimated)		
Proposed Facility Capital Cost:		#VALUE!
Existing Facility O&M Expense:	$	113,000
Proposed Facility O&M Expense:	$	113,000
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	127,337

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		342
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	5,000
Current Monthly User Charge:	$	48.91
Needed Average Monthly User Charge:	$	75.08

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	1.0%	3	342	200,732	15,000	-	215,732	**-**	**-**	347,000	-	-	127,337	113,000	240,337	-
1	1.0%	3	345	310,827	15,000	-	325,827	**21,246**	**2,081**	332,000	15,000	6,246	127,337	113,000	263,664	1.43
2	1.0%	4	349	314,431	20,000	-	334,431	**20,976**	**2,081**	317,000	15,000	5,976	127,337	114,130	264,524	1.49
3	1.0%	3	352	317,134	15,000	-	332,134	**20,706**	**2,081**	302,000	15,000	5,706	127,337	115,271	265,396	1.46
4	1.0%	4	356	320,737	20,000	-	340,737	**20,436**	**2,081**	287,000	15,000	5,436	127,337	116,424	266,278	1.52
5	1.0%	3	359	323,440	15,000	-	338,440	**21,166**	**2,081**	271,000	16,000	5,166	127,337	117,588	268,173	1.49
6	1.0%	4	363	327,044	20,000	-	347,044	**20,878**	**2,081**	255,000	16,000	4,878	127,337	118,764	269,061	1.54
7	1.0%	4	367	330,648	20,000	-	350,648	**20,590**	**2,081**	239,000	16,000	4,590	127,337	119,952	269,960	1.56
8	1.0%	3	370	333,351	15,000	-	348,351	**20,302**	**2,081**	223,000	16,000	4,302	127,337	121,151	270,872	1.54
9	1.0%	4	374	336,955	20,000	-	356,955	**21,014**	**2,081**	206,000	17,000	4,014	127,337	122,363	272,795	1.58
10	1.0%	4	378	340,558	20,000	-	360,558	**20,708**	**2,081**	189,000	17,000	3,708	127,337	123,586	273,713	1.60
11	1.0%	4	382	344,162	20,000	-	364,162	**20,402**		172,000	17,000	3,402	127,337	124,822	272,561	1.62
12	1.0%	3	385	346,865	15,000	-	361,865	**21,096**		154,000	18,000	3,096	127,337	126,071	274,504	1.59
13	1.0%	4	389	350,469	20,000	-	370,469	**20,772**		136,000	18,000	2,772	127,337	127,331	275,440	1.64
14	1.0%	4	393	354,073	20,000	-	374,073	**20,448**		118,000	18,000	2,448	127,337	128,605	276,390	1.66
15	1.0%	4	397	357,676	20,000	-	377,676	**21,124**		99,000	19,000	2,124	127,337	129,891	278,352	1.67
16	1.0%	4	401	361,280	20,000	-	381,280	**20,782**		80,000	19,000	1,782	127,337	131,189	279,308	1.69
17	1.0%	4	405	364,884	20,000	-	384,884	**20,440**		61,000	19,000	1,440	127,337	132,501	280,278	1.71
18	1.0%	4	409	368,488	20,000	-	388,488	**21,098**		41,000	20,000	1,098	127,337	133,826	282,261	1.72
19	1.0%	4	413	372,092	20,000	-	392,092	**20,738**		21,000	20,000	738	127,337	135,165	283,240	1.74
20	1.0%	4	417	375,695	20,000	-	395,695	**21,378**		-	21,000	378	127,337	136,516	285,231	1.74
										Total Paid in Debt Service =	347,000	69,300				

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Eureka City
COUNTY: Juab
PROJECT DESCRIPTION: Waterline, meters, 2 generators

FUNDING SOURCE: Federal SRF

0 % Loan & 100 % P.F.

ESTIMATED POPULATION:	669	NO. OF CONNECTIONS:	342 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$48.91 *			PROJECT TOTAL:	$694,095
CURRENT % OF AGI:	1.52%	FINANCIAL PTS:	65	LOAN AMOUNT:	$0
ESTIMATED MEDIAN AGI:	$38,512			PRINC. FORGIVE.:	$694,095
STATE AGI:	$40,489			TOTAL REQUEST:	$694,095
SYSTEM % OF STATE AGI:	95%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.28%		1.80%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.28%		1.80%
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:	$113,000.00	$113,000.00		$113,000.00
OTHER DEBT + COVERAGE:	$159,171.25	$159,171.25		$159,171.25
REPLACEMENT RESERVE ACCOUNT:	$12,016.85	$12,016.85		$12,016.85
ANNUAL EXPENSES PER CONNECTION:	$830.96	$830.96		$830.96
TOTAL SYSTEM EXPENSES	$284,188.10	$284,188.10		$284,188.10
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$69.25	$69.25		$69.25
% OF ADJUSTED GROSS INCOME:	2.16%	2.16%		2.16%

* Equivalent Residential Connections

DEQ | Drinking Water

Public Water System Custom Report

Eureka Town PWS ID: UTAH12004 Rating: Approved 09/12/1986 Status: Active

Contacts

Type: Administrative Contact
Name: LYNN REX ELLIOTT
Office: 435-433-6915
Emergency:
Email: EUREKA15@CUT.NET

Site Information

Address: PO BOX 156 , EUREKA, UT 84628
Phone: 435-433-6915
County: JUAB COUNTY
System Type: Community
Population: 669

Site Updates

Last Inventory Update: 12/02/2014
Last Surveyor Update: 06/14/2011
Surveyor: PETER T KEERS
Operating Period: 1/1 - 12/31
Last IPS Update: 04/01/2015 12:00:00

Consumptive Use Zone

Irrigation Zone: 3
Date: 02/15/2013

IPS SUMMARY

Total IPS Points	Admin & Physical Facilities	Quality & Monitoring	Operator Certifications	Significant Deficiency Violations
73	-7	80	0	0

PHYSICAL FACILITY POINTS

Code	Description	Severity	Points Effective	Details
M001	CURRENT EMERGENCY RESPONSE PROGRAM	REC	-10	Hide Details (1)

Facility	comments	Status	Determined Date	Point Not Effective	Point Assessed
	OPERATES UNDER THE JUAB CO ERP		06/14/2011		-10

Code	Description	Severity	Points Effective	Details
PS02	PS - NO CHECK VALVE ON DISCHARGE PIPING	MIN	1	Hide Details (1)

Facility	comments	Status	Determined Date	Point Not Effective	Point Assessed
PF001 TINTIC BOOSTER STATION	NO CHECK VALVE IN PUMP HOUSE PIPING	Active	06/14/2011		1

Code	Description	Severity	Points Effective	Details
PS05	PS - NO SHUT OFF VALVE ON DISCHARGE PIPING	MIN	1	Hide Details (1)

Facility	comments	Status	Determined Date	Point Not Effective	Point Assessed
PF001 TINTIC BOOSTER STATION	NO ISOLATION VALVES IN OR AROUND THE PUMP HOUSE	Active	06/14/2011		1

Code	Description	Severity	Points Effective	Details
S025	NO PRESSURE GAUGE ON DISCHARGE PIPING	MIN	1	Hide Details (1)

Facility	comments	Status	Determined Date	Point Not Effective	Point Assessed
WS008 TINTIC JUNCTION WELL 2	REMOVED TO FACILITATE TEMP CL2 INJECTION	Active	06/14/2011		1

Total Effective Points: -7

LEAD COPPER MONITORING AND QUALITY VIOLATIONS

Violation No.	Period	Code	Description/Name	Points Effective
2014-4013399	01/01/2011 - 12/31/2013	52	FOLLOW-UP OR ROUTINE TAP M/R (LCR)	20
2014-4013453	01/01/2014 - 12/31/2014	52	FOLLOW-UP OR ROUTINE TAP M/R (LCR)	20

Total Effective Points: 40

CHEMICAL MONITORING RULE VIOLATIONS

Facility	Violation No	Period	Code	Violation Type	Analyte Group	Determined	Seasonality	Points Effective
WS008	2014-3880	01/01/2011 - 12/31/2013	03	MONITORING, ROUTINE MAJOR	RRAD	01/22/2014	P	20

Total Effective Points: 20

MICROBIAL RULE VIOLATIONS

Date Range Start: 04/01/2014

Determine Date	Compliance Period	Code	Violation Type	Return To Compliance	Points Effective
09/03/2014	07/01/2014 - 07/31/2014	24	MONITORING (TCR), ROUTINE MINOR	N	10
10/29/2014	09/01/2014 - 09/30/2014	24	MONITORING (TCR), ROUTINE MINOR	N	10

Total Effective Points: 20

Agenda Item 5(C)(ii)(d)

Greendale Water Company
Presented to the Drinking Water Board
May 8, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

On July 12, 2013 Greendale Water Company received authorization for a $1,145,000 loan with an interest rate of 3.92% for a term of 20 years to construct a new 50,000 gallon concrete raw water storage tank with a new membrane treatment system sized for 100 gallons per minute. Bids for the construction of the facility recently came in higher than available funds. The applicant is requesting an increase of $245,000, which includes a 10% contingency.

Presented to the Financial Assistance Committee on April 8, was a request for a $230,000 increase to the construction funding. Since that time Greendale Water Company representatives have increased their request to $245,000.

STAFF COMMENTS:

The funding increase for a 20 year loan will increase the monthly needed water bill from $42.12 to $48.04, 1.21% of local MAGI. Greendale Water Company's local MAGI of $47,635, is approximately 126% of the State's $37,718 MAGI. Less than 50% of Greendale Water Company serviced resident are year round. This defines the water system as a second home community. The Drinking Water Board has established that second home communities cannot qualify for principal forgiveness or reduced interest loans. The Drinking Water Board does offer full loans to second home communities at 90% of the Revenue Bond Buyers Index currently at 4.35%.

FINANCIAL ASSISTANCE COMMITTEE RECOMENDATION:

The Committee has requested staff to prepare funding evaluations for 20, 25 and 30 year funding terms for discussion at the Board meeting.

	Total Request	Term (Yr)	Interest	Water Bill	% of MAGI
1	$1,390,000	20	3.92%	$48.04	1.21%
2	$1,390,000	25	3.92%	$43.63	1.10%
3	$1,390,000	30	3.92%	$40.78	1.03%

WESTECH

Letter of Assurance

April 13, 2015

Greendale Water Company
720 North Bear Creek Lane
Dutch John, UT 84023

Re: 30-Year Assurance Request

Dear Mr. Collett:

WesTech would like to offer our assurance, to the Greendale Water Company, that the membrane filtration system produced by WesTech Engineering, Inc. has been designed and built to last. The system and the process will last for 30 years or longer, when properly maintained and serviced by the Owner.

All of the components are industry standards, and can be repaired, replaced, or upgraded, with identical or similar products. The system, as a whole, can be maintained, repaired, and made to last for 30 years.

This letter does not supersede the 1-Year Equipment Warranty, the 10-Year Limited Membrane Module Warranty, or the Process Performance Warranty offered by WesTech and agreed to by Sunrise Engineering and the Greendale Water Company. This letter is meant to extend our confidence to you, our Customer, that this system will be functional well beyond the purchased Warranties.

Replacement modules purchased outside of the module warranty, and modules for expansion purposes, may be purchased for a guaranteed cost of $3,000/module subject to escalation equal to the increase in the Consumer Price Index (CPI).

WesTech has been producing water treatment equipment for more than 40 years, and we stand behind our products. We are confident in our equipment, and believe you will be fully satisfied with our product.

Sincerely,

Daniel J. Dye, PhD.
Project Manager

Approved by,

Vince Hamilton, VP

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Greendale
COUNTY: Daggett
PROJECT DESCRIPTION: Storage Tank and Treatment

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	150	NO. OF CONNECTIONS:	315 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$9.09 *			PROJECT TOTAL:	$1,630,000
CURRENT % OF AGI:	0.23%	FINANCIAL PTS:	37	LOAN AMOUNT:	$1,390,000
ESTIMATED MEDIAN AGI:	$47,635			PRINC. FORGIVENESS:	$0
STATE AGI:	$37,718			TOTAL REQUEST:	$1,390,000
SYSTEM % OF STATE AGI:	126%				

	@ ZERO % RATE 0%	@ RBBI MKT RATE 4.35%		AFTER REPAYMENT PENALTY & POINTS 3.92%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.35%		3.92%
REQUIRED DEBT SERVICE:	$69,500.00	$105,473.45		$101,555.41
*PARTIAL COVERAGE (15%):	$10,425.00	$15,821.02		$15,233.31
*ADD. COVERAGE AND RESERVE (10%):	$6,950.00	$10,547.35		$10,155.54
ANNUAL NEW DEBT PER CONNECTION:	$275.79	$418.55		$403.00
O & M + FUNDED DEPRECIATION:	$54,636.00	$54,636.00		$54,636.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$173.45	$173.45		$173.45
TOTAL SYSTEM EXPENSES	$141,511.00	$186,477.82		$181,580.26
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$37.44	$49.33		$48.04
% OF ADJUSTED GROSS INCOME:	0.94%	1.24%		1.21%

* Equivalent Residential Connections

Greendale

PROPOSED BOND REPAYMENT SCHEDULE 100 % Loan & 0 % P.F.

PRINCIPAL	$1,390,000.00	ANTICIPATED CLOSING DATE		21-Jul-14
INTEREST	3.92%		P&I PAYMT DUE	01-Jul-16
TERM	20		REVENUE BOND	
NOMIN. PAYMENT	$101,555.41		PRINC PREPAID:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$1,390,000.00		$24,216.89	*	$0.00	$24,216.89	$1,390,000.00	0
2016	$1,390,000.00		$101,488.00		$47,000.00	$54,488.00	$1,343,000.00	1
2017	$1,343,000.00		$101,645.60		$49,000.00	$52,645.60	$1,294,000.00	2
2018	$1,294,000.00		$101,724.80		$51,000.00	$50,724.80	$1,243,000.00	3
2019	$1,243,000.00		$101,725.60		$53,000.00	$48,725.60	$1,190,000.00	4
2020	$1,190,000.00		$101,648.00		$55,000.00	$46,648.00	$1,135,000.00	5
2021	$1,135,000.00		$101,492.00		$57,000.00	$44,492.00	$1,078,000.00	6
2022	$1,078,000.00		$101,257.60		$59,000.00	$42,257.60	$1,019,000.00	7
2023	$1,019,000.00		$101,944.80		$62,000.00	$39,944.80	$957,000.00	8
2024	$957,000.00		$101,514.40		$64,000.00	$37,514.40	$893,000.00	9
2025	$893,000.00		$101,005.60		$66,000.00	$35,005.60	$827,000.00	10
2026	$827,000.00		$101,418.40		$69,000.00	$32,418.40	$758,000.00	11
2027	$758,000.00		$101,713.60		$72,000.00	$29,713.60	$686,000.00	12
2028	$686,000.00		$101,891.20		$75,000.00	$26,891.20	$611,000.00	13
2029	$611,000.00		$101,951.20		$78,000.00	$23,951.20	$533,000.00	14
2030	$533,000.00		$101,893.60		$81,000.00	$20,893.60	$452,000.00	15
2031	$452,000.00		$101,718.40		$84,000.00	$17,718.40	$368,000.00	16
2032	$368,000.00		$101,425.60		$87,000.00	$14,425.60	$281,000.00	17
2033	$281,000.00		$101,015.20		$90,000.00	$11,015.20	$191,000.00	18
2034	$191,000.00		$101,487.20		$94,000.00	$7,487.20	$97,000.00	19
2035	$97,000.00		$100,802.40		$97,000.00	$3,802.40	$0.00	20
			$2,054,980.09		$1,390,000.00	$664,980.09		

*Interest Only Payment

Greendale

DWB Loan Terms		
Local Share (total):	$	240,000
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	1,390,000
DWB Loan Term:		20
DWB Loan Interest:		**3.92%**
DWB Loan Payment:	$	101,555

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	1,630,000
Existing Facility O&M Expense:	$	54,636
Proposed Facility O&M Expense:	$	54,636
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	-

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		315
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	5,000
Current Monthly User Charge:	$	9.09
Needed Average Monthly User Charge:	$	48.04

DW Revenue Projections

Yr	Growth Rate (%)	Annual Growth (ERC)	Total Users (ERC)	User Charge Revenue	Impact Fee Revenue	Property Tax Revenue	Total Revenue	DWB Loan Repayment	DWB Loan Reserves	Remaining Principal	Principal Payment	Interest Payment	Existing DW Debt Service	O&M Expenses	Total Expenses	Debt Service Ratio
0	1.0%	3	315	34,355	15,000	-	49,355	**-**	**-**	1,390,000	-	-	-	54,636	54,636	-
1	1.0%	3	318	183,310	15,000	-	198,310	**101,488**	**10,156**	1,343,000	47,000	54,488	-	54,636	166,280	1.42
2	1.0%	3	321	185,039	15,000	-	200,039	**101,646**	**10,156**	1,294,000	49,000	52,646	-	55,182	166,984	1.43
3	1.0%	4	325	187,345	20,000	-	207,345	**101,725**	**10,156**	1,243,000	51,000	50,725	-	55,734	167,615	1.49
4	1.0%	3	328	189,074	15,000	-	204,074	**101,726**	**10,156**	1,190,000	53,000	48,726	-	56,292	168,173	1.45
5	1.0%	3	331	190,803	15,000	-	205,803	**101,648**	**10,156**	1,135,000	55,000	46,648	-	56,854	168,658	1.47
6	1.0%	3	334	192,533	15,000	-	207,533	**101,492**	**10,156**	1,078,000	57,000	44,492	-	57,423	169,071	1.48
7	1.0%	4	338	194,839	20,000	-	214,839	**101,258**	**10,156**	1,019,000	59,000	42,258	-	57,997	169,410	1.55
8	1.0%	3	341	196,568	15,000	-	211,568	**101,945**	**10,156**	957,000	62,000	39,945	-	58,577	170,678	1.50
9	1.0%	4	345	198,874	20,000	-	218,874	**101,514**	**10,156**	893,000	64,000	37,514	-	59,163	170,833	1.57
10	1.0%	3	348	200,603	15,000	-	215,603	**101,006**	**10,156**	827,000	66,000	35,006	-	59,755	170,916	1.54
11	1.0%	3	351	202,332	15,000	-	217,332	**101,418**		758,000	69,000	32,418	-	60,352	161,771	1.55
12	1.0%	4	355	204,638	20,000	-	224,638	**101,714**		686,000	72,000	29,714	-	60,956	162,669	1.61
13	1.0%	3	358	206,367	15,000	-	221,367	**101,891**		611,000	75,000	26,891	-	61,565	163,456	1.57
14	1.0%	4	362	208,673	20,000	-	228,673	**101,951**		533,000	78,000	23,951	-	62,181	164,132	1.63
15	1.0%	4	366	210,979	20,000	-	230,979	**101,894**		452,000	81,000	20,894	-	62,803	164,696	1.65
16	1.0%	3	369	212,708	15,000	-	227,708	**101,718**		368,000	84,000	17,718	-	63,431	165,149	1.62
17	1.0%	4	373	215,014	20,000	-	235,014	**101,426**		281,000	87,000	14,426	-	64,065	165,491	1.69
18	1.0%	4	377	217,320	20,000	-	237,320	**101,015**		191,000	90,000	11,015	-	64,706	165,721	1.71
19	1.0%	4	381	219,626	20,000	-	239,626	**101,487**		97,000	94,000	7,487	-	65,353	166,840	1.72
20	1.0%	3	384	221,355	15,000	-	236,355	**100,802**		-	97,000	3,802	-	66,006	166,809	1.69
									Total Paid in Debt Service =		1,390,000	640,763				

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Greendale
COUNTY: Daggett
PROJECT DESCRIPTION: Storage Tank and Treatment

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	150	NO. OF CONNECTIONS:	315 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$9.09 *			PROJECT TOTAL:	$1,630,000
CURRENT % OF AGI:	0.23%	FINANCIAL PTS:	37	LOAN AMOUNT:	$1,390,000
ESTIMATED MEDIAN AGI:	$47,635			PRINC. FORGIVENESS:	$0
STATE AGI:	$37,718			TOTAL REQUEST:	$1,390,000
SYSTEM % OF STATE AGI:	126%				

	@ ZERO % RATE 0%	@ RBBI MKT RATE 4.35%		AFTER REPAYMENT PENALTY & POINTS 3.92%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	25	25		25
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.35%		3.92%
REQUIRED DEBT SERVICE:	$55,600.00	$92,298.38		$88,225.85
*PARTIAL COVERAGE (15%):	$8,340.00	$13,844.76		$13,233.88
*ADD. COVERAGE AND RESERVE (10%):	$5,560.00	$9,229.84		$8,822.58
ANNUAL NEW DEBT PER CONNECTION:	$220.63	$366.26		$350.10
O & M + FUNDED DEPRECIATION:	$54,636.00	$54,636.00		$54,636.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$173.45	$173.45		$173.45
TOTAL SYSTEM EXPENSES	$124,136.00	$170,008.97		$164,918.31
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$32.84	$44.98		$43.63
% OF ADJUSTED GROSS INCOME:	0.83%	1.13%		1.10%

* Equivalent Residential Connections

Greendale

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$1,390,000.00	ANTICIPATED CLOSING DATE		21-Jul-14
INTEREST	3.92%		P&I PAYMT DUE	01-Jul-16
TERM	25		REVENUE BOND	
NOMIN. PAYMENT	$88,225.85		PRINC PREPAID:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT	=	PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$1,390,000.00		$24,216.89	*	$0.00	$24,216.89	$1,390,000.00	0
2016	$1,390,000.00		$88,488.00		$34,000.00	$54,488.00	$1,356,000.00	1
2017	$1,356,000.00		$88,155.20		$35,000.00	$53,155.20	$1,321,000.00	2
2018	$1,321,000.00		$87,783.20		$36,000.00	$51,783.20	$1,285,000.00	3
2019	$1,285,000.00		$88,372.00		$38,000.00	$50,372.00	$1,247,000.00	4
2020	$1,247,000.00		$87,882.40		$39,000.00	$48,882.40	$1,208,000.00	5
2021	$1,208,000.00		$88,353.60		$41,000.00	$47,353.60	$1,167,000.00	6
2022	$1,167,000.00		$88,746.40		$43,000.00	$45,746.40	$1,124,000.00	7
2023	$1,124,000.00		$88,060.80		$44,000.00	$44,060.80	$1,080,000.00	8
2024	$1,080,000.00		$88,336.00		$46,000.00	$42,336.00	$1,034,000.00	9
2025	$1,034,000.00		$88,532.80		$48,000.00	$40,532.80	$986,000.00	10
2026	$986,000.00		$88,651.20		$50,000.00	$38,651.20	$936,000.00	11
2027	$936,000.00		$87,691.20		$51,000.00	$36,691.20	$885,000.00	12
2028	$885,000.00		$87,692.00		$53,000.00	$34,692.00	$832,000.00	13
2029	$832,000.00		$88,614.40		$56,000.00	$32,614.40	$776,000.00	14
2030	$776,000.00		$88,419.20		$58,000.00	$30,419.20	$718,000.00	15
2031	$718,000.00		$88,145.60		$60,000.00	$28,145.60	$658,000.00	16
2032	$658,000.00		$87,793.60		$62,000.00	$25,793.60	$596,000.00	17
2033	$596,000.00		$88,363.20		$65,000.00	$23,363.20	$531,000.00	18
2034	$531,000.00		$87,815.20		$67,000.00	$20,815.20	$464,000.00	19
2035	$464,000.00		$88,188.80		$70,000.00	$18,188.80	$394,000.00	20
2036	$394,000.00		$88,444.80		$73,000.00	$15,444.80	$321,000.00	21
2037	$321,000.00		$88,583.20		$76,000.00	$12,583.20	$245,000.00	22
2038	$245,000.00		$88,604.00		$79,000.00	$9,604.00	$166,000.00	23
2039	$166,000.00		$87,507.20		$81,000.00	$6,507.20	$85,000.00	24
2040	$85,000.00		$88,332.00		$85,000.00	$3,332.00	$0.00	25
			$2,229,772.89		$1,390,000.00	$839,772.89		

*Interest Only Payment

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Greendale
COUNTY: Daggett
PROJECT DESCRIPTION: Storage Tank and Treatment

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	150	NO. OF CONNECTIONS:	315 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$9.09 *			PROJECT TOTAL:	$1,630,000
CURRENT % OF AGI:	0.23%	FINANCIAL PTS:	37	LOAN AMOUNT:	$1,390,000
ESTIMATED MEDIAN AGI:	$47,635			PRINC. FORGIVENESS:	$0
STATE AGI:	$37,718			TOTAL REQUEST:	$1,390,000
SYSTEM % OF STATE AGI:	126%				

	@ ZERO % RATE 0%	@ RBBI MKT RATE 4.35%		AFTER REPAYMENT PENALTY & POINTS 3.92%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.35%		3.92%
REQUIRED DEBT SERVICE:	$46,333.33	$83,834.48		$79,604.87
*PARTIAL COVERAGE (15%):	$6,950.00	$12,575.17		$11,940.73
*ADD. COVERAGE AND RESERVE (10%):	$4,633.33	$8,383.45		$7,960.49
ANNUAL NEW DEBT PER CONNECTION:	$183.86	$332.68		$315.89
O & M + FUNDED DEPRECIATION:	$54,636.00	$54,636.00		$54,636.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$173.45	$173.45		$173.45
TOTAL SYSTEM EXPENSES	$112,552.67	$159,429.10		$154,142.09
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$29.78	$42.18		$40.78
% OF ADJUSTED GROSS INCOME:	0.75%	1.06%		1.03%

* Equivalent Residential Connections

Greendale

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$1,390,000.00	ANTICIPATED CLOSING DATE	21-Jul-14
INTEREST	3.92%	P&I PAYMT DUE	01-Jul-16
TERM	30	REVENUE BOND	
NOMIN. PAYMENT	$79,604.87	PRINC PREPAID:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$1,390,000.00		$24,216.89	*	$0.00	$24,216.89	$1,390,000.00	0
2016	$1,390,000.00		$79,488.00		$25,000.00	$54,488.00	$1,365,000.00	1
2017	$1,365,000.00		$79,508.00		$26,000.00	$53,508.00	$1,339,000.00	2
2018	$1,339,000.00		$79,488.80		$27,000.00	$52,488.80	$1,312,000.00	3
2019	$1,312,000.00		$79,430.40		$28,000.00	$51,430.40	$1,284,000.00	4
2020	$1,284,000.00		$79,332.80		$29,000.00	$50,332.80	$1,255,000.00	5
2021	$1,255,000.00		$79,196.00		$30,000.00	$49,196.00	$1,225,000.00	6
2022	$1,225,000.00		$80,020.00		$32,000.00	$48,020.00	$1,193,000.00	7
2023	$1,193,000.00		$79,765.60		$33,000.00	$46,765.60	$1,160,000.00	8
2024	$1,160,000.00		$79,472.00		$34,000.00	$45,472.00	$1,126,000.00	9
2025	$1,126,000.00		$80,139.20		$36,000.00	$44,139.20	$1,090,000.00	10
2026	$1,090,000.00		$79,728.00		$37,000.00	$42,728.00	$1,053,000.00	11
2027	$1,053,000.00		$79,277.60		$38,000.00	$41,277.60	$1,015,000.00	12
2028	$1,015,000.00		$79,788.00		$40,000.00	$39,788.00	$975,000.00	13
2029	$975,000.00		$79,220.00		$41,000.00	$38,220.00	$934,000.00	14
2030	$934,000.00		$79,612.80		$43,000.00	$36,612.80	$891,000.00	15
2031	$891,000.00		$79,927.20		$45,000.00	$34,927.20	$846,000.00	16
2032	$846,000.00		$80,163.20		$47,000.00	$33,163.20	$799,000.00	17
2033	$799,000.00		$79,320.80		$48,000.00	$31,320.80	$751,000.00	18
2034	$751,000.00		$79,439.20		$50,000.00	$29,439.20	$701,000.00	19
2035	$701,000.00		$79,479.20		$52,000.00	$27,479.20	$649,000.00	20
2036	$649,000.00		$79,440.80		$54,000.00	$25,440.80	$595,000.00	21
2037	$595,000.00		$79,324.00		$56,000.00	$23,324.00	$539,000.00	22
2038	$539,000.00		$80,128.80		$59,000.00	$21,128.80	$480,000.00	23
2039	$480,000.00		$79,816.00		$61,000.00	$18,816.00	$419,000.00	24
2040	$419,000.00		$79,424.80		$63,000.00	$16,424.80	$356,000.00	25
2041	$356,000.00		$79,955.20		$66,000.00	$13,955.20	$290,000.00	26
2042	$290,000.00		$79,368.00		$68,000.00	$11,368.00	$222,000.00	27
2043	$222,000.00		$79,702.40		$71,000.00	$8,702.40	$151,000.00	28
2044	$151,000.00		$79,919.20		$74,000.00	$5,919.20	$77,000.00	29
2045	$77,000.00		$80,018.40		$77,000.00	$3,018.40	$0.00	30
			$2,413,111.29		$1,390,000.00	$1,023,111.29		

*Interest Only Payment

Agenda Item 6(A)

CHANGE IN PROPOSED RULE
RULE *R309-500*

On January 9, 2015, the Drinking Water Board authorized the Division of Drinking Water to begin rulemaking to amend Rule R309-500, *Facility Design and Operation: Plan Review, Operation and Maintenance Requirements*. A 30-day public comment period for the proposed amendments was held from February 1, 2015, through March 3, 2015. Based on comments received, staff has determined that changes are needed to further clarify the previously proposed amendments. Because the new changes are substantive, they must be published in the Utah State Bulletin and a new 30-day public comment period must be held.

The "change in proposed rule" for *R309-500* includes the following:

1. Add a phrase to paragraph in R309-500-5(2), *On-going Operation and Maintenance Procedures*, to exclude substantial distribution system upgrades from the definition of on-going operation and maintenance procedures, which do not require plan approval.
2. Make a minor change by transposing the first two words of paragraph R309-500-6(2)(b).
3. Revise the proposed language in paragraph R309-500-6(2)(c) to require conflicts and interferences to be adequately identified and addressed, and to remove "profile drawing may be required."
4. Revise paragraph R309-500-2(f) to clarify that the one year period in which construction or ordering of equipment must occur before renewal of plan approval is required begins with the date of the original plan approval.
5. Rewrite paragraph R309-500-6(3)(b) to more clearly state the requirements for becoming eligible to request plan submittal waivers.
6. Rewrite R309-500-11, *Fee Schedule*, to state that DDW is authorized to assess fees according to the Department of Environmental Quality fee schedule.

Two versions of the amendments to R309-500 are attached:

- The Division of Administrative Rules (DAR) Version: DAR maintains the official version of rules and oversees the rulemaking process. The official rulemaking document for the *R309-500* amendment is in the specific format required by DAR. In the DAR format new words are underlined and deleted words are stuck out. First sentences are indented but not full paragraphs.

- The Division of Drinking Water (DDW) Version: In addition to the DAR version, DDW provides a separate version of the rule to the public. The content of the DDW version is the same as the DAR version. However, the DDW version is formatted for easier reading (with paragraph indentation) and contains DDW's interpretations of the rule (in the form of guidance paragraphs). The guidance paragraphs are not part of the official rule.

Staff Recommendation: The staff believes that the above changes to the previously proposed *R309-500* are needed, and requests authorization to initiate the "change in proposed rule" for *R309-500* with the Division of Administrative Rules prior to publication in the Utah State Bulletin.

Response to Comments for Proposed Rule Making

Division of Drinking Water
Utah Department of Environmental Quality

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

Published February 1, 2015, in the Utah State Bulletin
Formal Comment Period: February 1, 2015, through March 3, 2015
Public Hearing: There was no formal public hearing

The comments submitted by two individuals and the Division of Drinking Water (DDW) responses are given below.

Comments by John L. Chartier, P.E., Central District Engineer, State of Utah

Comments: *I would like to comment on the added sentence to the portion of the Rule cited above [paragraph R309-500-6(2)(c)]. The sentence I refer to is "In some cases, a profile drawing may be required to show potential water line conflicts and clearances".*

My comments include:

1. *Leaving this up to the individual review engineer will create significant discrepancies between different review engineers and separate water projects. This will create uncertainty for the consulting engineers on what they will or will not be required to submit. And that directly impacts cost of projects and the cost to the water users of Utah.*
2. *It is my interpretation that this modification to the Rule is intended to have engineers provide vertical clearances between existing underground utilities and the newly proposed water lines. In reality, obtaining these actual vertical separations cannot be fully realized until construction of the pipelines. Trying to provide these vertical separation distances during design of the project is nearly impossible to due unless SIGNIFICANT money is spent upfront to field verify existing utility depths.*
3. *The Division of Drinking Water's role in plan review should be just that, plan review for conformance to Rule requirements and protecting public health. Adding this requirement for providing profile views of new water line construction is an attempt to direct the consulting engineers on how to design a project and, in my opinion, does nothing to provide the review engineer with more accurate data to facilitate review for conformance with Division Rules.*
4. *It is my opinion that wording in the same paragraph, just prior to this added sentence, covers everything that you need if the specific project will require additional information pertaining to the project. That sentence is "Plans and Specifications submitted shall be complete and sufficiently detailed for actual construction".*

Response: DDW has deleted the sentence concerning profile drawings in paragraph R309-500-6(2)(c) and replaced it with the following sentence: Plans and specifications shall also adequately identify and address any conflicts or interferences.

The new sentence requires public water systems to address conflicts or interferences with proposed drinking water lines but does not require them to be shown exclusively on profile drawings. As long as any known interferences are indicated in the plans and specifications, the water system would meet the requirement.

The new sentence also addresses the issue of leaving the requirement to submit profile drawings up to individual DDW review engineers resulting in inconsistencies. All plans and specifications submitted must identify and address known conflicts and interferences.

Comments by Benjamin D. Miner, M.P.A., P.E., Hansen, Allen & Luce, Inc.

Comment 1: *In paragraph R309-500-6(2)(b), invert the first two words. Change "submittals required" to "required submittals."*

Response: In paragraph R309-500-6(2)(b), DDW inverted the first two words as suggested. DDW changed "Submittals required may include…" to "Required submittals may include…."

Comment 2: *In paragraph R309-500-6(2)(f), insert the words "of Plan Approval" after "if construction or the ordering of substantial equipment has not commenced within one year."*

Response: In paragraph R309-500-6(2)(f), DDW inserted the words "of Plan Approval" as suggested. The new sentence now reads as follows (added language is underlined): "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."

Comment 3: *"I am generally not in favor of these waivers in that pipelines can be pretty complex and I don't see the basis for waiving these projects in comparison with others. A 16" diameter line is pretty big to not have a plan review."*

Response: The basis for waiving water line projects is that DDW reviews and approves standard installation drawings, hydraulic analyses for the projects are required, and professional engineers are required to design the projects. Water line sizes eligible for categorical waivers correspond to the size and complexity of the water system. Small systems are limited to waivers for small diameter water lines, medium systems to medium diameter water lines, and large systems are limited to water lines up to 16" in diameter. Although a 16" water line may be large, only large professionally-managed water systems serving greater than 50,000 customers are eligible to obtain plan submittal waivers to install that size of water line. In Utah, there are only 15 public water systems potentially eligible for plan submittal waivers for the installation of 16" water lines.

Comment 4: *"The level of design detail in a master plan is usually limited and should probably only relieve the hydraulic modeling component."*

Response: Because the design detail in a master plan may be limited, as pointed out in the comment, R309-550-6 also requires standard installation drawings to be approved as a condition of both waivers. The standard installation drawings provide the design detail that may be missing from a master plan.

Comment 5: *"I suggest further defining "standard installation details." I think that designers will have a hard time separating which parts of a design to include or not include."*

Response: Paragraphs R309-500-6(3)(a) and (b) state that standard installation drawings must meet the requirements specified by R309-550. Rule R309-550, therefore, describes the design detail that standard installation drawings must have in case designers are unsure of what to include.

Comment 6: *"Consider providing the waivers only for line replacements. Consider distance limits on waivers (i.e. pipes shorter than 2,000 feet.)"*

Response: R309-500-5(2)(b) already permits water line replacement without plan approval or waivers. Based on the suggestion to limit the extent of the replacement permitted, DDW added the following language to R309-500-5(2)(b) to clarify that water line replacement without plan approval is meant to address replacement of deteriorated piping because of an immediate need and is not to be used for full-scale or long-term distribution system replacement (added language is underlined):

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), <u>excluding substantial distribution system upgrades that involve long-term planning and complex design,</u>

Comment 7: *"I'm not sure I see the advantage of offering Plan Submittal Waivers. The process of documenting waiver eligibility, applying for the waiver, and documenting results seems about the same as just filing for plan review."*

Response: Once a water system becomes eligible for either or both of the plan submittal waivers, the plan submittal waiver process is simpler than the plan review process, and it certainly saves time. Plan submittal waivers are typically provided by DDW review engineers in a fraction of the time that it takes to provide plan approval.

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.

(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.

(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 public drinking water system that may affect the quality or quantity of water delivered.

(c) 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:

(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, and

(v) replacement of a well pump with one of different capacity or deepening a well.

(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).

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.

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.

(b) Required ~~S~~submittals ~~required~~ 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.

(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) 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 standard installation drawings, which meet the requirements in R309-550, and identify in writing the professional engineer or engineers responsible for the oversight of the hydraulic analysis for and the design of the entire water system 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.

(4) Using Plan Submittal Waivers.

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 a water line project:

(a) Submit a complete Project Notification Form describing the project and specifying which Plan Submittal Waiver, R309-500-6(3)(a) or R309-500-6(3)(b), is being requested;

(b) 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);

(c) 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;

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

(e) Comply with the conditions in R309-500-6(4)(c) 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.

R309-500-7. 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 ~~Director's~~ approval of such plans or specifications before any construction work, which will be affected by such changes, is begun.

R309-500-9. Operating Permit.

The Division shall be informed when a public drinking water project, or a well-defined phase thereof, is at or near completion. 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. 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) 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) 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) confirmation that a copy of the as-built or record drawings has been received by the water system owner,

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

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

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

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 may charge a fee related to the review of plans and specifications is authorized to assess fees according to the Department of Environmental Quality fee schedule. AThe fee schedule is available from the Division.

Guidance: Beginning in State Fiscal Year 2016, the DEQ budget may include a line item for assessing a penalty for beginning construction without Plan Approval or placing unapproved facilities into service.

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: August 28, 2013
Notice of Continuation: March 22, 2010
Authorizing, and Implemented or Interpreted Law: 19-4-104

R309. Environmental Quality, Drinking Water.
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 Title 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.

(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.

(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 public drinking water system that may affect the quality or quantity of water delivered.

(c) 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:

(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, and

(v) replacement of a well pump with one of different capacity or deepening a well.

(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).

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.

(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.

(b) Required ~~S~~submittals ~~required~~ 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.

(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.

(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) 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 standard installation drawings, which meet the requirements in R309-550, and identify in writing the professional engineer or engineers responsible for the oversight of the hydraulic~~

~~analysis for and the design of the entire water system 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.

(4) Using Plan Submittal Waivers.

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 a water line project:

(a) Submit a complete Project Notification Form describing the project and specifying which Plan Submittal Waiver, R309-500-6(3)(a) or R309-500-6(3)(b), is being requested;

(b) 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);

(c) 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;

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

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

R309-500-7. 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 ~~Director's~~ approval of such plans or specifications before any construction work, which will be affected by such changes, is begun.

R309-500-9. Operating Permit.

The Division shall be informed when a public drinking water project, or a well-defined phase thereof, is at or near completion. 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. 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) 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) 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) confirmation that a copy of the as-built or record drawings has been received by the water system owner,

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

(5) where appropriate, water quality data,

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

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

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 ~~may charge a fee related to the review of plans and specifications~~ is authorized to assess fees according to the Department of Environmental Quality fee schedule. ~~A~~ 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: August 28, 2013
Notice of Continuation: March 22, 2010
Authorizing, and Implemented or Interpreted Law: 19-4-104

Agenda Item 6(B)

PROPOSED SUBSTANTIVE CHANGES
TO
RULE *R309-510*

The Division of Drinking Water is proposing amendments to Rule R309-510, *Facility Design and Operation: Minimum Sizing Requirements*, in response to the December 2014 Legislative Audit of the minimum sizing requirements contained in the rule. In its response to the legislative audit, the Division proposed two approaches to address the auditors' comments:

1. Amend R309-500 to clarify the existing regulatory process as it pertains to sizing sources, storage, and distribution systems. However, the source sizing requirements of 800 gpd and 400 gpd in Table 510-1 of the rule will not be altered by this amendment.

2. Review the indoor demand requirements of Table 510-1 (800 gpd indoor peak day demand/ERC and 400 gpd indoor yearly average demand/ERC) and the irrigation demand requirements after completing a thorough statewide water use study of peak day demand. The study is expected to take several years to complete.

The current, proposed amendments to R309-510 are the Division's attempt to clarify the content of the rule and to fulfill Approach #1 stated above. Approach #2 will be addressed after completion of the water use study, and is not the subject of the current proposed amendments.

Two versions of the amendments to R309-510 are attached:

- The Division of Administrative Rules (DAR) Version: DAR maintains the official version of rules and oversees the rulemaking process. **The official rulemaking document for the *R309-510* amendment is in the specific format required by DAR**. In the DAR format new words are underlined and deleted words are stuck out. First sentences are indented but not full paragraphs.

- The Division of Drinking Water (DDW) Version: In addition to the DAR version, DDW provides a separate version of the rule to the public. The content of the DDW version is the same as the DAR version. However, the DDW version is formatted for easier reading (with paragraph indentation) and contains DDW's interpretations of the rule (in the form of guidance paragraphs). **The guidance paragraphs are not part of the official rule**.

The proposed amendments to *R309-510* include the following:

1. Add a guidance paragraph in R309-510-1, *Purpose*, to clarify that the minimum sizing regulations are not meant to regulate impact fee calculations or the costs for water rights purchases.

2. Revise R309-510-4, *General*, to clarify that water system-specific sizing criteria may be used if a reduction is granted by the Director. Add language to state that in addition to meeting the State's minimum sizing requirements, the design of drinking water source and storage capacities may be required to be based on specific requirements imposed by local authorities.

3. Revise R309-510-5, *Reduction of Sizing Requirements*, to clarify the process to obtain a

reduction of sizing requirements. Also clarify the requirements for granting a reduction on the basis of limited water use development. [See the two attached guidance documents.]

4. Revise paragraphs R309-510-7(2) and (3) to clearly state that indoor water use and irrigation water use shall be based on the minimums provided by the rule unless a reduction in sizing has been granted by the director.

5. Clarify, define, and correct the term "Recreational Home Development" as used in Tables 510-1 and 510-4.

6. Clarify irrigation demands in R309-510-7(3) by adding a statement to take into consideration water losses associated with evaporation, delivery method, pipe leaks, etc., when irrigation demand is included in the design.

7. Allow for the use of Appendix B of the 2015 International Fire Code in determining fire flow when local fire code officials do not provide requirements, including a minimum flow of 1,000 gpm for 60 minutes. [This change is based input from various fire marshals.]

Staff Recommendation: Staff believes that the proposed changes to *R309-510* are substantive and requests authorization to start the rulemaking process and file the proposed rule amendments for publication in the Utah Bulletin.

Information Needed for Reduction in Source Sizing

Public Drinking Water Systems (PWSs) are required to have sufficient source capacity to meet both (1) the anticipated water demand on the day of highest water consumption ("Peak Day Demand") and (2) the quantity needed for the entire year ("Average Yearly Demand"). Both demand types apply to indoor water use and irrigation water use if a drinking water system also supplies irrigation water. The Director may allow a reduced source sizing requirement per Utah Administrative Code R309-510-5 if the water system presents sufficient and acceptable water specific data justifying the reduced source requirement (instead of the default source requirements in R309-510-7). The reduction request and the data supporting the request are reviewed on a case-by-case basis due to a wide variety of factors to consider and differences in water systems.

Prior to collecting or compiling the data supporting a reduction request, the PWS representative should **consult with the Division of Drinking Water engineering staff to identify the information needed for a reduction request and to establish a data collection protocol**.

The list below outlines typical issues to address when requesting a reduction in the **source** sizing. The review will include, but is not limited to, the issues identified below.

Intent of the Reduction Request

- Specifics of sizing reduction being sought (e.g., reduction in source sizing; reduction in peak day or yearly average demand, indoor water use, etc.)
- Proposed reduced amount versus the default requirement.

Water System Type, Size, Complexity, and Water Use Demand

- Type of water system (e.g., community, non-community, etc.).
- Size and complexity of water system (e.g. number of sources, number of connections, area served, facilities, ability to move water from multiple locations)
- Types and purposes of water use (e.g., industrial, residential, restaurant, camp ground, mixed use, etc.).
- Water system configuration and operation strategy in providing redundancies (e.g., backup power, spare parts, number of sources, service area served by multiple tanks or sources, etc.).
- Redundancy of water sources (e.g., emergency source, wholesale connection, etc.).
- Reliability and consistency of water sources (e.g., range of seasonal fluctuation of spring flows, reliability and availability of additional water sources, period of record, etc.).

Equivalent Residential Connections

- Rationale and methodology in determining number of Equivalent Residential Connections (ERCs) for present connections and estimated future connections (if ERCs are used in the calculations).
- Accounting of commercial, industrial, and other significant water uses if applicable.

Future Growth and Usage Projections

- Extent of the service area or the water system that is built out.

- History relevant to growth and water system capacity.
- Future development and annexation potential within the service area of the water system.
- How future growth is determined and managed (e.g., zoning ordinances, established process in reviewing and approving new developments, master plans, etc.).
- Current demand versus capacity needed to meet obligated and future demands.

Indoor versus Irrigation Water Use

- Extent of service connections that are served by a secondary irrigation system versus the ones that do not have irrigation water use demand (i.e., the information needed to estimate the irrigation water use demand imposed on the drinking water system).
- How the indoor and irrigation water use data is separated and measured.
- Future plan for conversion from an irrigation system to drinking water or vice versa (if applicable).
- Urban versus rural (more irrigation use) land use.

Water Use Data

- Actual water use data indicative of **peak day** demand. (e.g., daily data from residential meters, daily metered/measured data from sources and storage sources, etc.)
- Actual data indicative of **indoor water** use during peak day demand (if use data includes indoor and irrigation use); how is it separated and accounted for.
- Types of water use data (i.e., metered at the service connections, metered at the sources or pump stations, etc.).
- Tank levels and associated water outflows during the study period if using water use data metered at the sources and pump stations.
- Sufficient data to establish a statistically significant demand value (e.g., sufficient data points to represent or account for all or the majority of water uses; sufficient data points indicative of historical trend such as a minimum of 3 years; removing the outliers of non-usage service connections from the number of ERCs used for calculation when the water use data were metered at the service connections; etc.).

Water Loss

- Assessment of water loss through the distribution system (if the water use data is metered at the service connections).
- Accounting of water loss in peak day estimates.

Safety Factor

- Safety factors applied in the analysis and rationale.
- Examples
    - Redundant or excessive available storage capacity.
    - Emergency connection to another water system.
    - Reduced source sizing amount being 12% above the actual peak day indoor water use data.

Information Needed for Reduction in Storage Sizing

Public Drinking Water Systems (PWSs) are required to have sufficient ”equalization storage” capacity to meet the average day demands for indoor and irrigation water uses, and fire suppression storage volume if the water system is equipped with hydrants for fire suppression or is required by the fire authority to provide fire flow. The default “equalization storage” volumes are outlined in R309-510-8 and Tables 510-4 and 5. The Director may allow a reduced storage sizing requirement per Utah Administrative Code R309-510-5 if the water system presents sufficient and acceptable water system specific data justifying the reduced storage sizing. The reduction request is reviewed on a case-by-case basis due to the wide variety of factors and differences in water systems.

Prior to collecting or compiling water use data for the reduction request, the PWS representative should **consult with the Division of Drinking Water engineering staff to identify the information needed for a reduction request and/or to establish a data collection protocol**.

The lists below outline typical issues to address when requesting for reduced **storage** sizing. The review will include, but is not limited to, the issues identified below.

Intent of the Reduction Request

- Specifics of sizing reduction being sought (e.g., reduction in storage sizing for indoor water use, fire flow, etc.).
- Proposed reduced amount versus the default requirement.

Fire Suppression Storage

- A statement from the local fire code official indicating the required fire flow and duration or water storage volume if the PWS is required to provide fire flow or if the PWS is equipped with hydrants intended for fire suppression.

Nature of Water System and Water Use

- Type of water system (e.g., transient, community, or non-transient non-community, etc.).
- Size and complexity of water system (e.g., multiple ways to move water around, excessive source capacity, multiple storage tanks, number of connections serving, etc).
- Types and purposes of water use (e.g., industrial, residential, restaurant, camp ground, mixed use, etc.).
- Rationale and methodology in determining number of Equivalent Residential Connections (ERCs) for present connections and estimated future connections (if ERCs are used in the calculation).
- Water system configuration and operation strategy in providing redundancies (e.g., spare parts, service area served by multiple tanks or sources, etc.).
- Operation strategy in dealing with water outage and minimizing risk to public health (e.g., storage, water hauling, emergency connection to another system, backup power, etc.).

- Capacity and redundancy of water sources (e.g., emergency source, wholesale connection, etc.).
- Reliability and consistency of water source (e.g., range of seasonal fluctuation of spring flows, gravity feed source, pumped source that is covered by two independent substations or built-in generator or a transfer switch, etc.).

Future Growth and Usage Projections

- Extent of the service area or the water system that is built out.
- History relevant to growth & water system capacity.
- Future development and annexation potential within the service area of the water system.
- How future growth is determined and managed (e.g., zoning ordinances, established process in reviewing and approving new developments, master plans, etc.).
- Current demand versus capacity needed to meet obligated and future demands.
- Letter from local authority with jurisdiction over development and land use supporting the reduction request.
- Potential changes in zoning, densification, or land use designations.

Indoor versus Irrigation Water Use

- Extent of the service connections that are served by a secondary irrigation system or do not have irrigation demand (i.e., the information needed to estimate the irrigation demand imposed on the drinking water system).
- How indoor and irrigation water uses are separated and measured.
- Future plan of conversion from an irrigation system to drinking water or vice versa.
- Urban versus rural (more irrigation use) land use.

Water Use Data

- Actual average day water use data.
- Types of water use data (i.e., metered at the service connections, metered at the sources or pump stations, etc.).
- Sufficient data to establish a statistically significant value (e.g., sufficient data points to represent or account for all or the majority of the water uses, sufficient data points indicative of historical trend such as a minimum of 3 years, etc.).
- Peak Instantaneous Demand when request is for no storage.

Water Loss

- Assessment of water loss through the distribution system (if the water use data are metered at the service connections).
- Accounting for water loss in average day estimates.

Safety Factor

- Safety factors applied in the analysis and rationale.
- Examples
    - Excessive available source with backup power or means of conveyance.
    - Emergency connection to another water system or another emergency source.
    - Reduced storage sizing being 10% above the actual average day indoor water use data.

R309-510. Facility Design and Operation: Minimum Sizing Requirements.

R309-510-1. Purpose.

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

Guidance: This rule is not intended to be used to regulate, guide, or affect impact fees or water rights requirements.

R309-510-2. Authority.

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

R309-510-3. Definitions.

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

R309-510-4. General.

(1) This rule provides ~~estimates of~~ minimum quantities and flow rates ~~which~~ that shall be used in the design of new systems and in the evaluation of water source, storage facility, and pipeline capacities, ~~or if~~ unless a public water system has obtained a capacity reduction per R309-510-5. Water demand may vary significantly depending on water system size, type, land use, urbanization, location, precipitation, etc. Therefore, public water systems may submit system-specific water use data to justify alternative sizing requirements in accordance with R309-510-5.~~there is an absence of data collected by the public water system meeting the required confidence level for a reduction mentioned below, when evaluating water sources, storage facilities and pipelines. Within each of these three broad categories, the designer shall ascertain the contributions on demand from the indoor use of water, the outdoor use of water, and fire suppression activities (if required by local authorities). These components must be added together to determine the total demand on a given facility.~~

(2) When designing a public water system, the sizing requirements for indoor water use, irrigation, and fire suppression (as required by the local fire code official) shall be included as appropriate.

(3) Local authorities may impose more stringent design requirements on public water systems than the minimum sizing requirements of this rule.

(4) Public water systems shall consider daily, weekly, monthly, seasonal, and yearly variations of source capacity and system demand and shall verify that the capacities of drinking water facilities are sufficiently sized.

(5) The Director may modify the sizing requirements based on the unique nature and use of a water system.

Guidance: The intent of this rule is to minimize the possibility that a Public Water System will run out of water. If a water system runs out of water, it creates risks to public health and safety, including contaminated water entering under-pressurized water lines and the loss of water for fire protection.

~~***Guidance: Rules in this section are designed to assure that a water system never runs out of water. This is not only an inconvenience for the public, but a risk to public health and safety. When a distribution goes dry, the risk of system contamination from in-leakage and backflow increases. Furthermore, no fire protection would be available. Thus, the design engineer must give careful consideration to the daily and yearly variations of demand and verify that the system facilities are sufficient. Furthermore, the design engineer shall consider how the system would behave during drought periods when demands may be higher than usual, and source yield (particularly the of springs) will likely be reduced.***~~

R309-510-5. Reduction of Sizing Requirements.

~~If acceptable data are presented, certain number of days of peak day demand to establish minimum source capacity; certain number of years of annual demand to establish minimum water right requirements; and certain number of readings of peak hourly demand to establish minimum peak instantaneous demand; showing that the requirements made herein are excessive for a given project, the requirements may be appropriately reduced to the 90th percentile of readings, on a case by case basis by the Director. In the case of Recreational Home Developments, in order to qualify for a quantity reduction, not only must the actual water consumption be less than quantities required by rule but enforceable policy restrictions must have been approved which prevent the use of such dwellings as a permanent domicile and these restrictions shall have been consistently enforced. The Director may re-consider any reduced minimums if the nature and use of the system changes.~~

(1) Water systems that want to use system-specific design criteria that are below the state's minimum sizing requirements may submit a request for a reduction to the Director. Each

request shall include supporting information justifying the reduction in source, storage, or pipeline sizing.

Guidance: The Division has jurisdiction over Public Drinking Water Systems. Any reduction request must be initiated by a Public Drinking Water System.

(2) Depending on the reduction being sought, the supporting information may include actual water use data representing peak day demand, average day demand for indoor and irrigation uses, fire flow requirements established by the local fire code official, etc. Each reduction request and supporting information will be reviewed on a case-by-case basis because of the wide variety of factors to be considered, such as water system configuration and size, built-in redundancy, water user type, safety factors, method and quality of data collected, water losses, reliability of the source, etc.

(3) Prior to collecting or compiling water use data for a reduction request, a public water system shall consult with the Division of Drinking Water to identify the information needed for a reduction request and to establish a data collection protocol.

(4) The data submitted for a source reduction request shall be sufficient to account for daily, seasonal, and yearly variations in source and demand.

(5) If data justifying a reduction are accepted by the Director, the sizing requirements may be reduced. The requirements shall not be less than the 90th percentile of acceptable readings.

(6) If a reduction is granted on the basis of limited water use, enforceable water use restrictions must be in place, shall be consistently enforced by the water system or local authority, and shall be accepted by the Director.

(7) The Director may re-evaluate any reduction if the nature or use of the water system changes.

Guidance: ~~***The Director may allow a reduced source and/or storage requirement if the water system presents sufficient and acceptable water use data justifying the reduction (instead of using the default requirements outlined in this rule). The reduction request and the water use data supporting the request are reviewed on a case-by-case basis due to the wide variety of factors to be considered and differences in water systems. It is recommended that, prior to collecting or compiling the water use data for a reduction request, you meet with the Division of Drinking Water engineering staff to understand the information needed for a reduction request and to establish a data collection protocol.***~~ ***The Division of Drinking Water has developed two documents to aid public water systems in understanding the information needed to request a reduction in the source or storage requirement.***

- ***"Information Needed for Reduction in Source Sizing*** ~~***Requirement***~~***"***
- ***"Information Needed for Reduction in Storage Sizing*** ~~***Requirement***~~***"***

These documents are available ~~***through the Division as well as***~~ ***on the Division of Drinking Water's website.***

R309-510-6. Water Conservation.

Drinking water systems shall use the water resources of the state efficiently. The minimum sizing requirements of this rule ~~is~~ are based ~~up~~on typical ~~current~~ water consumption patterns in the State of Utah. ~~They may be excessive in certain settings w~~Where ~~legally~~ legally-enforceable water conservation measures exist,~~. In these cases~~ the sizing requirements ~~made~~ in this ~~section~~ rule may be reduced on a case-by-case basis by the Director.

~~***Guidance: Drinking water systems are encouraged to use the water resources of the state wisely. Conservation measures such as low flow toilets and low water demand landscaping (xeriscaping) may significantly reduce the demands on water systems.***~~

R309-510-7. Source Sizing.

(1) Peak Day Demand and Average Yearly Demand.

Sources shall legally and physically meet water demands under two ~~separate~~ conditions~~.~~:

(a) ~~First, they~~The water system's source capacity shall be able to meet the anticipated water demand on the day of highest water consumption,~~. This is referred to as~~ which is the peak day demand.

(b) ~~Second, they~~The water system's source capacity shall also be able to provide one year's supply of water, which is the average yearly demand.

~~***Guidance: If the above two criteria are met, the source(s) can be relied upon to adequately serve the system under most, if not all, conditions. The term "legally", above, refers to what is permitted by the owner's water right. The design engineer shall fully investigate the available water rights for a system. Water rights vary in the way they are written. Some are written in "cfs", others are written in terms of "AF". Still others are written in terms of allowable acreage or livestock. Furthermore, water rights may be restricted to certain times of the year, or certain uses (e.g. irrigation). Consult the Division for assistance in determining how many connections a specific water right may support.***~~

Guidance: Water systems should investigate the availability and validity of water rights for their systems. Consult the Division of Water Rights concerning the legal right to use water.

(2) ~~Estimated~~ Indoor Water Use.

~~In the absence of firm water use data,~~ Tables 510-1 and 510-2 shall be used ~~to estimate~~ as the minimum sizing requirements for peak day demand and average yearly demand for indoor water use unless a public water system has obtained a reduction per R309-510-5.

Table 510-1 Source Demand for Indoor Use		
Type of Connection	Peak Day Demand	Average Yearly Demand
Year-Round Use		
Residential	800 gpd/conn	146,000 gal./conn
Equivalent Residential Connection (ERC)	800 gpd/ERC	146,000 gal./ERC
Seasonal / Non-Residential Use		
Modern Recreation Camp	60 gpd/person	(~~see~~ See ~~note~~ Note 1)
Semi-Developed Camp a. With pit privies b. With flush toilets	 5 gpd/person 20 gpd/person	 (See ~~note~~Note 1) (See ~~note~~ Note 1)
Hotels, Motel & Resort	150 gpd/unit	(See ~~note~~Note 1)
Labor Camp	50 gpd/person	(See ~~note~~Note 1)
Recreational Vehicle Park	100 gpd/pad	(See ~~note~~Note 1)
Roadway Rest Stop	7 gpd/vehicle	(See ~~note~~Note 1)
Recreational Home Development (i.e., developments with limited water use) [See Note 2]	400 gpd/conn	(See ~~note1~~Note 1)

NOTES FOR TABLE 510-1:

Note 1. A~~nnual~~verage yearly demand shall be ~~based on~~calculated by multiplying the number of days ~~the system will be open during the year times~~ in the designated water system operating period by the peak day demand unless a reduction has been granted in accordance with R309-510-5.~~data acceptable to the Director, with a confidence level of 90% or greater showing a lesser annual consumption, can be presented.~~

Note 2. To be considered a Recreational Home Development (i.e., developments with limited water use) as listed in Table 510-1, dwellings shall not have more than 8 plumbing fixture units, in accordance with the state-adopted plumbing code, and shall not be larger than 1,000 square feet. For a new not-yet-constructed development to be considered as a development with limited water use, it must have enforceable restrictions in place that are enforced by the water system or local authority and are accepted by the Director.

Guidance: The Division of Drinking Water is in the process of proposing a study to gather water use data from public water systems representing various sizes, types, and locations throughout the state. The residential source demand requirements in Table 510-1 will be re-evaluated based on the water use study data.

TABLE 510-2 Source Demand for Indoor Use - Individual Establishments~~[a]~~ (Note 1) ~~(Indoor Use)~~

Type of Establishment	Peak Day Demand (gpd) (Notes 2 & 3)
Airports a. per passenger b. per employee	 3 15
Boarding Houses a. for each resident boarder and employee b. for each nonresident boarders	 50 10
Bowling Alleys, per alley a. with snack bar b. with no snack bar	 100 85
Churches, per person	5
Country Clubs a. per resident member b. per nonresident member c. per employee	 100 25 15
Dentist's Office a. per chair b. per staff member	 200 35
Doctor's Office a. per patient b. per staff member	 10 35
Fairgrounds, per person	1
Fire Stations, per person a. with full time employees and food prep b. with no full time employees and no food prep	 70 5
Gyms a. per participant b. per spectator	 25 4
Hairdresser a. per chair b. per operator	 50 35
Hospitals, per bed space	250
Industrial Buildings, per 8 hour shift, per employee (exclusive of industrial waste) a. with showers b. with no showers	 35 15
Launderette, per washer	580
Movie Theaters a. auditorium, per seat b. drive-in, per car space	 5 10
Nursing Homes, per bed space	280
Office Buildings & Business Establishments, per shift, per employee (sanitary wastes only) a. with cafeteria	 25 15

b. with no cafeteria	
Picnic Parks, per person (toilet wastes only)	5
Restaurants a. ordinary restaurants (not 24 hour service) b. 24 hour service c. single service customer utensils only d. or, per customer served (includes toilet and kitchen wastes)	 35 per seat 50 per seat 2 per customer 10
Rooming House, per person	40
Schools, per person a. boarding b. day, without cafeteria, gym or showers c. day, with cafeteria, but no gym or showers d. day, with cafeteria, gym and showers	 75 15 20 25
Service Stations ~~(b),~~ a. per vehicle served, or b. per gas pump	 10 250
Skating Rink, Dance Halls, etc., per person a. no kitchen wastes b. additional for kitchen wastes	 10 3
Ski Areas, per person (no kitchen waste)	10
Stores a. per public toilet room b. per employee	 500 11
Swimming Pools and Bathhouses~~(c)~~, per person (Note 4)	10
Taverns, Bars, Cocktail Lounges, per seat	20
Visitors Centers, per visitor	5

NOTES FOR TABLE 510-2:

Note 1. When more than one use will occur, the multiple uses shall be considered in determining total demand. Small industrial plants maintaining a cafeteria or showers and club houses or motels maintaining swimming pools or laundries are typical examples of multiple uses. Uses other than those listed above shall be considered in relation to established demands from known or similar installations.

Note 2. Source capacity must at least equal the peak day demand of the system. ~~Estimate~~ Determine this by assuming the facility is used to its maximum, e.g., the physical capacity of the facility.

~~2~~Note 3. ~~Generally, storage volume must at least equal one average day's demand.~~To determine the average day demand for establishments listed in Table 510-2, divide the peak day demand by 2, unless alternative data are accepted by the Director.

Guidance: Table 510-1 assumes a peaking factor of 2 between the peak day demand and the average day demand for residential connections. The same default peaking factor of 2 may be used to estimate the average day demand from the numbers in Table 510-2. Water systems may impose more stringent requirements.

Note 4. Or Peak Day Demand = 20 x [Water Area (ft^2)/30] + Deck Area (ft^2)

~~3. Peak instantaneous demands may be estimated by fixture unit analysis as per Appendix E of the 2006 International Plumbing Code.~~

> ~~(a) When more than one use will occur, the multiple use shall be considered in determining total demand. Small industrial plants maintaining a cafeteria and/or showers and club houses or motels maintaining swimming pools and/or laundries are typical examples of multiple uses. Uses other than those listed above shall be considered in relation to established demands from known or similar installations.~~
>
> ~~(b) or 250 gpd per pump,~~
>
> ~~(c) 20 x {Water Area (Ft2) / 30} + Deck Area (Ft2)~~

(3) ~~Estimated Outdoor~~ Irrigation Use.

~~In the absence of firm water use data,~~ If a water system provides water for irrigation, Table 510-3 shall be used to ~~estimate~~ determine the peak day demand and average yearly demand for ~~outdoor~~ irrigation water use. The following procedure shall be used:

~~***Guidance: The demand on drinking water sources is related to whether the system supplies water for outdoor use such as the irrigation of lawns and gardens. While the indoor use of water can be expected to remain relatively constant throughout the state, the outdoor use component is highly variable through the year, and is related to the amount of land irrigated as well as local climatological conditions.***~~

> (a) Determine the location of the water system on the map entitled *Irrigated Crop Consumptive Use Zones and Normal Annual Effective Precipitation, Utah* as prepared by the Soil Conservation Service (available from the Division). Find the numbered zone, one through six, in which the water system is located (if located in an area described "non-arable" find nearest numbered zone).
>
> ***Guidance: The irrigation zone map is provided below.*** ~~***If you are viewing a printed copy of this rule, the map may be in black and white. A more usable colored version of the***~~ ***This map is available on the Division of Drinking water's website.*** ~~***may be viewed or downloaded from:***~~
>
> ~~***http://drinkingwater.utah.gov/irrigation_map_intro.htm***~~

~~***Tip: If you are viewing an electronic version of this rule, to make the map more readable use any zoom-in feature which may be available.***~~

(b) Determine the net number of acres which may be irrigated. ~~This is generally done by starting with the gross acreage, then subtract out any area of roadway, driveway, sidewalk or patio pavements along with housing foundation footprints that can be reasonably expected for lots within a new subdivision or which is representative of existing lots. Before any other land area which may be considered "non-irrigated" (e.g. steep slopes, wooded areas, etc.) is subtracted from the gross area, the Director shall be consulted and agree that the land in question will not be irrigated.~~

Guidance: ***To determine the net number of acres to be irrigated, start with the gross acreage, then subtract any area of roadway, driveway, sidewalk, or patio pavement along with housing foundation footprints that can be reasonably expected for lots within a new subdivision or which is representative of existing lots. Before any other land area which may be considered "non-irrigated" (e.g., steep slopes, wooded acres, etc.) is subtracted from the gross area, the Director should be consulted and agree that the land in question will not be irrigated.*** ***For instance, in the case of a heavily wooded mountain home subdivision, it may be claimed that large lawns will not be put in by the lot owners. The division*** ~~***must***~~ ***should*** ***review and concur with this judgment.***

(c) Refer to Table 510-3, which assumes direct application of water to vegetation, to determine peak day demand and average yearly demand for ~~outdoor~~ irrigation use.

(d) ~~The results of the indoor use and outdoor use tables shall be added together and source(s) shall be legally and physically capable of meeting this combined demand.~~Consider water losses due to factors such as evaporation, irrigation delivery method, overwatering, pipe leaks, etc. Apply a safety factor to the irrigation demand in the design accordingly.

Table 510-3 Source Demand for Irrigation ~~(Outdoor Use)~~		
Map Zone	Peak Day Demand (gpm/irrigated acre)	Average Yearly Demand (AF/ irrigated acre) (Note 1)
1	2.26	1.17
2	2.80	1.23
3	3.39	1.66
4	3.96	1.87
5	4.52	2.69
6	4.90	3.26

NOTE FOR TABLE 510-3:

Note 1. The average yearly demand for irrigation water use (in acre-feet per irrigated acre) is based on 213 days of irrigation, e.g., April 1 to October 31.

Guidance: If the irrigation season differs from the assumed 213 days, the average yearly demand numbers may need to adjusted.

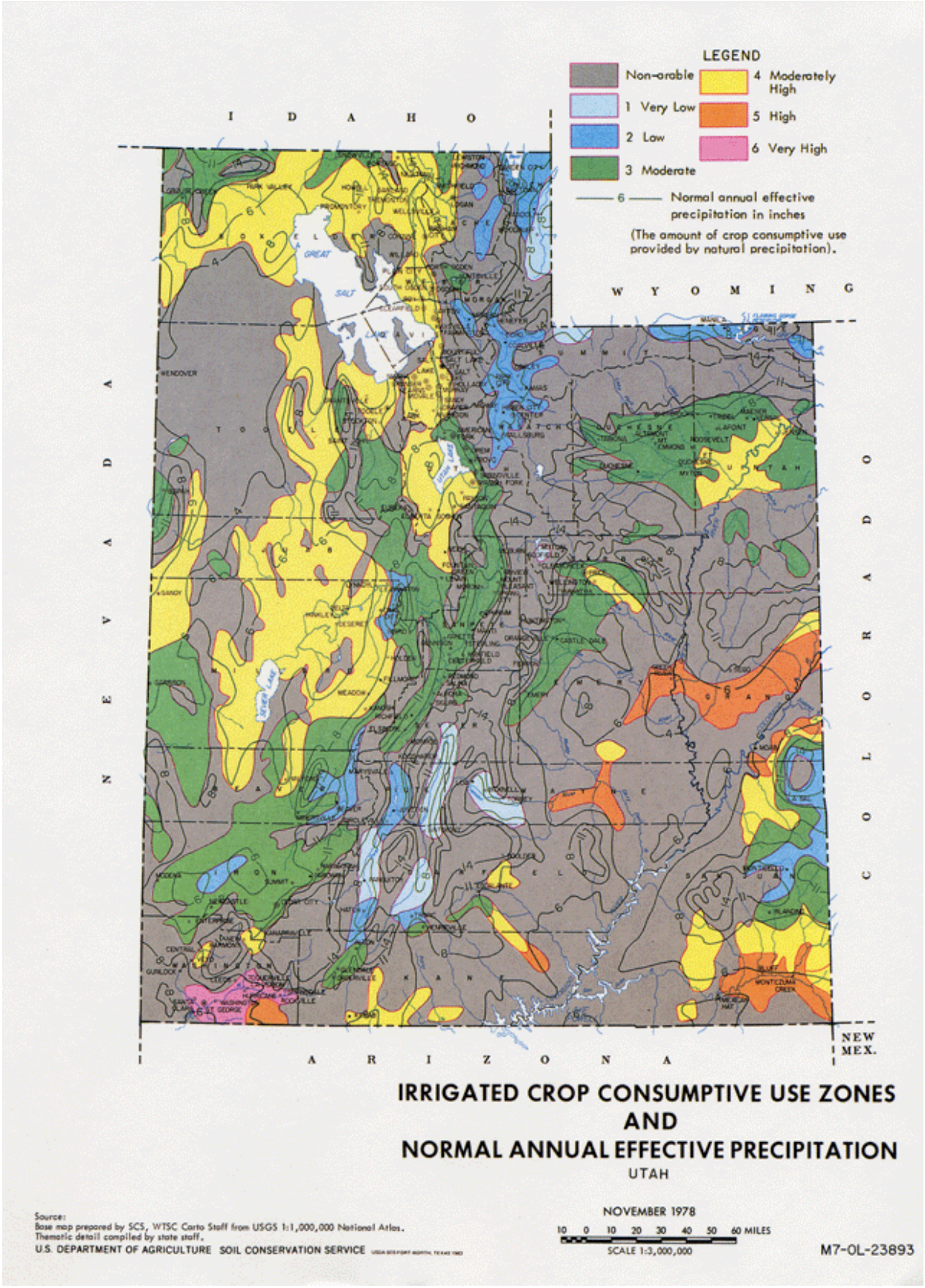
(4) ~~Accounting for~~ Variations in Source Yield.

~~The design engineer shall consider whether flow from the source(s) may vary. Where flow varies, as is the case for most springs, the minimum flow rate shall be used in determining the number of connections which may be supported by the source(s). Where historical records are sufficient, and where peak flows from the source(s) correspond with peak demand periods, the Director may grant an exception to this requirement.~~

(a) Water systems shall consider that flow from sources may vary seasonally and yearly. Where flow varies, the number of service connections supported by a source shall be based on the minimum seasonal flow rate compared to the corresponding seasonal demand.

(b) Where source capacity is limited by the capacity of treatment facilities, the maximum number of service connections shall be determined using the treatment plant design capacity instead of the source capacity.

Guidance: ~~***The design engineer is cautioned to thoroughly investigate spring behavior. During dry periods, springs (particularly those at higher elevations) may drastically decrease in flow. In assessing minimum flowrates of springs, watersheds shall be assumed to have received only 80% of normal precipitation.***~~***Some water sources, such as deep wells, yield consistent quantities of water while others, such as springs, yield inconsistent quantities that vary seasonally and annually. Sources that yield inconsistent quantities of water should be studied and understood prior to the commitment of those sources for future uses, such as providing will-serve letters or approving proposed developments.***


LEGEND
Non-arable
1 Very Low
2 Low
3 Moderate
4 Moderately High
5 High
6 Very High
6 Normal annual effective precipitation in inches
(The amount of crop consumptive use provided by natural precipitation).
I D A H O
W Y O M I N G
N E V A D A
C O L O R A D O
A R I Z O N A
NEW MEX.
IRRIGATED CROP CONSUMPTIVE USE ZONES
AND
NORMAL ANNUAL EFFECTIVE PRECIPITATION
UTAH
Source:
Base map prepared by SCS, WTSC Carto Staff from USGS 1:1,000,000 National Atlas.
Thematic detail compiled by state staff.
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
NOVEMBER 1978
10 0 10 20 30 40 50 60 MILES
SCALE 1:3,000,000
M7-OL-23893

R309-510-8. Storage Sizing.

(1) General.

Each public water system, or storage facility serving connections within a specific area, shall provide:

(a) equalization storage volume~~,~~ to satisfy average day demands for water for indoor use ~~as well as outdoor~~and irrigation use,

(b) fire ~~suppression~~ flow storage volume, if the water system is equipped with fire hydrants ~~and~~ intended to provide fire suppression water or as required by the local fire code official, and

(c) emergency storage, if deemed appropriate by the water supplier or the Director~~, to meet demands in the event of an unexpected emergency situation such as a line break or a treatment plant failures~~.

(2) Equalization Storage.

(a) All public drinking water systems shall ~~be~~ provide~~d with~~ equalization storage. The amount of equalization storage ~~which must be provided~~ varies with the nature of the water system, the extent of ~~outdoor~~ irrigation use, and the location and configuration of the water system.

(b) Table 510-4 lists ~~R~~required equalization storage for indoor use ~~is provided in Table 510-4~~. Storage requirements for non-community systems not listed in this table shall be determined by calculating the average day demands from the information given in Table 510-2.

Guidance: Water systems capable of meeting the intent of the equalization storage requirements, for example, by redundancy configuration or operation strategy, may request a reduction in storage sizing requirements per R309-510-5.

Table 510-4 Storage Volume for Indoor Use	
Type	Volume Required (gallons)
Community Systems	
Residential; per single resident service connection	400
Non-Residential; per Equivalent Residential Connection (ERC)	400
Non-Community Systems	
Modern Recreation Camp; per person	30

Semi-Developed Camp; per person a. with Pit Privies b. with Flush Toilets	 2.5 10
Hotel, Motel, & Resorts; per unit	75
Labor Camp; per unit	25
Recreational Vehicle Park; per pad	50
Roadway Rest Stop; per vehicle	3.5
Recreational Home Development (i.e., developments with limited water use); per connection (See Note 2 in Table 510-1)	400

(c) Where ~~the~~ a drinking water system provides water for ~~outdoor~~ irrigation use, ~~such as the irrigation of lawns and gardens,~~ Table 510-5 shall be used to determine the minimum equalization storage volumes for irrigation~~estimated in Table 510-5 shall be added to the indoor volumes estimated in Table 510-4~~. The procedure for determining the map zone and irrigated acreage for using Table 510-5 is outlined in ~~Section~~ R309-510-7(3).

Table 510-5 Storage Volume for ~~Outdoor~~ Irrigation Use	
Map Zone	Volume Required (gallons/irrigated acre)
1	1,782
2	1,873
3	2,528
4	2,848
5	4,081
6	4,964

(3) Fire ~~Suppression~~ Flow Storage.

~~Fire suppression storage shall be required if the water system is intended to provide fire fighting water as evidenced by fire hydrants connected to the piping. The design engineer shall consult with the local fire suppression authority regarding needed fire flows in the area under consideration. This information shall be provided to the Division. Where no local fire suppression authority exists, needed fire suppression storage shall be assumed to be 120,000 gallons (1000 gpm for 2 hours).~~

(a) Fire flow storage shall be provided if fire flow is required by the local fire code official or if fire hydrants intended for fire flow are installed.

(b) Water systems shall consult with the local fire code official regarding needed fire flows in the area under consideration. The fire flow information shall be provided to the Division during the plan review process.

(c) When direction from the local fire code official is not available, the water system shall use Appendix B of the International Fire Code, 2015 edition, for guidance. Unless otherwise approved by the local fire code official, the fire flow and fire flow duration shall not be less than 1,000 gallons per minute for 60 minutes.

Guidance: ***~~The 1991 Uniform Fire Code has been adopted statewide in~~*** ***Utah*** ***has adopted a state-wide fire code. However, local*** ***~~authorities~~*** ***fire code officials*** ***are authorized to*** ***determine fire flow requirements in their jurisdictions.~~deviate from this code if it can be justified. Normal fire storage volume is given in Table A-III-A-1 of the code. According to this table, flow duration must be 2 to 4 hours depending on the size and type of structure which must be protected. Fire flow storage for a one or two family dwelling of less than 3,600 square feet would be 120,000 gallons (1,000 gpm x 120 minutes).Larger volumes would be required for other structures.~~***

(4) Emergency Storage.

Emergency storage shall be considered during the design process. The amount of emergency storage shall be based upon an assessment of risk and the desired degree of system dependability. The Director may require emergency storage when it is warranted to protect public health and welfare.

Guidance: It is advisable to provide water storage for emergency situations, such as pipeline failures, major trunk main failures, equipment failures, electrical power outages, water treatment facility failures, raw-water supply contamination, or natural disasters. Generally, the need for emergency storage shall be determined by the water supplier and design engineer.

R309-510-9. Distribution System Sizing.

(1) General Requirements.

The distribution system shall be designed to ~~insure~~ ensure adequate flow and that minimum water pressures as required in R309-105-9 exist at all points within the distribution system. ~~If the distribution system is equipped with fire hydrants, the Division will require a letter from the local fire authority stating the fire flow and duration required of the area to insure the system shall be designed to provide minimum pressures as required in R309-105-9 to exist at all points within the system when needed fire flows are imposed upon the peak day demand flows of the system.~~

(2) ~~Indoor Use, Estimated~~ Peak Instantaneous Demand for Indoor Water Use.

(a) Large or complex water systems may determine peak instantaneous demand using hydraulic modeling. The hydraulic model must either apply an instantaneous peaking factor to account for peak instantaneous demand or use actual peak instantaneous water flow data.

(b) ~~For community water systems and large non-community systems~~Alternatively, the peak instantaneous demand for ~~each~~ a single pipeline shall be ~~assumed~~ calculated for indoor use ~~as~~using the following equation:

$Q = 10.8 \times N^{0.64}$

where N equals the total number of ERC's, and Q equals the total flow (gpm) delivered to the total connections served by that pipeline.

Guidance: The equation above ~~shall~~ should only be used to estimate the flow required for N connections from a single pipeline and ~~shall~~ should not be used to estimate node or junction demands utilized in hydraulic analyses.

(c) For Recreational Vehicle Parks, the peak instantaneous flow for indoor use shall be based on the following:

Table 510-6 Peak Instantaneous Demand for Indoor Water Use for Recreational Vehicle Parks	
Number of Connections	Formula
0 to 59	Q=4N
60 to 239	$Q= 80+ 20N^{0.5}$
240 or greater	Q= 1.6N

NOTES FOR TABLE 510-6:

Q is total peak instantaneous demand (gpm). ~~and~~ N is the maximum number of connections. However, if the only water use is via service buildings, the peak instantaneous demand shall be calculated for the number of plumbing fixture units as presented in ~~Appendix E of the 2006 International Plumbing Code~~ the state-adopted plumbing code.

(~~b~~d) For small non-community water systems, the peak instantaneous demand ~~to be estimated~~ for indoor water use shall be calculated on a per-building basis for the number of plumbing fixture units as presented in ~~Appendix E of the 2006 International Plumbing Code~~ the state-adopted plumbing code.

(3) ~~Outdoor Use, Estimated~~ Peak Instantaneous Demand for Irrigation Use.

Peak instantaneous demand ~~to be estimated~~ for ~~outdoor~~ irrigation use is given in Table 510-7. The procedure for determining the map zone and irrigated acreage for using Table 510-7 is outlined in ~~Section~~ R309-510-7(3).

Table 510-7 Peak Instantaneous Demand for ~~Outdoor~~ Irrigation Use	
Map Zone	Peak Instantaneous Demand (gpm/irrigated acre)
1	4.52
2	5.60
3	6.78
4	7.92
5	9.04
6	9.80

(4) Fire Flow~~s~~.

~~(a) Distribution systems shall be designed to deliver needed fire flows if fire hydrants are provided. The design engineer shall consult with the local fire suppression authority regarding needed fire flows in the area under consideration. This information shall be provided to the Division. Where no local fire suppression authority exists, needed fire flows shall be assumed to be 1000 gpm unless the local planning commission provides a letter indicating that the system will not be required to provide any fire flows, in which case fire hydrants will not be allowed to be installed on any mains.~~

~~***Guidance: Generally, fire flows shall be as required by Appendix B of the 2003 International Fire Code. According to this appendix, minimum fire flow for a one or two family dwelling not exceeding 3,600 square feet is 1,000 gpm. Fire flows for other types of buildings are higher. The 2003 International Fire Code has been adopted statewide in Utah. However, local authorities are authorized to deviate from this code if it can be justified.***~~

~~(b) If a distribution system is equipped with fire hydrants, the system shall be designed to insure that minimum pressures required by R309-105-9 exist at all points within the system when fire flows are added to the peak day demand of the system. Refer to Section R309-510-7 for information on determining the peak day demand of the system.~~

(a) Distribution systems shall be designed to deliver needed fire flow if fire flow is required by the local fire code official or if fire hydrants intended for fire flow are provided. The distribution system shall be sized to provide minimum pressures as

required by R309-105-9 to all points in the distribution system when needed fire flows are imposed during peak day demand in the distribution system.

(b) The water system shall consult with the local fire code official regarding needed fire flow in the area under consideration. The fire flow information shall be provided to the Division during the plan review process.

(c) If direction from the local fire code official is not available, the water system shall use Appendix B of the International Fire Code, 2015 edition, for guidance. Unless otherwise approved by the local fire code official, the fire flow and fire flow duration shall not be less than 1,000 gallons per minute for 60 minutes.

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R309. Environmental Quality, Drinking Water.
R309-510. Facility Design and Operation: Minimum Sizing Requirements.
R309-510-1. Purpose.

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

R309-510-2. Authority.

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

R309-510-3. Definitions.

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

R309-510-4. General.

(1) This rule provides ~~estimates of~~ minimum quantities and flow rates ~~which~~ that shall be used in the design of new systems and in the evaluation of water source, storage facility, and pipeline capacities, ~~or if~~ unless a public water system has obtained a capacity reduction per R309-510-5. Water demand may vary significantly depending on water system size, type, land use, urbanization, location, precipitation, etc. Therefore, public water systems may submit system-specific water use data to justify alternative sizing requirements in accordance with R309-510-5.~~there is an absence of data collected by the public water system meeting the required confidence level for a reduction mentioned below, when evaluating water sources, storage facilities and pipelines. Within each of these three broad categories, the designer shall ascertain the contributions on demand from the indoor use of water, the outdoor use of water, and fire suppression activities (if required by local authorities). These components must be added together to determine the total demand on a given facility.~~

(2) When designing a public water system, the sizing requirements for indoor water use, irrigation, and fire suppression (as required by the local fire code official) shall be included as appropriate.

(3) Local authorities may impose more stringent design requirements on public water systems than the minimum sizing requirements of this rule.

(4) Public water systems shall consider daily, weekly, monthly, seasonal, and yearly variations of source capacity and system demand and shall verify that the capacities of drinking water facilities

are sufficiently sized.

(5) The Director may modify the sizing requirements based on the unique nature and use of a water system.

R309-510-5. Reduction of Sizing Requirements.

~~If acceptable data are presented, certain number of days of peak day demand to establish minimum source capacity; certain number of years of annual demand to establish minimum water right requirements; and certain number of readings of peak hourly demand to establish minimum peak instantaneous demand; showing that the requirements made herein are excessive for a given project, the requirements may be appropriately reduced to the 90th percentile of readings, on a case by case basis by the Director. In the case of Recreational Home Developments, in order to qualify for a quantity reduction, not only must the actual water consumption be less than quantities required by rule but enforceable policy restrictions must have been approved which prevent the use of such dwellings as a permanent domicile and these restrictions shall have been consistently enforced. The Director may re-consider any reduced minimums if the nature and use of the system changes.~~

(1) Water systems that want to use system-specific design criteria that are below the state's minimum sizing requirements may submit a request for a reduction to the Director. Each request shall include supporting information justifying the reduction in source, storage, or pipeline sizing.

(2) Depending on the reduction being sought, the supporting information may include actual water use data representing peak day demand, average day demand for indoor and irrigation uses, fire flow requirements established by the local fire code official, etc. Each reduction request and supporting information will be reviewed on a case-by-case basis because of the wide variety of factors to be considered, such as water system configuration and size, built-in redundancy, water user type, safety factors, method and quality of data collected, water losses, reliability of the source, etc.

(3) Prior to collecting or compiling water use data for a reduction request, a public water system shall consult with the Division of Drinking Water to identify the information needed for a reduction request and to establish a data collection protocol.

(4) The data submitted for a source reduction request shall be sufficient to account for daily, seasonal, and yearly variations in source and demand.

(5) If data justifying a reduction are accepted by the Director, the sizing requirements may be reduced. The requirements shall not be less than the 90th percentile of acceptable readings.

(6) If a reduction is granted on the basis of limited water use, enforceable water use restrictions must be in place, shall be consistently enforced by the water system or local authority, and shall be accepted by the Director.

(7) The Director may re-evaluate any reduction if the nature or use of the water system changes.

R309-510-6. Water Conservation.

Drinking water systems shall use the water resources of the state efficiently. The minimum sizing requirements of this rule ~~is~~ are

based ~~up~~on typical ~~current~~ water consumption patterns in the State of Utah. ~~They may be excessive in certain settings w~~Where legally ~~-~~enforceable water conservation measures exist~~.~~, ~~In these cases~~ the sizing requirements ~~made~~ in this ~~section~~rule may be reduced on a case-by-case basis by the Director.

R309-510-7. Source Sizing.

(1) Peak Day Demand and Average Yearly Demand.

Sources shall legally and physically meet water demands under two ~~separate~~ conditions~~.~~:

(a) ~~First, they~~ The water system's source capacity shall be able to meet the anticipated water demand on the day of highest water consumption~~.~~, ~~This is referred to as the~~ which is peak day demand.

(b) ~~Second, they~~ The water system's source capacity shall also be able to provide one year's supply of water, which is the average yearly demand.

(2) ~~Estimated~~ Indoor Water Use.

~~In the absence of firm water use data,~~ Tables 510-1 and 510-2 shall be used ~~to estimate~~ as the minimum sizing requirements for peak day demand and average yearly demand for indoor water use unless a public water system has obtained a reduction per R309-510-5.

TABLE 510-1
Source Demand for Indoor Use

Type of Connection	Peak Day Demand	Average Yearly Demand
Year-round use		
Residential	800 gpd/conn	146,000 gal./conn
Equivalent Residential Connection (ERC)	800 gpd/ERC	146,000 gal./ERC
Seasonal/Non-residential use		
Modern Recreation Camp	60 gpd/person	(~~s~~See ~~n~~Note 1)
Semi-Developed Camp		
a. with pit privies	5 gpd/person	(~~s~~See ~~n~~Note 1)
b. with flush toilets	20 gpd/person	(~~s~~See ~~n~~Note 1)
Hotel, Motel, and Resort	150 gpd/unit	(~~s~~See ~~n~~Note 1)
Labor Camp	50 gpd/person	(~~s~~See ~~n~~Note 1)
Recreational Vehicle Park	100 gpd/pad	(~~s~~See ~~n~~Note 1)
Roadway Rest Stop	7 gpd/vehicle	(~~s~~See ~~n~~Note 1)
Recreational Home Development (i.e., developments with limited water use)[See Note 2]	400 gpd/conn	(~~s~~See ~~n~~Note 1)

Notes for Table 510-1:

Note 1. A~~nnual~~verage yearly demand shall be ~~based on~~ calculated by multiplying the number of days ~~the system will be open during the year times~~ in the designated water system operating period by the peak day demand unless a reduction has been granted in accordance with R309-510-5~~data acceptable to the Director, with a confidence level of 90% or greater showing a lesser annual consumption, can be~~

~~presented~~.

Note 2. To be considered a Recreational Home Development (i.e., developments with limited water use) as listed in Table 510-1, dwellings shall not have more than 8 plumbing fixture units, in accordance with the state-adopted plumbing code, and shall not be larger than 1,000 square feet. For a new not-yet-constructed development to be considered as a development with limited water use, it must have enforceable restrictions in place that are enforced by the water system or local authority and are accepted by the Director.

TABLE 510-2

Source Demand for Indoor Use - Individual Establishments~~[a]~~ (Note 1) ~~(Indoor Use)~~

Type of Establishment	Peak Day Demand (gpd) (Notes 2 &3)
Airports	
a. per passenger	3
b. per employee	15
Boarding Houses	
a. for each resident boarder and employee	50
b. for each nonresident boarders	10
Bowling Alleys, per alley	
a. with snack bar	100
b. with no snack bar	85
Churches, per person	5
Country Clubs	
a. per resident member	100
b. per nonresident member present	25
c. per employee	15
Dentist's Office	
a. per chair	200
b. per staff member	35
Doctor's Office	
a. per patient	10
b. per staff member	35
Fairgrounds, per person	1
Fire Stations, per person	
a. with full-time employees and food prep.	70
b. with no full-time employees and no food prep.	5
Gyms	
a. per participant	25
b. per spectator	4
Hairdresser	
a. per chair	50
b. per operator	35
Hospitals, per bed space	250
Industrial Buildings, per 8 hour shift, per employee (exclusive of industrial waste)	
a. with showers	35
b. with no showers	15
Launderette, per washer	580

Movie Theaters	
a. auditorium, per seat	5
b. drive-in, per car space	10
Nursing Homes, per bed space	280
Office Buildings and Business Establishments, per shift, per employee (sanitary wastes only)	
a. with cafeteria	25
b. with no cafeteria	15
Picnic Parks, per person (toilet wastes only)	5
Restaurants	
a. ordinary restaurants (not 24 hour service)	35 per seat
b. 24 hour service	50 per seat
c. single service customer utensils only	2 per customer
d. or, per customer served (includes toilet and kitchen wastes)	10
Rooming House, per person	40
Schools, per person	
a. boarding	75
b. day, without cafeteria, gym or showers	15
c. day, with cafeteria, but no gym or showers	20
d. day, with cafeteria, gym and showers	25
Service Stations~~(b)~~~~,~~	
a. per vehicle served, or	10
b. per gas pump	250
Skating Rink, Dance Halls, etc., per person	
a. no kitchen wastes	10
b. Additional for kitchen wastes	3
Ski Areas, per person (no kitchen wastes)	10
Stores	
a. per public toilet room	500 b.
per employee	11
Swimming Pools and Bathhouses~~(c)~~~~,~~, per person (Note 4)	10
Taverns, Bars, Cocktail Lounges, per seat	20
Visitor Centers, per visitor	5

NOTES FOR TABLE 510-2:

Note 1. When more than one use will occur, the multiple uses shall be considered in determining total demand. Small industrial plants maintaining a cafeteria or showers and club houses or motels maintaining swimming pools or laundries are typical examples of multiple uses. Uses other than those listed above shall be considered in relation to established demands from known or similar installations.

~~1~~Note 2. Source capacity must at least equal the peak day demand of the system. ~~Estimate~~ Determine this by assuming the facility is used to its maximum, e.g., the physical capacity of the facility.

~~2~~Note 3. ~~Generally, storage volume must at least equal one average day's demand~~To determine the average day demand for establishments listed in Table 510-2, divide the peak day demand by 2, unless alternative data are accepted by the Director.

~~3. Peak instantaneous demands may be estimated by fixture unit analysis as per Appendix E of the 2006~~

~~International Plumbing Code.~~

~~(a) When more than one use will occur, the multiple use shall be considered in determining total demand. Small industrial plants maintaining a cafeteria and/or showers and club houses or motels maintaining swimming pools and/or laundries are typical examples of multiple uses. Uses other than those listed above shall be considered in relation to established demands from known or similar installations.~~

~~(b) or 250 gpd per pump,~~

~~(c) 20 x {Water Area (Ft^2) / 30} + Deck Area (Ft^2)~~

Note 4. Or Peak Day Demand = 20 x [Water Area (ft^2)/30] + Deck Area (ft^2)

(3) ~~Estimated Outdoor~~ Irrigation Use.

~~In the absence of firm water use data,~~ If a water system provides water for irrigation, Table 510-3 shall be used to ~~estimate~~ determine the peak day demand and average yearly demand for ~~outdoor~~ irrigation water use. The following procedure shall be used:

(a) Determine the location of the water system on the map entitled Irrigated Crop Consumptive Use Zones and Normal Annual Effective Precipitation, Utah as prepared by the Soil Conservation Service (available from the Division). Find the numbered zone, one through six, in which the water system is located (if located in an area described "non-arable" find nearest numbered zone).

(b) Determine the net number of acres which may be irrigated. ~~This is generally done by starting with the gross acreage, then subtract out any area of roadway, driveway, sidewalk or patio pavements along with housing foundation footprints that can be reasonably expected for lots within a new subdivision or which is representative of existing lots. Before any other land area which may be considered "non-irrigated" (e.g. steep slopes, wooded areas, etc.) is subtracted from the gross area, the Director shall be consulted and agree that the land in question will not be irrigated.~~

(c) Refer to Table 510-3, which assumes direct application of water to vegetation, to determine peak day demand and average yearly demand for ~~outdoor~~ irrigation use.

(d) ~~The results of the indoor use and outdoor use tables shall be added together and source(s) shall be legally and physically capable of meeting this combined demand~~ Consider water losses due to factors such as evaporation, irrigation delivery method, overwatering, pipe leaks, etc. Apply a safety factor to the irrigation demand in the design accordingly.

TABLE 510-3
Source Demand for Irrigation
~~(Outdoor Use)~~

Map Zone	Peak Day Demand (gpm/irrigated acre)	Average Yearly Demand (AF/irrigated acre) (Note 1)
1	2.26	1.17
2	2.80	1.23
3	3.39	1.66
4	3.96	1.87
5	4.52	2.69

6	4.90	3.26

Note for Table 510-3:

Note 1. The average yearly demand for irrigation water use (in acre-feet per irrigated acre) is based on 213 days of irrigation, e.g., April 1 to October 31.

(4) ~~Accounting for~~ Variations in Source Yield.

~~The design engineer shall consider whether flow from the source(s) may vary. Where flow varies, as is the case for most springs, the minimum flow rate shall be used in determining the number of connections which may be supported by the source(s). Where historical records are sufficient, and where peak flows from the source(s) correspond with peak demand periods, the Director may grant an exception to this requirement.~~

(a) Water systems shall consider that flow from sources may vary seasonally and yearly. Where flow varies, the number of service connections supported by a source shall be based on the minimum seasonal flow rate compared to the corresponding seasonal demand.

(b) Where source capacity is limited by the capacity of treatment facilities, the maximum number of service connections shall be determined using the treatment plant design capacity instead of the source capacity.

R309-510-8. Storage Sizing.

(1) General.

Each public water system, or storage facility serving connections within a specific area, shall provide:

(a) equalization storage volume, to satisfy average day demands for water for indoor use ~~as well as outdoor~~ and irrigation use,

(b) fire ~~suppression~~ flow storage volume, if the water system is equipped with fire hydrants ~~and~~ intended to provide fire suppression water or as required by the local fire code official, and

(c) emergency storage, if deemed appropriate by the water supplier or the Director~~, to meet demands in the event of an unexpected emergency situation such as a line break or a treatment plant failures~~.

(2) Equalization Storage.

(a) All public drinking water systems shall ~~be~~ provide~~d with~~ equalization storage. The amount of equalization storage ~~which must be provided~~ varies with the nature of the water system, the extent of ~~outdoor~~ irrigation use, and the location and configuration of the water system.

(b) Table 510-4 lists ~~R~~required equalization storage for indoor use~~ is provided in Table 510-4~~. Storage requirements for non-community systems not listed in this table shall be determined by calculating the average day demands from the information given in Table 510-2.

TABLE 510-4
Storage Volume for Indoor Use

Type	Volume Required

	(gallons)
Community Systems	
Residential;	
per single resident service connection	400
Non-Residential;	
per Equivalent Residential Connection (ERC)	400
Non-Community Systems	
Modern Recreation Camp; per person	30
Semi-Developed Camp; per person	
a. with Pit Privies	2.5
b. with Flush Toilets	10
Hotel, Motel and Resort; per unit	75
Labor Camp; per unit	25
Recreational Vehicle Park; per pad	50
Roadway Rest Stop; per vehicle	3.5
Recreational Home Development (i.e., developments with limited water use); per connection (See Note 2 in Table 510-1)	400

(c) Where ~~the~~ a drinking water system provides water for ~~outdoor~~ irrigation use, ~~such as the irrigation of lawns and gardens,~~ Table 510-5 shall be used to determine the minimum equalization storage volumes for irrigation~~estimated in Table 510-5 shall be added to the indoor volumes estimated in Table 510-4~~. The procedure for determining the map zone and irrigated acreage for using Table 510-5 is outlined in ~~Section~~ R309-510-7(3).

TABLE 510-5
Storage Volume for ~~Outdoor~~ Irrigation Use

Map Zone	Volume Required (gallons/irrigated acre)
1	1,782
2	1,873
3	2,528
4	2,848
5	4,081
6	4,964

(3) Fire ~~Suppression~~ Flow Storage.

~~Fire suppression storage shall be required if the water system is intended to provide fire fighting water as evidenced by fire hydrants connected to the piping. The design engineer shall consult with the local fire suppression authority regarding needed fire flows in the area under consideration. This information shall be provided to the Division. Where no local fire suppression authority exists, needed fire suppression storage shall be assumed to be 120,000 gallons (1000 gpm for 2 hours).~~

(a) Fire flow storage shall be provided if fire flow is required by the local fire code official or if fire hydrants intended for fire flow are installed.

(b) Water systems shall consult with the local fire code official regarding needed fire flows in the area under consideration. The

fire flow information shall be provided to the Division during the plan review process.

(c) When direction from the local fire code official is not available, the water system shall use Appendix B of the International Fire Code, 2015 edition, for guidance. Unless otherwise approved by the local fire code official, the fire flow and fire flow duration shall not be less than 1,000 gallons per minute for 60 minutes.

(4) Emergency Storage.

Emergency storage shall be considered during the design process. The amount of emergency storage shall be based upon an assessment of risk and the desired degree of system dependability. The Director may require emergency storage when it is warranted to protect public health and welfare.

R309-510-9. Distribution System Sizing.

(1) General Requirements.

The distribution system shall be designed to ~~insure~~ensure adequate flow and that minimum water pressures as required in R309-105-9 exist at all points within the distribution system. ~~If the distribution system is equipped with fire hydrants, the Division will require a letter from the local fire authority stating the fire flow and duration required of the area to insure the system shall be designed to provide minimum pressures as required in R309-105-9 to exist at all points within the system when needed fire flows are imposed upon the peak day demand flows of the system.~~

(2) ~~Indoor Use, Estimated~~ Peak Instantaneous Demand for Indoor Water Use.

(a) Large or complex water systems may determine peak instantaneous demand using hydraulic modeling. The hydraulic model must either apply an instantaneous peaking factor to account for peak instantaneous demand or use actual peak instantaneous water flow data.

(~~a~~b) ~~For community water systems and large non-community systems~~Alternatively, the peak instantaneous demand for ~~each~~a single pipeline shall be ~~assumed~~ calculated for indoor use ~~as~~ using the following equation:

$Q = 10.8 \times N^{0.64}$

where N equals the total number of ERC's, and Q equals the total flow (gpm) delivered to the total connections served by that pipeline.

(c) For Recreational Vehicle Parks, the peak instantaneous flow for indoor use shall be based on the following:

TABLE 510-6

Peak Instantaneous Demand for Indoor Water Use for Recreational Vehicle Parks

Number of Connections	Formula
0 to 59	$Q = 4N$
60 to 239	$Q = 80 + 20N^{0.5}$
240 or greater	$Q = 1.6N$

NOTES FOR TABLE 510-6:

Q is total peak instantaneous demand (gpm). ~~and~~ N is the maximum number of connections. However, if the only water use

is via service buildings the peak instantaneous demand shall be calculated for the number of plumbing fixture units as presented in ~~Appendix E of the 2006 International Plumbing Code~~the state-adopted plumbing code.

(~~b~~d) For small non-community water systems the peak instantaneous demand ~~to be estimated~~ for indoor water use shall be calculated on a per-building basis for the number of plumbing fixture units as presented in ~~Appendix E of the 2006 International Plumbing Code~~ the state-adopted plumbing code.

(3) ~~Outdoor Use, Estimated~~ Peak Instantaneous Demand for Irrigation Use.

Peak instantaneous demand ~~to be estimated~~ for ~~outdoor~~ irrigation use is given in Table 510-7. The procedure for determining the map zone and irrigated acreage for using Table 510-7 is outlined in ~~Section~~ R309-510-7(3).

TABLE 510-7

Peak Instantaneous Demand for ~~Outdoor~~ Irrigation Use

Map Zone	Peak Instantaneous Demand (gpm/irrigated acre)
1	4.52
2	5.60
3	6.78
4	7.92
5	9.04
6	9.80

(4) Fire Flow~~s~~.

~~(a) Distribution systems shall be designed to deliver needed fire flows if fire hydrants are provided. The design engineer shall consult with the local fire suppression authority regarding needed fire flows in the area under consideration. This information shall be provided to the Division. Where no local fire suppression authority exists, needed fire flows shall be assumed to be 1000 gpm unless the local planning commission provides a letter indicating that the system will not be required to provide any fire flows, in which case fire hydrants will not be allowed to be installed on any mains.~~

~~(b) If a distribution system is equipped with fire hydrants, the system shall be designed to insure that minimum pressures required by R309-105-9 exist at all points within the system when fire flows are added to the peak day demand of the system. Refer to Section R309-510-7 for information on determining the peak day demand of the system.~~

(a) Distribution systems shall be designed to deliver needed fire flow if fire flow is required by the local fire code official or if fire hydrants intended for fire flow are provided. The distribution system shall be sized to provide minimum pressures as required by R309-105-9 to all points in the distribution system when needed fire flows are imposed during peak day demand in the distribution system.

(b) The water system shall consult with the local fire code official regarding needed fire flow in the area under consideration. The fire flow information shall be provided to the Division during the plan review process.

(c) If direction from the local fire code official is not available, the water system shall use Appendix B of the International Fire Code, 2015 edition, for guidance. Unless otherwise approved by the local fire code official, the fire flow and fire flow duration shall not be less than 1,000 gallons per minute for 60 minutes.

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