Drinking Water Board Packet

July 10, 2015

Agenda

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

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

DRINKING WATER BOARD MEETING

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

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

1. Call to Order – Chairman Hansen

2. Roll Call – Ken Bousfield

3. Approval of the Minutes:

   A. May 8, 2015

4. Financial Assistance Committee Report

   A. Status Report – Michael Grange
   B. Project Priority List – Michael Grange
   C. SRF Applications
      i. STATE:
         a) Helper City – Nathan Hall
      ii. FEDERAL:
         a) Hooper Water – Rich Peterson
      iii. OTHER:
         a) Oak City

5. Authorization to Proceed with Rulemaking Actions:
   A. Request to Adopt Amendments to R309-510, *Facility Design and Operation: Minimum Sizing Requirements* – Tammy North
   B. Request to Adopt Changes to Proposed Amendments to R309-500, *Facility Design and Operation: Plan Review, Operation and Maintenance Requirements* – Bernie Clark
   C. Request to Begin Rulemaking to Amend R309-550-10, *Facility Design and Operation: Transmission and Distribution Pipelines – Water Hauling* – Bernie Clark

6. Information Regarding Proposed Rulemaking Action:
   A. Anticipated Request for Authorization to Amend R309-520, *Facility Design and Operation: Disinfection* – Bernie Clark

7. Rural Water Association Report – Dale Pierson

8. Greendale Water Company – Michael Grange
   A. Collateral Issue – Eric Johnson
   B. Water User's Issues – Dustin Bambrough
   C. Project Need – Michael Grange
   D. Legal Issues – Bill Prater
   E. Greendale Water Company Board – Craig Collett

9. Chairman's Report

10. Directors Report

    A. Utah Tax Review Commission
    B. Natural Resources, Agriculture, and Environment Interim Committee
    C. Revenue and Taxation Interim Committee

11. Next Board Meeting:

    Date: Tuesday, September 1, 2015
    Time: 1:30 pm
    Place: The Davis Conference Center
    Zephyr Room
    1651 North 700 West
    Layton, Utah 84041

12. Other

13. 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

GARY R. HERBERT
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Department of
Environmental Quality

Alan Matheson
Executive Director

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

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

DRAFT MINUTES

- **A tour of the Woods Cross City Water Treatment Facility was conducted at 9:00 am, prior to the Board meeting. Neither discussion of any agenda item nor any Board actions were conducted during the tour.**

  Board Members present: Paul Hansen, Betty Naylor, Roger Fridal, and Brad Johnson

  Division Staff present: Ken Bousfield, Michael Grange, Nathan Hall, Rich Peterson and Marianne Booth

  Others present: Dale Pierson and Terry Smith representing the Rural Water Association of Utah (RWAU)

- **A Board Member Work Session was held at 11:00 am, prior to the Drinking Water Board Meeting. Table 2 language relative to Energy Efficiency incentives as well as cost increases due to Federal "American Iron and Steel" requirements were discussed. No Board actions were conducted during this time.**

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

  Division Staff present: Ken Bousfield, Michael Grange, Nathan Hall, Rich Peterson, and Marianne Booth

  Others present:
  - Dale Pierson, Terry Smith, and Curtis Ludvigson representing RWAU.
  - 4 Woods Cross City representatives joined the meeting at approximately 12:00 pm.

1. **Call to Order – Chairman Hansen**

Paul Hansen, Board Chairman, called the meeting to order at 1:30 pm and expressed appreciation to Woods Cross City for hosting the Drinking Water Board tour of the Woods Cross City water treatment facility, Work Session, and Board Meeting.

2. **Roll Call – Ken Bousfield**

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

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

Division Staff present: Ken Bousfield, Michael Grange, Heather Bobb, Marianne Booth, Gary Kobzeff, Nathan Hall, Rich Peterson, Bernie Clark, Ying-Ying Macauley, Julie Cobleigh

3. **Approval of the Minutes:**

A. February 26, 2015

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

B. April 17, 2015

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

4. **Election of Board Chairman and Vice-Chairman**

- Betty Naylor moved to reappoint Paul Hansen as Board Chairman. There were no other nominations made. David Sakrison seconded. The motion was carried unanimously by the Board.

- David Sakrison moved to reappoint Betty Naylor as Board Vice-Chairman. There were no other nominations made. Roger Fridal seconded. The motion was carried unanimously by the Board.

5. **Financial Assistance Committee Report**

A. Status Report – Michael Grange

Michael Grange, the Construction Assistance Section Manager with the Division of Drinking Water (DDW, the Division), reported that there is currently $2.9 million in the State SRF fund and over the course of the next year the Division is expecting an additional $5.5 million to come into the fund, for a total of approximately $8.5 million to be available for funding of projects.

Michael also reported that there is currently $31.9 million in the Federal SRF fund and over the course of the next year the Division is expecting an additional $16.4 million to come into the fund, for a total of approximately $48 million to be available for financial assistance of water system projects.

In response to questions from the Board, Michael informed them that most of the planning projects that are on the State and Federal program are underway just not complete yet. He also noted that he would email the detailed information on the outstanding planning loans 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 Eureka Town, with 50.9 points, and a project consisting of installing water line meters and two generators. The second being Liberty Pipeline, with 4.8 points, and a project consisting of a new well. The Financial Assistance Committee (FAC) recommends that the Board approve the updated project priority list.

- Paul Hansen moved to approve the updated project priority list. David Sakrison seconded. The motion was carried unanimously by the Board.

C. SRF Applications

i. STATE:

a) Cedarview Montwell: Planning – Julie Cobleigh

Representing Cedarview Montwell was Lars Powell, Chairman of the Board, and Aaron Averett of Sunrise Engineering.

Julie Cobleigh, Environmental Engineer with the Division, informed the Board that Cedarview Montwell is requesting $65,000 in assistance to create a Regional Water Master Plan. The proposed master plan will gather needed information from the surrounding water systems, identify potentially mutually beneficial improvements, and look into projected costs and feasibility of these improvements. Cedarview Montwell has a local MAGI of $54,694 or 126% of State MAGI. Based on an estimated 90 connections by May of 2015, the expected water bill is $100 or 2.19% of the local MAGI. The proposed financial assistance would increase their water bill to $101 or 2.21% of their local MAGI. The FAC recommends a $65,000 planning grant to Cedarview Montwell.

There was discussion between the Board, Division Staff, and those representing Cedarview Montwell, and it was indicated that the study would be looking at the connection points between Cedarview Montwell, Neola, Ballard, Roosevelt and Johnson water systems to determine what would be mutually beneficial to all.

- Paul Hansen moved to authorize a $65,000 planning grant to Cedarview Montwell Special Service District. David Sakrison seconded. The motion was carried unanimously by the Board.

b) Corinne City – Julie Cobleigh

Julie Cobleigh informed the Board that Corinne City (Corinne) is requesting $70,000 in assistance to upgrade their water meters to automated read meters to assist with the Division's statewide water use study. Corinne has a local MAGI of $39,861 or 98% of State MAGI. Their current water bill is approximately $47 or 1.43% of local MAGI. The proposed financial assistance would increase their water bill to $56 or 1.74% of the local MAGI. The FAC recommends that in recognition of their willingness to participate in the Division's statewide water use study; the Board authorize a $70,000 grant to Corinne City.

- David Sakrison moved to authorize a $70,000 grant to Corinne City to upgrade their water meters. Paul Hansen seconded. The motion was carried unanimously by the Board.

c) Oak City – Nathan Hall

Nathan Hall, Environmental Engineer with the Division, informed the Board that Oak City was requesting $400,000 in assistance from the Board as well as $400,000 in assistance from the Community Impact Board (CIB) to do several upgrades; however on May 7, 2015 he was informed that Oak City had pulled their application from CIB for assistance and are planning on doing a more formal engineering study before they move forward with any improvements.

There was discussion between the Board and Division Staff it was determined that tabling this item would be appropriate.

- David Sakrison moved to table this item to be brought back before the Board at a later date. Roger Fridal seconded. The motion was carried unanimously by the Board.

d) Plymouth Town – Gary Kobzeff

Representing Plymouth Town was Wes Udy, Water Operator and Council Member, and Devon Jones of Sunrise Engineering.

Gary Kobzeff, Environmental Engineer with the Division, informed the Board that Plymouth Town is requesting $880,000 in financial assistance to construct a new 500,000 gallon storage tank to assist with their current tanks, which during the summer months have historically been drained. Gary reminded the Board that at the February 26, 2015 meeting, they agreed to consider authorizing the funds at a lower interest rate and at a longer term, in order to decrease the burden on Plymouth Town. The FAC recommends the Board authorize an $880,000 construction loan to Plymouth Town with a 3.49% interest/fee per annum for 30 years.

There was discussion between the Board, Division Staff, and those representing Plymouth Town regarding the amount of connections on their system, whether the increase to the water bill would be impractical, the benefit of additional fire protection, and what their impact fees are. There was also discussion between the Board regarding what options they had based on the scope of their guidelines.

- David Sakrison moved to authorize an $880,000 construction loan to Plymouth Town at 3.49% interest/fee per annum for 30 years. Roger Fridal seconded. The motion was carried unanimously by the Board.

ii. FEDERAL:

a) Pine Meadow Mutual Water Co – Gary Kobzeff

Gary Kobzeff informed the Board that Pine Meadow Mutual Water Company (Pine Meadow) is requesting a change in scope of work as they have $240,000 in remaining funds which they would like to use to replace an existing pump station; that currently provides 45 gallons of water per minute; with a new pump station; that would be capable of pumping 250 gallons per minute, and can also be upgraded to pump 500,000 gallons per minute if needed in the future. The FAC recommends that the Board authorize the change in scope of work for Pine Meadow's remaining funds to replace an existing pump station.

- Roger Fridal moved to authorize the change in scope of work for Pine Meadow's remaining funds to replace an existing pump station. Paul Hansen seconded. The motion was carried unanimously by the Board.

b) Liberty Pipeline – Gary Kobzeff

Representing Liberty Pipeline was Pen Hollist, one of the Directors, and Fred Philpot of Lewis, Young, Robertson & Burningham, Inc.

Gary Kobzeff informed the Board that Liberty Pipeline (Liberty) is requesting $699,000 in financial assistance to construct a new 8-inch well and well house. Liberty has a local MAGI of $56,611 or 140% of the State MAGI. Their current average water bill is $29.64 or 0.63% of the local MAGI. The proposed financial assistance would increase their average water bill to $37.47 or 79% of the local MAGI. The FAC recommends that the Board authorize a $699,000 to Liberty Pipeline with 2.83% interest/fee per annum for 20 years with the condition they resolve all issues on their compliance and that a 1.0% loan origination fee of $6,990 be assessed, which can be either absorbed by the authorized loan amount or paid by Liberty Pipeline out of system funds at closing.

There was discussion between the Board, Division Staff, and those representing Liberty Pipeline regarding the need for this project, the systems IPS point reductions over the last year to bring them into compliance, the water source and water rights, what the systems impact fees are, and whether they had taken into account the Federal requirements that would be associated with this loan.

- Roger Fridal moved to authorize a $699,000 construction loan to Liberty Pipeline at 2.83% interest/fee per annum for 20 years. David Sakrison seconded. The motion was carried unanimously by the Board.

c) Eureka – Julie Cobliegh

Representing Eureka was Nick Castleton, Mayor of Eureka, Brian Underwood, City Councilman for Eureka, and Jesse Ralphs of Sunrise Engineering.

Julie Cobleigh informed the Board that Eureka is requesting $694,095 to cover an increase in costs on their current project which includes 27,000 feet of waterline replacement, 80 gate valves, adding 36 fire hydrants, adding 10,000 feet of new water line, a new water metering system, a new well and well building, upgrading a booster station, and adding a new booster station. This project has been co-funded by the Community Impact Board, USDA Rural Development, The army Corp of Engineers, and the Drinking Water Board. Eureka's has a local MAGI of $38,512 or 95% of the State MAGI. The base rate for their water bill is $56 or 1.74% of the local MAGI and they have a tiered water rate structure for overages. With the proposed financial assistance of 50% loan and 50% grant, their water bill would increase to $75 or 2.34% of the local MAGI. The FAC recommends that the Board authorize a loan of $694,095 with $694,095 in principle forgiveness.

There was discussion between the representatives for Eureka and the Board regarding the Federal loan requirements.

- Paul Hansen moved to authorize a $694,095 loan with $694,095 in principal forgiveness to Eureka. David Sakrison seconded. The motion was carried unanimously by the Board.

d) Greendale Water Co – Gary Kobzeff

Representing Greendale Water Company was Craig Collett, Manager of Greendale Water Co., DeArman Batty, Greendale Water Board, and Scott Archibald of Sunrise Engineering.

Gary Kobzeff informed the Board that Greendale Water Company (Greendale) is requesting an additional $245,000 on their current loan of $1,145,000 in order to cover an increase in costs on their current project to construct a new 50,000 gallon raw storage tank with a membrane treatment system sized for 100 gallons per minute. With the proposed funding increase their water bill would be $48.04 or 1.21 of their local MAGI. The FAC recommended that Division staff prepare funding evaluations for 20, 25, and 30 year funding terms for discussion at the Board meeting.

Greendale representatives requested the 30 year term. There was discussion between the Board, Division Staff, and those representing Greendale as to the longevity of a water membrane treatment system.

- Roger Fridal moved to authorize a $245,000 increase in loan for a total loan of $1,390,000 to Greendale Water Company at 3.92% interest for 30 years. Paul Hansen seconded. The motion was carried unanimously by the Board.

6. **Authorization to Initiate:**

A. Changes to proposed amendments to R309-500 Facility Design and Operation: Plan Review, Operation and Maintenance Requirements – Bernie Clark

Bernie Clark, Environmental Program Coordinator with DDW, informed the Board that the proposed changes are in response to comments received during the recent public comment period of February 1, 2015 to March 3, 2015. Bernie then went over an outline of each proposed change and noted that upon approval another 30 day public comment period will commence. Division staff believes that the changes to are needed and requests authorization to initiate the change in proposed rule R309-500 with the Division of Administrative Rules prior to publication in the Utah State Bulletin.

- Betty Naylor moved to authorize Division staff to initiate the change in proposed rule R309-500 with the Division of Administrative Rules prior to publication in the Utah State Bulletin. David Sakrison seconded. The motion was carried unanimously by the Board

B. Revision of R309-510 Facility Design and Operation: Minimum Sizing Requirements – Ying-Ying Macauley

Ying-Ying Macauley, Environmental Engineering Manager with DDW, informed the Board that the proposed rule changes before them today is a result of a Legislative Audit of R309-510 as well as comments from an informal comment period based on a rough draft of R309-510. Ying-Ying then went over some of the main changes Division staff is proposing and informed noted that upon approval a 30 day public comment period will commence. Division staff believes that the proposed changes R309-510 are substantive and requests authorization to start the rulemaking process and file the proposed rule amendments for publication in the Utah State Bulletin.

There was discussion between Ying-Ying and the Board regarding "recreational home development" in Table 510-1 and whether the proposed definition will be sufficient. Ying-Ying noted that the term "developments with limited-water use" was added to provide clarification, noting that Division staff checked the current plumbing code as well to determine the limit of plumbing fixture units for typical homes in "developments with limited water use".

- David Sakrison moved to authorize Division staff to start the rulemaking process and file the proposed rule amendments for publication in the Utah State Bulletin. Roger Fridal seconded. The motion was carried unanimously by the Board

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

Agenda items 6(C) and 6(D) were presented together and one motion was made for both items.

Michael Grange began by informing the Board that, as has been discussed in past Board Working Sessions and Board Meetings, the Division has identified language to modify Rule

R309-700 and R309-705 in order to incorporate energy efficiency incentives into calculating financial assistance. Michael stated that Division staff has added definitions for "energy audit" and "energy efficiency incentive", as well as adding a sentence to Table 2 making is so that energy efficiency criteria can be applied to financial assistance determinations, with up to a 0.5% interest rate reduction based on specified implementation. Division staff recommends that the Board authorize them to start the rulemaking process with the proposed changes for both R309-700 and R309-705.

- Betty Naylor moved to authorize Division staff to start the rulemaking process with the proposed changes for R309-700 and R309-705. David Sakrison seconded. The motion was carried unanimously by the Board

7. **Rural Water Association Report – Dale Pierson**

Dale Pierson, Executive Director of RWAU, thanked the Board for the mutually beneficial relationship between RWAU, the Board, and Division staff. He then congratulated Paul Hansen and Betty Naylor on their re-election to Board Chair and Vice-Chair.

Terry Smith, Management Technician with RWAU, informed the Board that he has been working on a rate studies for Levan, Johnson Water, Willard City, and Minersville Town. He also stated that he is going to be doing disinfection training at the Boards and Council meeting as well as a presentation at the Utah Local Government Trust meeting in the next few weeks.

Brian Pattee, Compliance Circuit Writer with RWAU, reported that over the last year Snow Basin, Pine Valley Irrigation, Summit Culinary Water, Thompson Springs, and other systems, have come into compliance with his assistance. He also reported that he had been contacted by a small system asking for assistance to ensure that when they grow into a public water system they have everything already in compliance, and by a water system having cross connection issues with a trailer park that they were able to resolve.

Curt Ludvigson, Development Specialist for RWAU, reported on the newly added Commissioners, Planners, Zoning Administrators, planning Commissions, and Health Departments session at the 2015 RWAU Annual Conference that was held in St. George. He stated that they received great response from the session and RWAU is planning on holding a similar session at their 2015 Fall Conference in Layton. Curt also reported that he and John Chartier, P.E., District Engineer with DEQ, are continuing their work on what they call the "non-public drinking water system rule" in Sanpete, Sevier, Piute, Wayne, Millard, and Juab counties; and once in place in those counties, plan to start working with other counties around the state.

8. **Chairman's Report**

In the interest of time this item was skipped.

9. **Directors Report**

A. Emerging Contaminants in Drinking Water

Ken Bousfield, Division Director of DDW, reported to the Board that there are new developments related to algae blooms on surface water sources and the EPA is going to be proposing standards and limits for cyanobacteria. He also reported the DDW will be having meetings with key stakeholders, particularly hospital associations, regarding legionella.

B. Recent press releases regarding State source water needs and capacities

Ken Bousfield started out by mentioning the recent news coverage of a legislative audit done on Water Resources and how they establish source capacity needs. He then informed the Board that he, Brad Johnson, Deputy Director of the Department of Environmental Quality and Ying-Ying Macauley, Division Engineering Manager, will be meeting with Eric Millis, Director of the Division of Water Resources, Kent Jones, Director of the Division of Water Rights, and Mike Styler, Director of the Department of Natural Resources, on Tuesday May 26, 2015. The purpose of the meeting is to collaborate on issues related to the Division of Drinking Water's Legislative Audit on its Source Capacity Rule and the Division of Water Resources Legislative Audit on its Projections of Utah's Water Needs to ensure that a unified plan will be presented to our joint Legislative Appropriations Committee in January 2016.

C. Other

Ken also reported that there is going to be a Legislative Tax Review Commission Meeting on Thursday, May 28, 2015 to discuss DDW's use of the portion of the .25% of the 1% sales tax that goes towards funding the State SRF Program.

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**

Paul Hansen adjourned the meeting @ 3:25 pm.

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(A)

Will be available as a handout at the
7/10/2015 Board Meeting.

Agenda Item 4(B)

Project Priority List
Presented to the Drinking Water Board
July 10, 2015

DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST

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

Hooper Water is being added to the Project Priority List with 6.6 points. Their project consists of DIP replacement.

Helper City is being added to the Project priority List with 17.0 points. Their project consists of replacement of their distribution system.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board approve the updated Project Priority List.

May 21, 2015

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$233,454,540** **Total Needs, incl. Recent funding** **$252,276,531** **Authorized** **$223,063,081**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
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				17.0	Helper City	Carbon	2,201	Replace Distribution System	$3,535,354		
N				10.7	Plymouth	Box Elder	411	.5-MG tank	$880,303	880,303	
N				6.6	Hooper Water Improvement District	Weber	19,726	Water Line Replacement	$6,195,503	6,183,702	
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				50.9	Eureka City	Juab	669	Waterline, meters, 2 generators	$7,417,246.00	701,106	
A				50.0	Boulder Farmstead	Garfield	226	Water line, spring upgrades and chlorination	$2,000,000	$2,000,000	$2,000,000
N				22.9	Taylor West Weber ID	Weber	6,927	3-MG tank, transmission line, new well	$7,233,375	7,144,664	$7,636,391
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				4.8	Liberty Pipeline Company	Weber	2,504	New Well	$743,954	$698,647	$699,000

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		

May 21, 2015

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$233,454,540** **Total Needs, incl. Recent funding** **$252,276,531** **Authorized** **$223,063,081**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
P				17.9	Wendover	Tooele	1,600	Water line upgrades	$833,000		
P				17.5	Draper City	Salt Lake	15,000	Storage and distribution upgrades	$35,789,000		
P				17.1	East Zion SSD	Kane	49	Water line	$128,876	$128,876	
P				16.4	Eastland SSD	San Juan	60	New well for back up purposes	$500,000		
P				16.4	Neola	Duchesne	840	Waterline upgrades, storage, source improvements	$3,607,592	$3,607,592	
P				15.3	Newton Town	Cache	799	Spring rehabilitation, water line upgrades	$1,581,500		
P				15.3	South Rim Water	Tooele	264	Well equipment and house, new tank	$600,000		
P				15.2	Midvalley Estates Water Company	Iron	700	Source, storage, distribution	$500,000		
P				15.1	Syracuse	Davis	25,200	Water line upgrades	$1,589,756	$1,589,756	
P				14.7	Central Waterworks Co.	Sevier	450	Storage and distribution upgrades	$1,400,000		
P				14.0	Herriman	Salt Lake	18,431	Booster Pump, water line	$2,050,000		
P				13.7	Cornish Town	Cache	300	Connect to Lewiston, rehab well	$1,226,263		
P				13.7	Morgan City	Morgan	3,250	Water line upgrades	$692,026		
P				13.5	Riverdale	Weber	8,200	New well and tank, water line upgrades	$2,050,000		
P				13.3	Richfield City	Sevier	7,111	System repairs	$2,722,000		
P				13.0	Uintah City	Weber	1,300	Treatment	$1,063,000		
P				12.8	Centerfield	Sanpete	1,200	New tank, upgrade water lines	$3,600,000		
P				12.6	Enterprise	Washington	1,500	New tank, upgrade water lines	$1,917,100		
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		

May 21, 2015

Utah Federal SRF Program

Project Priority List

											Authorized
				Priority Points	Total Unmet Needs:		$233,454,540		Total Needs, incl. Recent funding	$252,276,531	$223,063,081
	date	type	%Green		System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
P				8.3	Hurricane	Washington	8,000	Water line replacement and new tank	$5,047,899		
P				7.6	Harmony Farms Water User Assoc.	Washington	300	Water line Replacement	$3,000		
P				6.8	Hooper Water Improvement District	Weber	16,520	Storage, water lines, treatment	$2,887,000		
P				6.7	Centerville City	Davis	16,000	Replacement well, water line upgrades	$2,965,000		
P				6.1	Marble Hill Water Company	Box Elder	250	New storage tank	$225,000		
P				4.5	Peterson Pipeline Association	Morgan	450	Source, storage, distribution	$1,700,000		
P				4.5	Perry City	Box Elder	4,603	Source, storage, distribution	$4,782,220		
P				3.9	Wolf Creek Country Club	Weber	2,000	Water line	$180,000		
P				3.4	Highland City	Utah	15,066	New well houses	$650,000		

Agenda Item 4(C)(i)(a)

Helper City
Presented to Drinking Water Board
July 10, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST

Helper City is requesting $3,500,000 in financial assistance from the Drinking Water Board to replace approximately 5.3 miles of 8-inch and 12-inch water line in their water system. Since 2012 Helper has replaced about 2/3 of the distribution water lines in their water system using Community Impact Board funding. The proposed project is to replace the remaining water lines in the system at a total estimated cost of $3,500,000.

STAFF COMMENTS:

Based on information from the Utah State Tax commission, the 2013 MAGI for Helper City is $41,307, which is 102% of the State MAGI of $40,489. The current average monthly water bill is calculated as $39.93, or 1.16% of the local MAGI.

The base evaluation returned an interest rate of 3.21% for 20 years and resulted in a water bill of 2.41% of the local MAGI and therefore Helper qualifies for additional subsidization. The base evaluation and two other options with grant and zero percent interest are outlined in the table below, with the staff recommendation shown in bold.

	Description	Repayable Loan Amount	Interest Rate	Term	Principal Forgiveness	Monthly Water Rate	% Local MAGI
1	Base Evaluat.	$3.5 M	3.21%	20 yrs	$0	$82.86	2.41%
2	**70 / 30**	**$2.45 M**	**0.0%**	**30 yrs**	**$1.05 M**	**$71.36**	**2.07%**
3	50 / 50	$1.75 M	0.0%	30 yrs	$1.75 M	$69.67	2.02%

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a $3,500,000 construction loan at 0.0% interest for 30 years to Helper City, with $1,050,000 in principal forgiveness, which results in a repayable loan amount of $2,450,000. The committee also recommended the project be funded through the State fund.

APPLICANT'S LOCATION:

Helper City is located in Carbon County, approximately 10 miles north of Price.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

Replace approximately 28,000 feet of 8-inch and 12-inch C-900 water line and associated valves, fire hydrants, service connections and meters.

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	2201	1319
Projected	2045	2967	1778

IMPLEMENTATION SCHEDULE:

Apply to DWB for Funding:	May 2015
DWB Funding Authorization:	July 2015
Plans already approved and project bid:	July 2015
Loan Closing:	July 2015
Begin Construction:	July 2015
Complete Construction:	July 2017

COST ESTIMATE:

Construction (including 10% Contigency):	$3,185,000
Engineering, Environmental and CM:	$300,000
Legal/Bonding:	$12,500
Administrative:	$2,500
Total Cost:	$3,500,000

CONTACT INFORMATION:

APPLICANT:	Helper City 73 South Main Helper, UT 84526 435-472-5391 jonaskerl@helpercity.net
PRESIDING OFFICIAL & CONTACT PERSON:	Edward Chavez, Mayor 73 South Main Helper, UT 84526 435-650-1918 mayor@helpercity.net
Treasurer/Recorder	Jona Skerl 73 South Main Helper, UT 84526 435-472-5391 jonaskerl@helpercity.net
CONSULTING ENGINEER:	Chad Brown Franson Civil Engineers 1276 South 820 East, Suite 100 American Fork, UT 84003 801-756-0309 cbrown@fransoncivil.com
CITY ATTORNEY	Angela Sampino-Gurley Sampinos Legal, PLLC 190 North Carbon Avenue Price, UT 84501 435-820-0403 asampinos@etv.net

Edocs: Water Systems/04 - Carbon/04004 - HELPER CITY/Construction Assistance/3F238

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Helper
COUNTY: Carbon
PROJECT DESCRIPTION: Distribution Lines

FUNDING SOURCE: Federal SRF

70 % Loan & 30 % P.F.

ESTIMATED POPULATION:	2,201	NO. OF CONNECTIONS:	1319 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$39.93 *			PROJECT TOTAL:	$3,500,000
CURRENT % OF AGI:	1.16%	FINANCIAL PTS:	35	LOAN AMOUNT:	$2,450,000
ESTIMATED MEDIAN AGI:	$41,307			PRINC. FORGIVE.:	$1,050,000
STATE AGI:	$40,489			TOTAL REQUEST:	$3,500,000
SYSTEM % OF STATE AGI:	102%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.48%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.48%		0.00%
REQUIRED DEBT SERVICE:	$81,666.67	$150,055.56		$81,666.67
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$8,166.67	$15,005.56		$8,166.67
ANNUAL NEW DEBT PER CONNECTION:	$68.11	$125.14		$68.11
O & M + FUNDED DEPRECIATION:	$421,750.00	$421,750.00		$421,750.00
OTHER DEBT + COVERAGE:	$528,750.00	$528,750.00		$528,750.00
REPLACEMENT RESERVE ACCOUNT:	$46,320.83	$49,740.28		$46,320.83
ANNUAL EXPENSES PER CONNECTION:	$755.74	$758.33		$755.74
TOTAL SYSTEM EXPENSES	$1,086,654.17	$1,165,301.39		$1,086,654.17
TAX REVENUE:	$6,000.00	$6,000.00		$6,000.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$71.36	$76.33		$71.36
% OF ADJUSTED GROSS INCOME:	2.07%	2.22%		2.07%

* Equivalent Residential Connections

R309-700-5

Helper
Carbon
May 18, 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	
	$2,654		
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	
	102%		
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	
	2.07%		
5. SPECIAL INCENTIVE POINTS Applicant: (Mark all that apply)			
A. has a replacement fund receiving annual deposits of 5% of the system's drinking water budget been established, and has already accumulated a minimum of 10% of said annual DW budget in this reserve fund.		5	
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		35	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Helper

PROPOSED BOND REPAYMENT SCHEDULE

70 % Loan & 30 % P.F.

PRINCIPAL	$2,450,000.00	ANTICIPATED CLOSING DATE	25-Jul-15
INTEREST	0.00%	FIRST P&I PAYMENT DUE	01-Jul-16
TERM	30	REVENUE BOND	
NOMIN. PAYMENT	$81,666.67	PRINC. FORGIVE.:	$1,050,000.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$2,450,000.00		$0.00	*	$0.00	$0.00	$2,450,000.00	0
2016	$2,450,000.00		$82,000.00		$82,000.00	$0.00	$2,368,000.00	1
2017	$2,368,000.00		$82,000.00		$82,000.00	$0.00	$2,286,000.00	2
2018	$2,286,000.00		$82,000.00		$82,000.00	$0.00	$2,204,000.00	3
2019	$2,204,000.00		$82,000.00		$82,000.00	$0.00	$2,122,000.00	4
2020	$2,122,000.00		$82,000.00		$82,000.00	$0.00	$2,040,000.00	5
2021	$2,040,000.00		$82,000.00		$82,000.00	$0.00	$1,958,000.00	6
2022	$1,958,000.00		$82,000.00		$82,000.00	$0.00	$1,876,000.00	7
2023	$1,876,000.00		$82,000.00		$82,000.00	$0.00	$1,794,000.00	8
2024	$1,794,000.00		$82,000.00		$82,000.00	$0.00	$1,712,000.00	9
2025	$1,712,000.00		$82,000.00		$82,000.00	$0.00	$1,630,000.00	10
2026	$1,630,000.00		$82,000.00		$82,000.00	$0.00	$1,548,000.00	11
2027	$1,548,000.00		$81,000.00		$81,000.00	$0.00	$1,467,000.00	12
2028	$1,467,000.00		$82,000.00		$82,000.00	$0.00	$1,385,000.00	13
2029	$1,385,000.00		$81,000.00		$81,000.00	$0.00	$1,304,000.00	14
2030	$1,304,000.00		$82,000.00		$82,000.00	$0.00	$1,222,000.00	15
2031	$1,222,000.00		$81,000.00		$81,000.00	$0.00	$1,141,000.00	16
2032	$1,141,000.00		$82,000.00		$82,000.00	$0.00	$1,059,000.00	17
2033	$1,059,000.00		$81,000.00		$81,000.00	$0.00	$978,000.00	18
2034	$978,000.00		$82,000.00		$82,000.00	$0.00	$896,000.00	19
2035	$896,000.00		$81,000.00		$81,000.00	$0.00	$815,000.00	20
2036	$815,000.00		$82,000.00		$82,000.00	$0.00	$733,000.00	21
2037	$733,000.00		$81,000.00		$81,000.00	$0.00	$652,000.00	22
2038	$652,000.00		$82,000.00		$82,000.00	$0.00	$570,000.00	23
2039	$570,000.00		$81,000.00		$81,000.00	$0.00	$489,000.00	24
2040	$489,000.00		$82,000.00		$82,000.00	$0.00	$407,000.00	25
2041	$407,000.00		$81,000.00		$81,000.00	$0.00	$326,000.00	26
2042	$326,000.00		$82,000.00		$82,000.00	$0.00	$244,000.00	27
2043	$244,000.00		$81,000.00		$81,000.00	$0.00	$163,000.00	28
2044	$163,000.00		$82,000.00		$82,000.00	$0.00	$81,000.00	29
2045	$81,000.00		$81,000.00		$81,000.00	$0.00	$0.00	30
			$1,635,000.00		$1,635,000.00	$0.00		

*Interest Only Payment

Helper

DWB Loan Terms		
Local Share (total):	$	-
Other Agency Funding:	$	-
DWB Grant Amount:	$	1,050,000
DWB Loan Amount:	$	2,450,000
DWB Loan Term:		30
DWB Loan Interest:		**0.00%**
DWB Loan Payment:	$	81,667

DW Expenses (Estimated)		
Proposed Facility Capital Cost:		#VALUE!
Existing Facility O&M Expense:	$	421,750
Proposed Facility O&M Expense:	$	421,750
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	423,000

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		1,319
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	-
Current Monthly User Charge:	$	37.22
Needed Average Monthly User Charge:	$	68.65

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%	13	1,319	589,166	-	6,000	595,166	**-**	**-**	2,450,000	-	-	423,000	421,750	844,750	-
1	1.0%	13	1,332	1,097,364	-	6,000	1,103,364	**82,000**	**8,167**	2,368,000	82,000	-	423,000	421,750	934,917	1.35
2	1.0%	14	1,346	1,108,898	-	6,000	1,114,898	**82,000**	**8,167**	2,286,000	82,000	-	423,000	425,968	939,134	1.36
3	1.0%	13	1,359	1,119,608	-	6,000	1,125,608	**82,000**	**8,167**	2,204,000	82,000	-	423,000	430,227	943,394	1.38
4	1.0%	14	1,373	1,131,142	-	6,000	1,137,142	**82,000**	**8,167**	2,122,000	82,000	-	423,000	434,529	947,696	1.39
5	1.0%	13	1,386	1,141,852	-	6,000	1,147,852	**82,000**	**8,167**	2,040,000	82,000	-	423,000	438,875	952,041	1.40
6	1.0%	14	1,400	1,153,386	-	6,000	1,159,386	**82,000**	**8,167**	1,958,000	82,000	-	423,000	443,263	956,430	1.42
7	1.0%	14	1,414	1,164,920	-	6,000	1,170,920	**82,000**	**8,167**	1,876,000	82,000	-	423,000	447,696	960,863	1.43
8	1.0%	14	1,428	1,176,453	-	6,000	1,182,453	**82,000**	**8,167**	1,794,000	82,000	-	423,000	452,173	965,340	1.45
9	1.0%	15	1,443	1,188,811	-	6,000	1,194,811	**82,000**	**8,167**	1,712,000	82,000	-	423,000	456,695	969,861	1.46
10	1.0%	14	1,457	1,200,345	-	6,000	1,206,345	**82,000**	**8,167**	1,630,000	82,000	-	423,000	461,262	974,428	1.48
11	1.0%	15	1,472	1,212,703	-	6,000	1,218,703	**82,000**		1,548,000	82,000	-	423,000	465,874	970,874	1.49
12	1.0%	14	1,486	1,224,237	-	6,000	1,230,237	**81,000**		1,467,000	81,000	-	423,000	470,533	974,533	1.51
13	1.0%	15	1,501	1,236,594	-	6,000	1,242,594	**82,000**		1,385,000	82,000	-	423,000	475,238	980,238	1.52
14	1.0%	15	1,516	1,248,952	-	6,000	1,254,952	**81,000**		1,304,000	81,000	-	423,000	479,991	983,991	1.54
15	1.0%	15	1,531	1,261,310	-	6,000	1,267,310	**82,000**		1,222,000	82,000	-	423,000	484,791	989,791	1.55
16	1.0%	16	1,547	1,274,491	-	6,000	1,280,491	**81,000**		1,141,000	81,000	-	423,000	489,639	993,639	1.57
17	1.0%	15	1,562	1,286,849	-	6,000	1,292,849	**82,000**		1,059,000	82,000	-	423,000	494,535	999,535	1.58
18	1.0%	16	1,578	1,300,031	-	6,000	1,306,031	**81,000**		978,000	81,000	-	423,000	499,480	1,003,480	1.60
19	1.0%	15	1,593	1,312,388	-	6,000	1,318,388	**82,000**		896,000	82,000	-	423,000	504,475	1,009,475	1.61
20	1.0%	16	1,609	1,325,570	-	6,000	1,331,570	**81,000**		815,000	81,000	-	423,000	509,520	1,013,520	1.63
21	1.0%	17	1,626	1,339,575	-	6,000	1,345,575	**82,000**		733,000	82,000	-	423,000	514,615	1,019,615	1.65
22	1.0%	16	1,642	1,352,757	-	6,000	1,358,757	**81,000**		652,000	81,000	-	423,000	519,761	1,023,761	1.66
23	1.0%	16	1,658	1,365,938	-	6,000	1,371,938	**82,000**		570,000	82,000	-	423,000	524,959	1,029,959	1.68
24	1.0%	17	1,675	1,379,944	-	6,000	1,385,944	**81,000**		489,000	81,000	-	423,000	530,209	1,034,209	1.70
25	1.0%	17	1,692	1,393,949	-	6,000	1,399,949	**82,000**		407,000	82,000	-	423,000	535,511	1,040,511	1.71
26	1.0%	16	1,708	1,407,131	-	6,000	1,413,131	**81,000**		326,000	81,000	-	423,000	540,866	1,044,866	1.73
27	1.0%	18	1,726	1,421,960	-	6,000	1,427,960	**82,000**		244,000	82,000	-	423,000	546,274	1,051,274	1.75
28	1.0%	17	1,743	1,435,965	-	6,000	1,441,965	**81,000**		163,000	81,000	-	423,000	551,737	1,055,737	1.77
29	1.0%	17	1,760	1,449,971	-	6,000	1,455,971	**82,000**		81,000	82,000	-	423,000	557,254	1,062,254	1.78
30	1.0%	18	1,778	1,464,800	-	6,000	1,470,800	**81,000**		-	81,000	-	423,000	562,827	1,066,827	1.80
									Total Paid in Debt Service =		2,450,000	-				

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Helper
COUNTY: Carbon
PROJECT DESCRIPTION: Distribution Lines

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	2,201	NO. OF CONNECTIONS:	1319 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$39.93 *			PROJECT TOTAL:	$3,500,000
CURRENT % OF AGI:	1.16%	FINANCIAL PTS:	35	LOAN AMOUNT:	$3,500,000
ESTIMATED MEDIAN AGI:	$41,307			PRINC. FORGIVE.:	$0
STATE AGI:	$40,489			TOTAL REQUEST:	$3,500,000
SYSTEM % OF STATE AGI:	102%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.48%		3.21%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.48%		3.21%
REQUIRED DEBT SERVICE:	$175,000.00	$268,600.41		$239,846.23
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$17,500.00	$26,860.04		$23,984.62
ANNUAL NEW DEBT PER CONNECTION:	$145.94	$224.00		$200.02
O & M + FUNDED DEPRECIATION:	$421,750.00	$421,750.00		$421,750.00
OTHER DEBT + COVERAGE:	$528,750.00	$528,750.00		$528,750.00
REPLACEMENT RESERVE ACCOUNT:	$50,987.50	$55,667.52		$54,229.81
ANNUAL EXPENSES PER CONNECTION:	$759.28	$762.83		$761.74
TOTAL SYSTEM EXPENSES	$1,193,987.50	$1,301,627.97		$1,268,560.66
TAX REVENUE:	$6,000.00	$6,000.00		$6,000.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$78.15	$84.95		$82.86
% OF ADJUSTED GROSS INCOME:	2.27%	2.47%		2.41%

* Equivalent Residential Connections

Helper

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$3,500,000.00	ANTICIPATED CLOSING DATE	25-Jul-15
INTEREST	3.21%	FIRST P&I PAYMENT DUE	01-Jul-16
TERM	20	REVENUE BOND	
NOMIN. PAYMENT	$239,846.23	PRINC. FORGIVE.:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$3,500,000.00		($7,490.00)	*	$0.00	($7,490.00)	$3,500,000.00	0
2016	$3,500,000.00		$239,350.00		$127,000.00	$112,350.00	$3,373,000.00	1
2017	$3,373,000.00		$240,273.30		$132,000.00	$108,273.30	$3,241,000.00	2
2018	$3,241,000.00		$240,036.10		$136,000.00	$104,036.10	$3,105,000.00	3
2019	$3,105,000.00		$239,670.50		$140,000.00	$99,670.50	$2,965,000.00	4
2020	$2,965,000.00		$240,176.50		$145,000.00	$95,176.50	$2,820,000.00	5
2021	$2,820,000.00		$239,522.00		$149,000.00	$90,522.00	$2,671,000.00	6
2022	$2,671,000.00		$239,739.10		$154,000.00	$85,739.10	$2,517,000.00	7
2023	$2,517,000.00		$239,795.70		$159,000.00	$80,795.70	$2,358,000.00	8
2024	$2,358,000.00		$239,691.80		$164,000.00	$75,691.80	$2,194,000.00	9
2025	$2,194,000.00		$239,427.40		$169,000.00	$70,427.40	$2,025,000.00	10
2026	$2,025,000.00		$240,002.50		$175,000.00	$65,002.50	$1,850,000.00	11
2027	$1,850,000.00		$240,385.00		$181,000.00	$59,385.00	$1,669,000.00	12
2028	$1,669,000.00		$239,574.90		$186,000.00	$53,574.90	$1,483,000.00	13
2029	$1,483,000.00		$239,604.30		$192,000.00	$47,604.30	$1,291,000.00	14
2030	$1,291,000.00		$240,441.10		$199,000.00	$41,441.10	$1,092,000.00	15
2031	$1,092,000.00		$240,053.20		$205,000.00	$35,053.20	$887,000.00	16
2032	$887,000.00		$239,472.70		$211,000.00	$28,472.70	$676,000.00	17
2033	$676,000.00		$239,699.60		$218,000.00	$21,699.60	$458,000.00	18
2034	$458,000.00		$239,701.80		$225,000.00	$14,701.80	$233,000.00	19
2035	$233,000.00		$240,479.30		$233,000.00	$7,479.30	$0.00	20
			$4,789,606.80		$3,500,000.00	$1,289,606.80		

*Interest Only Payment

Helper

DWB Loan Terms		
Local Share (total):	$	-
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	3,500,000
DWB Loan Term:		20
DWB Loan Interest:		**3.21%**
DWB Loan Payment:	$	239,846

DW Expenses (Estimated)		
Proposed Facility Capital Cost:		#VALUE!
Existing Facility O&M Expense:	$	421,750
Proposed Facility O&M Expense:	$	421,750
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	423,000

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		1,319
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	-
Current Monthly User Charge:	$	37.22
Needed Average Monthly User Charge:	$	80.15

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%	13	1,319	589,166	-	6,000	595,166	**-**	**-**	3,500,000	-	-	423,000	421,750	844,750	-
1	1.0%	13	1,332	1,281,064	-	6,000	1,287,064	**239,350**	**23,985**	3,373,000	127,000	112,350	423,000	421,750	1,108,085	1.31
2	1.0%	14	1,346	1,294,528	-	6,000	1,300,528	**240,273**	**23,985**	3,241,000	132,000	108,273	423,000	425,968	1,113,225	1.32
3	1.0%	13	1,359	1,307,031	-	6,000	1,313,031	**240,036**	**23,985**	3,105,000	136,000	104,036	423,000	430,227	1,117,248	1.33
4	1.0%	14	1,373	1,320,496	-	6,000	1,326,496	**239,671**	**23,985**	2,965,000	140,000	99,671	423,000	434,529	1,121,185	1.35
5	1.0%	13	1,386	1,332,999	-	6,000	1,338,999	**240,177**	**23,985**	2,820,000	145,000	95,177	423,000	438,875	1,126,036	1.36
6	1.0%	14	1,400	1,346,463	-	6,000	1,352,463	**239,522**	**23,985**	2,671,000	149,000	90,522	423,000	443,263	1,129,770	1.37
7	1.0%	14	1,414	1,359,928	-	6,000	1,365,928	**239,739**	**23,985**	2,517,000	154,000	85,739	423,000	447,696	1,134,420	1.39
8	1.0%	14	1,428	1,373,392	-	6,000	1,379,392	**239,796**	**23,985**	2,358,000	159,000	80,796	423,000	452,173	1,138,953	1.40
9	1.0%	15	1,443	1,387,819	-	6,000	1,393,819	**239,692**	**23,985**	2,194,000	164,000	75,692	423,000	456,695	1,143,371	1.41
10	1.0%	14	1,457	1,401,283	-	6,000	1,407,283	**239,427**	**23,985**	2,025,000	169,000	70,427	423,000	461,262	1,147,674	1.43
11	1.0%	15	1,472	1,415,710	-	6,000	1,421,710	**240,003**		1,850,000	175,000	65,003	423,000	465,874	1,128,877	1.44
12	1.0%	14	1,486	1,429,174	-	6,000	1,435,174	**240,385**		1,669,000	181,000	59,385	423,000	470,533	1,133,918	1.45
13	1.0%	15	1,501	1,443,601	-	6,000	1,449,601	**239,575**		1,483,000	186,000	53,575	423,000	475,238	1,137,813	1.47
14	1.0%	15	1,516	1,458,027	-	6,000	1,464,027	**239,604**		1,291,000	192,000	47,604	423,000	479,991	1,142,595	1.49
15	1.0%	15	1,531	1,472,454	-	6,000	1,478,454	**240,441**		1,092,000	199,000	41,441	423,000	484,791	1,148,232	1.50
16	1.0%	16	1,547	1,487,842	-	6,000	1,493,842	**240,053**		887,000	205,000	35,053	423,000	489,639	1,152,692	1.51
17	1.0%	15	1,562	1,502,268	-	6,000	1,508,268	**239,473**		676,000	211,000	28,473	423,000	494,535	1,157,008	1.53
18	1.0%	16	1,578	1,517,656	-	6,000	1,523,656	**239,700**		458,000	218,000	21,700	423,000	499,480	1,162,180	1.55
19	1.0%	15	1,593	1,532,083	-	6,000	1,538,083	**239,702**		233,000	225,000	14,702	423,000	504,475	1,167,177	1.56
20	1.0%	16	1,609	1,547,471	-	6,000	1,553,471	**240,479**		-	233,000	7,479	423,000	509,520	1,172,999	1.57
									Total Paid in Debt Service =		3,500,000	1,297,097				

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Helper
COUNTY: Carbon
PROJECT DESCRIPTION: Distribution Lines

FUNDING SOURCE: Federal SRF

50 % Loan & 50 % P.F.

ESTIMATED POPULATION:	2,201	NO. OF CONNECTIONS:	1319 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$39.93 *			PROJECT TOTAL:	$3,500,000
CURRENT % OF AGI:	1.16%	FINANCIAL PTS:	35	LOAN AMOUNT:	$1,750,000
ESTIMATED MEDIAN AGI:	$41,307			PRINC. FORGIVE.:	$1,750,000
STATE AGI:	$40,489			TOTAL REQUEST:	$3,500,000
SYSTEM % OF STATE AGI:	102%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.48%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.48%		0.00%
REQUIRED DEBT SERVICE:	$58,333.33	$107,182.54		$58,333.33
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$5,833.33	$10,718.25		$5,833.33
ANNUAL NEW DEBT PER CONNECTION:	$48.65	$89.39		$48.65
O & M + FUNDED DEPRECIATION:	$421,750.00	$421,750.00		$421,750.00
OTHER DEBT + COVERAGE:	$528,750.00	$528,750.00		$528,750.00
REPLACEMENT RESERVE ACCOUNT:	$45,154.17	$47,596.63		$45,154.17
ANNUAL EXPENSES PER CONNECTION:	$754.86	$756.71		$754.86
TOTAL SYSTEM EXPENSES	$1,059,820.83	$1,115,997.42		$1,059,820.83
TAX REVENUE:	$6,000.00	$6,000.00		$6,000.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$69.67	$73.22		$69.67
% OF ADJUSTED GROSS INCOME:	2.02%	2.13%		2.02%

* Equivalent Residential Connections

Helper

PROPOSED BOND REPAYMENT SCHEDULE

50 % Loan & 50 % P.F.

PRINCIPAL	$1,750,000.00	ANTICIPATED CLOSING DATE	25-Jul-15
INTEREST	0.00%	FIRST P&I PAYMENT DUE	01-Jul-16
TERM	30	REVENUE BOND	
NOMIN. PAYMENT	$58,333.33	PRINC. FORGIVE.:	$1,750,000.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2015	$1,750,000.00		$0.00	*	$0.00	$0.00	$1,750,000.00	0
2016	$1,750,000.00		$58,000.00		$58,000.00	$0.00	$1,692,000.00	1
2017	$1,692,000.00		$58,000.00		$58,000.00	$0.00	$1,634,000.00	2
2018	$1,634,000.00		$58,000.00		$58,000.00	$0.00	$1,576,000.00	3
2019	$1,576,000.00		$58,000.00		$58,000.00	$0.00	$1,518,000.00	4
2020	$1,518,000.00		$58,000.00		$58,000.00	$0.00	$1,460,000.00	5
2021	$1,460,000.00		$58,000.00		$58,000.00	$0.00	$1,402,000.00	6
2022	$1,402,000.00		$58,000.00		$58,000.00	$0.00	$1,344,000.00	7
2023	$1,344,000.00		$58,000.00		$58,000.00	$0.00	$1,286,000.00	8
2024	$1,286,000.00		$58,000.00		$58,000.00	$0.00	$1,228,000.00	9
2025	$1,228,000.00		$58,000.00		$58,000.00	$0.00	$1,170,000.00	10
2026	$1,170,000.00		$59,000.00		$59,000.00	$0.00	$1,111,000.00	11
2027	$1,111,000.00		$58,000.00		$58,000.00	$0.00	$1,053,000.00	12
2028	$1,053,000.00		$59,000.00		$59,000.00	$0.00	$994,000.00	13
2029	$994,000.00		$58,000.00		$58,000.00	$0.00	$936,000.00	14
2030	$936,000.00		$59,000.00		$59,000.00	$0.00	$877,000.00	15
2031	$877,000.00		$58,000.00		$58,000.00	$0.00	$819,000.00	16
2032	$819,000.00		$59,000.00		$59,000.00	$0.00	$760,000.00	17
2033	$760,000.00		$58,000.00		$58,000.00	$0.00	$702,000.00	18
2034	$702,000.00		$59,000.00		$59,000.00	$0.00	$643,000.00	19
2035	$643,000.00		$58,000.00		$58,000.00	$0.00	$585,000.00	20
2036	$585,000.00		$59,000.00		$59,000.00	$0.00	$526,000.00	21
2037	$526,000.00		$58,000.00		$58,000.00	$0.00	$468,000.00	22
2038	$468,000.00		$59,000.00		$59,000.00	$0.00	$409,000.00	23
2039	$409,000.00		$58,000.00		$58,000.00	$0.00	$351,000.00	24
2040	$351,000.00		$59,000.00		$59,000.00	$0.00	$292,000.00	25
2041	$292,000.00		$58,000.00		$58,000.00	$0.00	$234,000.00	26
2042	$234,000.00		$59,000.00		$59,000.00	$0.00	$175,000.00	27
2043	$175,000.00		$58,000.00		$58,000.00	$0.00	$117,000.00	28
2044	$117,000.00		$59,000.00		$59,000.00	$0.00	$58,000.00	29
2045	$58,000.00		$58,000.00		$58,000.00	$0.00	$0.00	30
			$1,165,000.00		$1,165,000.00	$0.00		

*Interest Only Payment

Helper

DWB Loan Terms		
Local Share (total):	$	-
Other Agency Funding:	$	-
DWB Grant Amount:	$	1,750,000
DWB Loan Amount:	$	1,750,000
DWB Loan Term:		30
DWB Loan Interest:		**0.00%**
DWB Loan Payment:	$	58,333

DW Expenses (Estimated)		
Proposed Facility Capital Cost:		#VALUE!
Existing Facility O&M Expense:	$	421,750
Proposed Facility O&M Expense:	$	421,750
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	423,000

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		1,319
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	-
Current Monthly User Charge:	$	37.22
Needed Average Monthly User Charge:	$	66.96

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%	13	1,319	589,166	-	6,000	595,166	**-**	**-**	1,750,000	-	-	423,000	421,750	844,750	-
1	1.0%	13	1,332	1,070,266	-	6,000	1,076,266	**58,000**	**5,833**	1,692,000	58,000	-	423,000	421,750	908,583	1.36
2	1.0%	14	1,346	1,081,515	-	6,000	1,087,515	**58,000**	**5,833**	1,634,000	58,000	-	423,000	425,968	912,801	1.38
3	1.0%	13	1,359	1,091,961	-	6,000	1,097,961	**58,000**	**5,833**	1,576,000	58,000	-	423,000	430,227	917,061	1.39
4	1.0%	14	1,373	1,103,210	-	6,000	1,109,210	**58,000**	**5,833**	1,518,000	58,000	-	423,000	434,529	921,363	1.40
5	1.0%	13	1,386	1,113,656	-	6,000	1,119,656	**58,000**	**5,833**	1,460,000	58,000	-	423,000	438,875	925,708	1.42
6	1.0%	14	1,400	1,124,905	-	6,000	1,130,905	**58,000**	**5,833**	1,402,000	58,000	-	423,000	443,263	930,097	1.43
7	1.0%	14	1,414	1,136,154	-	6,000	1,142,154	**58,000**	**5,833**	1,344,000	58,000	-	423,000	447,696	934,529	1.44
8	1.0%	14	1,428	1,147,403	-	6,000	1,153,403	**58,000**	**5,833**	1,286,000	58,000	-	423,000	452,173	939,006	1.46
9	1.0%	15	1,443	1,159,455	-	6,000	1,165,455	**58,000**	**5,833**	1,228,000	58,000	-	423,000	456,695	943,528	1.47
10	1.0%	14	1,457	1,170,704	-	6,000	1,176,704	**58,000**	**5,833**	1,170,000	58,000	-	423,000	461,262	948,095	1.49
11	1.0%	15	1,472	1,182,757	-	6,000	1,188,757	**59,000**		1,111,000	59,000	-	423,000	465,874	947,874	1.50
12	1.0%	14	1,486	1,194,006	-	6,000	1,200,006	**58,000**		1,053,000	58,000	-	423,000	470,533	951,533	1.52
13	1.0%	15	1,501	1,206,058	-	6,000	1,212,058	**59,000**		994,000	59,000	-	423,000	475,238	957,238	1.53
14	1.0%	15	1,516	1,218,111	-	6,000	1,224,111	**58,000**		936,000	58,000	-	423,000	479,991	960,991	1.55
15	1.0%	15	1,531	1,230,164	-	6,000	1,236,164	**59,000**		877,000	59,000	-	423,000	484,791	966,791	1.56
16	1.0%	16	1,547	1,243,020	-	6,000	1,249,020	**58,000**		819,000	58,000	-	423,000	489,639	970,639	1.58
17	1.0%	15	1,562	1,255,072	-	6,000	1,261,072	**59,000**		760,000	59,000	-	423,000	494,535	976,535	1.59
18	1.0%	16	1,578	1,267,928	-	6,000	1,273,928	**58,000**		702,000	58,000	-	423,000	499,480	980,480	1.61
19	1.0%	15	1,593	1,279,981	-	6,000	1,285,981	**59,000**		643,000	59,000	-	423,000	504,475	986,475	1.62
20	1.0%	16	1,609	1,292,837	-	6,000	1,298,837	**58,000**		585,000	58,000	-	423,000	509,520	990,520	1.64
21	1.0%	17	1,626	1,306,496	-	6,000	1,312,496	**59,000**		526,000	59,000	-	423,000	514,615	996,615	1.66
22	1.0%	16	1,642	1,319,352	-	6,000	1,325,352	**58,000**		468,000	58,000	-	423,000	519,761	1,000,761	1.67
23	1.0%	16	1,658	1,332,208	-	6,000	1,338,208	**59,000**		409,000	59,000	-	423,000	524,959	1,006,959	1.69
24	1.0%	17	1,675	1,345,868	-	6,000	1,351,868	**58,000**		351,000	58,000	-	423,000	530,209	1,011,209	1.71
25	1.0%	17	1,692	1,359,528	-	6,000	1,365,528	**59,000**		292,000	59,000	-	423,000	535,511	1,017,511	1.72
26	1.0%	16	1,708	1,372,384	-	6,000	1,378,384	**58,000**		234,000	58,000	-	423,000	540,866	1,021,866	1.74
27	1.0%	18	1,726	1,386,847	-	6,000	1,392,847	**59,000**		175,000	59,000	-	423,000	546,274	1,028,274	1.76
28	1.0%	17	1,743	1,400,506	-	6,000	1,406,506	**58,000**		117,000	58,000	-	423,000	551,737	1,032,737	1.78
29	1.0%	17	1,760	1,414,166	-	6,000	1,420,166	**59,000**		58,000	59,000	-	423,000	557,254	1,039,254	1.79
30	1.0%	18	1,778	1,428,629	-	6,000	1,434,629	**58,000**		-	58,000	-	423,000	562,827	1,043,827	1.81
									Total Paid in Debt Service =		1,750,000	-				

Agenda Item 4(C)(ii)(a)

Hooper Water Improvement District
Presented to the Drinking Water Board
July 10, 2015

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

The Hooper Water Improvement District is in the need of replacing over 3 miles of 18-inch and 16-inch ductile iron pipe, as well as a 1,200 meter switchout. The cost of the project is estimated to be $5,923,000. The applicant is planning to contribute $500,000. Therefore they are requesting financial assistance in the amount of $5,423,000.

STAFF COMMENTS:

The average MAGI for Hooper City, West Haven and West Point is $58,733 (145% of the state MAGI), and the after project water bill would only be 1.13% of the local MAGI. Therefore they do not qualify as a hardship community. The calculated interest rate is 3.26% for 20 years.

As part of this project, Hooper WID will be replacing existing customer water meters. The Financial Assistance Committee discussed the possibility that Hooper may take part in the water use study the Division is undertaking. The Committee suggested that staff discuss this with Hooper and approved an interest rate reduction of 0.5% if Hooper WID agreed to participate in the study. Hopper WID has agreed to participate with the Division in the water use study; therefore the 0.5% interest rate reduction is included in the Committee's recommendation

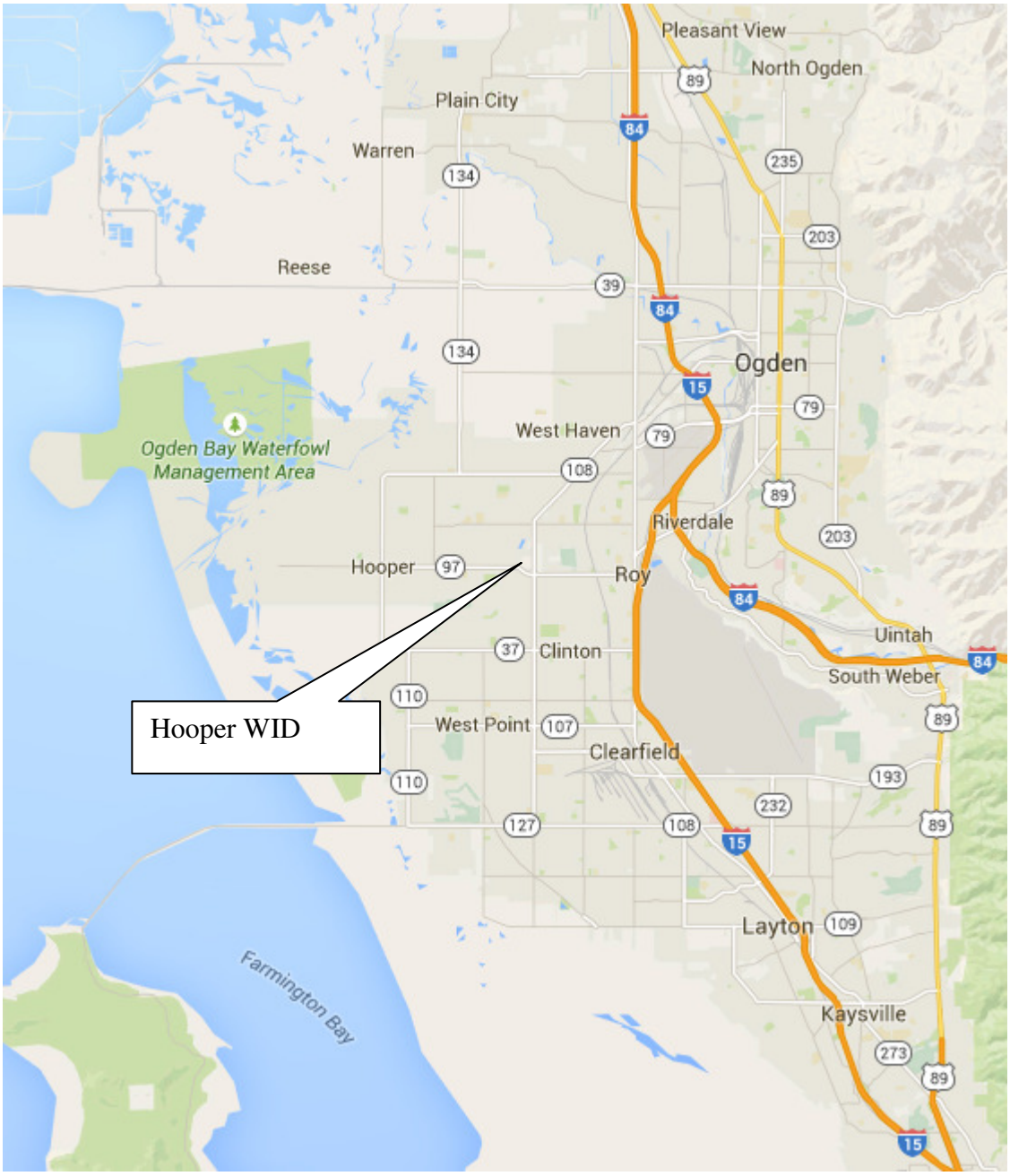
FINANCIAL ASSISTANCE RECOMMENDATION:

The Drinking Water Board authorize a construction loan of $5,423,000 at 2.76% interest or fee for 20 years to Hooper Water Improvement District.

APPLICANT'S LOCATION:

The Hooper Water Improvement District is located in Weber County and includes Hooper City, West Haven and West Point areas.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

The Hooper Water Improvement District is in the need of replacing 14,360 LF of 18-inch ductile iron pipe and 3,450 LF of 16-inch ductile iron pipe, as well as replacing 1,200 meters.

POPULATION GROWTH:

The District is expected to grow at a rate of 2.7% annually through 2060. Projected populations and number of connections are shown in the table below and taken from the application.

Year	Population	Connections
Current	19,726	5,137
2015	20,317	5,291
2020	23,555	6,134
2025	27,306	7,111
2030	31,653	8,243
2035	36,691	9,555

IMPLEMENTATION SCHEDULE:

FA Committee Conference Call:	Jun 2015
DWB Funding Authorization:	July 2015
Complete Design:	July 2015
Plan Approval:	Aug 2015
Advertise for Bids:	Aug 2015
Begin Construction:	Sep 2015
Complete Construction:	Mar 2016
Receive Operating Permit:	Apr 2016

COST ESTIMATE:

Legal – Bonding, Admin	$139,000
Engineering- Plan, Design, CMS	$125,000
Construction – Transmission	$4,935,300
Contingency	$429, 200
Other – Meter Switchout	$240,000
Sub Total Cost	**$5,868,500**
DDW Admin Fee	$54,230
Total Project Cost	**$5,922,800**

COST ALLOCATION:

The cost allocation proposed for the project is shown below:

Funding Source	Cost Sharing	Percent of Project
DWB Loan (2.76%, 20-yr)	$5,423,000	91.6%
Self-Contribution	$500,000	8.4%

ESTIMATED ANNUAL COST OF WATER SERVICE:

Operation and Maintenance	$933,678
Existing DW Debt Service	$68,940
DDW Debt Service (2.76%, 20 yrs):	$356,471
DDW Debt Reserve (10%):	$35,647
DDW Coverage (15%):	n/a
Replacement Reserve Account (5%):	$70,954
Annual Cost/ERC:	$298.03
Monthly Cost/ERC:	$54.84
Cost as % MAGI:	1.12%

CONTACT INFORMATION:

APPLICANT:	Hooper Water Improvement District 5555 West 5500 South Hooper, UT 84315 801.985.1991
PRESIDING OFFICIAL & CONTACT PERSON:	Scott Christiansen Manager 5555 West 5500 South Hooper, UT 84315 801.985.1991 scotthwid@qwestoffice.net
CONSULTING ENGINEER:	Dan White Gardner Engineering 5450 South 575 East Ogden, UT 84405 801.476.0202 dan@gardnerengineering.net
RECORDER:	Cole Allen 801.985.1991 colehwid@qwestoffice.net
FINANCIAL CONSULTANT:	Alan Westenskow Zions Bank Public Finance One South Main Street, 18th Floor Salt Lake City, UT 84133 801.844.7377 Alan.westenskow@zionsbank.com
CITY ATTORNEY:	Mark Anderson Fabian Law 215 South State Street, Suite 1200 Salt Lake City, UT 84111 801.323.2234 mhanderson@fabianlaw.com
BOND ATTORNEY:	Eric Hunter Chapman and Cutler 201 South Main Street, 20th Floor Salt Lake City, UT 84111 801.533.0066 ehunter@chapman.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Hooper
COUNTY: Weber
PROJECT DESCRIPTION: Transmission Line

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	19,726	NO. OF CONNECTIONS:	5177 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$63.82 *			PROJECT TOTAL:	$5,923,000
CURRENT % OF AGI:	1.30%	FINANCIAL PTS:	34	LOAN AMOUNT:	$5,423,000
ESTIMATED MEDIAN AGI:	$58,733			PRINC. FORGIVE.:	$0
STATE AGI:	$40,489			TOTAL REQUEST:	$5,423,000
SYSTEM % OF STATE AGI:	145%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	4.48%		2.76%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	4.48%		2.76%
REQUIRED DEBT SERVICE:	$271,150.00	$416,177.15		$356,470.70
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$27,115.00	$41,617.71		$35,647.07
ANNUAL NEW DEBT PER CONNECTION:	$57.61	$88.43		$75.74
O & M + FUNDED DEPRECIATION:	$993,678.00	$993,678.00		$993,678.00
OTHER DEBT + COVERAGE:	$86,175.00	$86,175.00		$86,175.00
REPLACEMENT RESERVE ACCOUNT:	$66,688.40	$73,939.76		$70,954.44
ANNUAL EXPENSES PER CONNECTION:	$221.47	$222.87		$222.29
TOTAL SYSTEM EXPENSES	$1,444,806.40	$1,611,587.62		$1,542,925.21
TAX REVENUE:	$323,765.00	$323,765.00		$323,765.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$53.26	$55.94		$54.84
% OF ADJUSTED GROSS INCOME:	1.09%	1.14%		1.12%

* Total # of Connections

R309-700-5

Hooper
Weber
May 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	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	
	$1,144		
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	
	145%		
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	
	8.4%		
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	
	1.14%		
5. SPECIAL INCENTIVE POINTS Applicant: (Mark all that apply)			
A. has a replacement fund receiving annual deposits of 5% of the system's drinking water budget been established, and has already accumulated a minimum of 10% of said annual DW budget in this reserve fund.		5	
B. Has a replacement fund equal to at least 15% or 20% of annual DW budget.		5	
C. Is creating or enhancing a regionalization plan		16	
D. Has a rate structure encouraging conservation		6	X
TOTAL POINTS FOR FINANCIAL NEED		34	
TOTAL POSSIBLE POINTS FOR FINANCIAL NEED		100	

Hooper

PROPOSED BOND REPAYMENT SCHEDULE

100 % Loan & 0 % P.F.

PRINCIPAL	$5,423,000.00	ANTICIPATED CLOSING DATE	28-Jul-15
INTEREST	2.76%	FIRST P&I PAYMENT DUE	28-Jul-17
TERM	20	REVENUE BOND	
NOMIN. PAYMENT	$356,470.70	PRINC. FORGIVE.:	$0.00

YEAR	BEGINNING BALANCE	DATE OF PAYMENT	PAYMENT		PRINCIPAL	INTEREST	ENDING BALANCE	PAYM NO.
2016	$5,423,000.00		$149,674.80	*	$0.00	$149,674.80	$5,423,000.00	0
2017	$5,423,000.00		$356,674.80		$207,000.00	$149,674.80	$5,216,000.00	1
2018	$5,216,000.00		$355,961.60		$212,000.00	$143,961.60	$5,004,000.00	2
2019	$5,004,000.00		$356,110.40		$218,000.00	$138,110.40	$4,786,000.00	3
2020	$4,786,000.00		$356,093.60		$224,000.00	$132,093.60	$4,562,000.00	4
2021	$4,562,000.00		$356,911.20		$231,000.00	$125,911.20	$4,331,000.00	5
2022	$4,331,000.00		$356,535.60		$237,000.00	$119,535.60	$4,094,000.00	6
2023	$4,094,000.00		$356,994.40		$244,000.00	$112,994.40	$3,850,000.00	7
2024	$3,850,000.00		$356,260.00		$250,000.00	$106,260.00	$3,600,000.00	8
2025	$3,600,000.00		$356,360.00		$257,000.00	$99,360.00	$3,343,000.00	9
2026	$3,343,000.00		$356,266.80		$264,000.00	$92,266.80	$3,079,000.00	10
2027	$3,079,000.00		$356,980.40		$272,000.00	$84,980.40	$2,807,000.00	11
2028	$2,807,000.00		$356,473.20		$279,000.00	$77,473.20	$2,528,000.00	12
2029	$2,528,000.00		$356,772.80		$287,000.00	$69,772.80	$2,241,000.00	13
2030	$2,241,000.00		$356,851.60		$295,000.00	$61,851.60	$1,946,000.00	14
2031	$1,946,000.00		$356,709.60		$303,000.00	$53,709.60	$1,643,000.00	15
2032	$1,643,000.00		$356,346.80		$311,000.00	$45,346.80	$1,332,000.00	16
2033	$1,332,000.00		$356,763.20		$320,000.00	$36,763.20	$1,012,000.00	17
2034	$1,012,000.00		$355,931.20		$328,000.00	$27,931.20	$684,000.00	18
2035	$684,000.00		$355,878.40		$337,000.00	$18,878.40	$347,000.00	19
2036	$347,000.00		$356,577.20		$347,000.00	$9,577.20	$0.00	20
			$7,279,127.60		$5,423,000.00	$1,856,127.60		

*Interest Only Payment

Hooper

DWB Loan Terms		
Local Share (total):	$	500,000
Other Agency Funding:	$	-
DWB Grant Amount:	$	-
DWB Loan Amount:	$	5,423,000
DWB Loan Term:		20
DWB Loan Interest:		**2.76%**
DWB Loan Payment:	$	356,471

DW Expenses (Estimated)		
Proposed Facility Capital Cost:	$	5,977,230
Existing Facility O&M Expense:	$	993,678
Proposed Facility O&M Expense:	$	993,678
O&M Inflation Factor:		**1.0%**
Existing Debt Service:	$	68,940

DW Revenue Sources (Projected)		
Beginning Cash:	$	-
Existing Customers (ERC):		5,177
Projected Growth Rate:		**1.0%**
Impact Fee/Connection Fee:	$	3,058
Current Monthly User Charge:	$	33.82
Needed Average Monthly User Charge:	$	24.84

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%	52	5,177	2,100,728	159,016	323,765	2,583,509	**-**	**-**	5,423,000	-	-	68,940	993,678	1,062,618	-
1	1.0%	52	5,229	1,558,423	159,016	323,765	2,041,204	**356,675**	**35,647**	5,216,000	207,000	149,675	68,940	993,678	1,454,940	2.46
2	1.0%	52	5,281	1,573,921	159,016	323,765	2,056,702	**355,962**	**35,647**	5,004,000	212,000	143,962	68,940	1,003,615	1,464,163	2.48
3	1.0%	53	5,334	1,589,717	162,074	323,765	2,075,556	**356,110**	**35,647**	4,786,000	218,000	138,110	68,940	1,013,651	1,474,348	2.50
4	1.0%	53	5,387	1,605,512	162,074	323,765	2,091,351	**356,094**	**35,647**	4,562,000	224,000	132,094	68,940	1,023,787	1,484,468	2.51
5	1.0%	54	5,441	1,621,606	165,132	323,765	2,110,503	**356,911**	**35,647**	4,331,000	231,000	125,911	68,940	1,034,025	1,495,524	2.53
6	1.0%	54	5,495	1,637,700	165,132	323,765	2,126,597	**356,536**	**35,647**	4,094,000	237,000	119,536	68,940	1,044,366	1,505,488	2.54
7	1.0%	55	5,550	1,654,092	168,190	323,765	2,146,047	**356,994**	**35,647**	3,850,000	244,000	112,994	68,940	1,054,809	1,516,391	2.56
8	1.0%	56	5,606	1,670,782	171,248	323,765	2,165,795	**356,260**	**35,647**	3,600,000	250,000	106,260	68,940	1,065,357	1,526,204	2.59
9	1.0%	56	5,662	1,687,472	171,248	323,765	2,182,485	**356,360**	**35,647**	3,343,000	257,000	99,360	68,940	1,076,011	1,536,958	2.60
10	1.0%	57	5,719	1,704,460	174,306	323,765	2,202,531	**356,267**	**35,647**	3,079,000	264,000	92,267	68,940	1,086,771	1,547,625	2.62
11	1.0%	57	5,776	1,721,448	174,306	323,765	2,219,519	**356,980**		2,807,000	272,000	84,980	68,940	1,097,639	1,523,559	2.63
12	1.0%	58	5,834	1,738,734	177,364	323,765	2,239,863	**356,473**		2,528,000	279,000	77,473	68,940	1,108,615	1,534,028	2.66
13	1.0%	58	5,892	1,756,020	177,364	323,765	2,257,149	**356,773**		2,241,000	287,000	69,773	68,940	1,119,701	1,545,414	2.67
14	1.0%	59	5,951	1,773,604	180,422	323,765	2,277,791	**356,852**		1,946,000	295,000	61,852	68,940	1,130,898	1,556,690	2.69
15	1.0%	59	6,010	1,791,188	180,422	323,765	2,295,375	**356,710**		1,643,000	303,000	53,710	68,940	1,142,207	1,567,857	2.71
16	1.0%	60	6,070	1,809,070	183,480	323,765	2,316,315	**356,347**		1,332,000	311,000	45,347	68,940	1,153,629	1,578,916	2.73
17	1.0%	61	6,131	1,827,250	186,538	323,765	2,337,553	**356,763**		1,012,000	320,000	36,763	68,940	1,165,166	1,590,869	2.75
18	1.0%	61	6,192	1,845,430	186,538	323,765	2,355,733	**355,931**		684,000	328,000	27,931	68,940	1,176,817	1,601,688	2.77
19	1.0%	62	6,254	1,863,908	189,596	323,765	2,377,269	**355,878**		347,000	337,000	18,878	68,940	1,188,585	1,613,404	2.80
20	1.0%	63	6,317	1,882,685	192,654	323,765	2,399,104	**356,577**		-	347,000	9,577	68,940	1,200,471	1,625,988	2.82
									Total Paid in Debt Service =		5,423,000	1,706,453				

Agenda Item 4(C)(iii)(a)

Oak City
Presented to the Drinking Water Board
July 10, 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:

Oak City has withdrawn their application for funding at this time.

Agenda Item 5(A)

RULE ADOPTION OF AMENDMENT TO *R309-510*

On May 8, 2015, the Drinking Water Board authorized Division staff to initiate the rulemaking process to amend rule R309-510, *Facility Design and Operation: Minimum Sizing Requirements*.

The proposed amendments to R309-510 included 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.]

The 30-day comment period was held from June 1, 2015, through July 1, 2015. Two sets of comments were submitted recommending changes to the proposed rule. Upon review of the proposed changes, Division staff determined that the changes were already covered by the proposed amendments to the rule, were beyond the scope of the proposed amendments, or were not within the authority of the Division to implement. Therefore, none of the proposed changes have been accepted.

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. 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: Division staff recommends that the Board adopt the amendment to *R309-510* and authorize the staff to make the amended rule effective on July 15, 2015.

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 (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 minimum quantities and flow rates that shall be used in the design of new systems and in the evaluation of water source, storage facility, and pipeline capacities, 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.

(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.

R309-510-5. Reduction of Sizing Requirements.

(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 90^{th} 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 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"***
- ***"Information Needed for Reduction in Storage Sizing"***

These documents are available 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 are based on typical water consumption patterns in the State of Utah. Where legally-enforceable water conservation measures exist, the sizing requirements in this 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 conditions:

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

(b) 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: 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) Indoor Water Use.

Tables 510-1 and 510-2 shall be used 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 Note 1)
Semi-Developed Camp a. With pit privies b. With flush toilets	 5 gpd/person 20 gpd/person	 (See Note 1) (See Note 1)
Hotels, Motel & Resort	150 gpd/unit	(See Note 1)
Labor Camp	50 gpd/person	(See Note 1)
Recreational Vehicle Park	100 gpd/pad	(See Note 1)
Roadway Rest Stop	7 gpd/vehicle	(See Note 1)
Recreational Home Development (i.e., developments with limited water use) [See Note 2]	400 gpd/conn	(See Note 1)

NOTES FOR TABLE 510-1:

Note 1. Average yearly demand shall be calculated by multiplying the number of days in the designated water system operating period by the peak day demand unless a reduction has been granted in accordance with R309-510-5.

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 (Note 1)	
Type of Establishment	Peak Day Demand (gpd) (Notes 2 & 3)
Airports	3

a. per passenger b. per employee	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 b. with no cafeteria	 25 15
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 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, 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. Determine this by assuming the facility is used to its maximum, e.g., the physical capacity of the facility.

Note 3. 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) Irrigation Use.

If a water system provides water for irrigation, Table 510-3 shall be used to determine the peak day demand and average yearly demand for 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).

Guidance: The irrigation zone map is provided below. This map is available on the Division of Drinking Water's website.

(b) Determine the net number of acres which may 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 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 irrigation use.

(d) 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		
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.

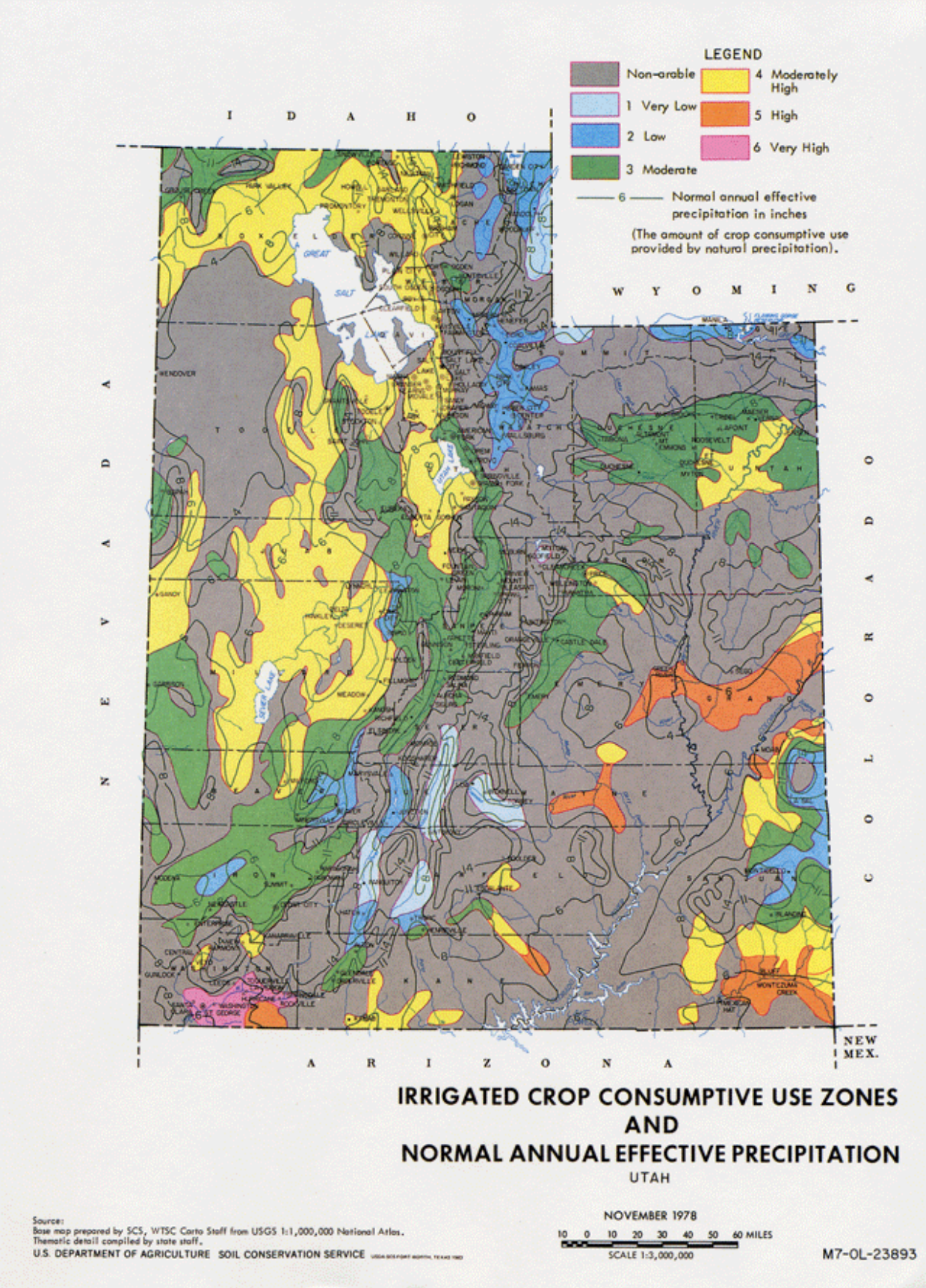
Guidance: If the irrigation season differs from the assumed 213 days, the average yearly demand numbers may need to adjusted.

(4) Variations in Source Yield.

(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: 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
NOVEMBER 1978
10 0 10 20 30 40 50 60 MILES
SCALE 1:3,000,000
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
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 and irrigation use,

(b) fire flow storage volume, if the water system is equipped with fire hydrants 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.

(2) Equalization Storage.

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

(b) Table 510-4 lists required equalization storage for indoor use. 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 a drinking water system provides water for irrigation use, Table 510-5 shall be used to determine the minimum equalization storage volumes for irrigation. The procedure for determining the map zone and irrigated acreage for using Table 510-5 is outlined in R309-510-7(3).

Table 510-5 Storage Volume for 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 Flow Storage.

(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: Utah has adopted a state-wide fire code. However, local fire code officials are authorized to determine fire flow requirements in their jurisdictions.

(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 ensure adequate flow and that minimum water pressures as required in R309-105-9 exist at all points within the distribution system.

(2) 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) Alternatively, the peak instantaneous demand for a single pipeline shall be calculated for indoor use 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 should only be used to estimate the flow required for N connections from a single pipeline and 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). 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 the state-adopted plumbing code.

(d) For small non-community water systems, the peak instantaneous demand for indoor water use shall be calculated on a per-building basis for the number of plumbing fixture units as presented in the state-adopted plumbing code.

(3) Peak Instantaneous Demand for Irrigation Use.

Peak instantaneous demand for 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 R309-510-7(3).

Table 510-7 Peak Instantaneous Demand for 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.

(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.

KEY: drinking water, minimum sizing, water conservation
Date of Enactment or Last Substantive Amendment: August 28, 2013
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

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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 (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 minimum quantities and flow rates that shall be used in the design of new systems and in the evaluation of water source, storage facility, and pipeline capacities, 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.

(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.

(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 90^{th} 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 are based on typical water consumption patterns in the State of Utah. Where legally-enforceable water conservation measures exist, the sizing requirements in this 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 conditions:

(a) The water system’s source capacity shall be able to meet the anticipated water demand on the day of highest water consumption, which is the peak day demand.

(b) 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) Indoor Water Use.

Tables 510-1 and 510-2 shall be used 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 Note 1)
Semi-Developed Camp		
a. with pit privies	5 gpd/person	(See Note 1)
b. with flush toilets	20 gpd/person	(See Note 1)
Hotel, Motel, and Resort	150 gpd/unit	(See Note 1)
Labor Camp	50 gpd/person	(See Note 1)
Recreational Vehicle Park	100 gpd/pad	(See Note 1)
Roadway Rest Stop	7 gpd/vehicle	(See Note 1)
Recreational Home Development (i.e., developments with limited water use)[See Note 2]	400 gpd/conn	(See Note 1)

NOTES FOR TABLE 510-1:

Note 1. Average yearly demand shall be calculated by multiplying the number of days in the designated water system operating period by the peak day demand unless a reduction has been granted in accordance with R309-510-5.

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 (Note 1)

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	
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, 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.

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

Note 3. 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.

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

(3) Irrigation Use.

If a water system provides water for irrigation, Table 510-3 shall be used to determine the peak day demand and average yearly demand for 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.

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

(d) 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

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

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) Variations in Source Yield.

(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 and irrigation use,

(b) fire flow storage volume, if the water system is equipped with fire hydrants 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.

(2) Equalization Storage.

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

(b) Table 510-4 lists required equalization storage for indoor use. 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 a drinking water system provides water for irrigation use, Table 510-5 shall be used to determine the minimum equalization storage volumes for irrigation. The procedure for determining the map zone and irrigated acreage for using Table 510-5 is outlined in R309-510-7(3).

TABLE 510-5
Storage Volume for 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 Flow Storage.

(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 ensure adequate flow and that minimum water pressures as required in R309-105-9 exist at all points within the distribution system.

(2) 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) Alternatively, the peak instantaneous demand for a single pipeline shall be calculated for indoor use 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). 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 the state-adopted plumbing code.

(d) For small non-community water systems, the peak instantaneous demand for indoor water use shall be calculated on a per-building basis for the number of plumbing fixture units as presented in the state-adopted plumbing code.

(3) Peak Instantaneous Demand for Irrigation Use.

Peak instantaneous demand for 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 R309-510-7(3).

TABLE 510-7

Peak Instantaneous Demand for 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.

(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.

KEY: drinking water, minimum sizing, water conservation
Date of Enactment or Last Substantive Amendment: August 28, 2013
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

Amendments to R309-510, *Facility Design and Operation: Minimum Sizing Requirements*

Comments and DDW Responses

June 25, 2015

Via E-mail only

Bernie Clark
bernieclark@utah.gov

Re: Proposed Revisions to R309-510 (Minimum Sizing Requirements)- Joint Comments of Sandy City, Salt Lake City, and the Metropolitan Water District of Salt Lake & Sandy

Dear Mr. Clark,

Thank you for the opportunity to review and comment on the proposed revisions to R309-510 (Minimum Sizing Requirements). We view this as a very important issue on many fronts and look forward to remaining quite involved in this drafting process.

This letter and the attached redline documents serves as Sandy City, Salt Lake City, and the Metropolitan Water District of Salt Lake & Sandy's joint comments to-date. We offer general comments below and present specific suggested changes in the redline document.

As noted previously, we have reviewed the Report to the Utah Legislature #2014-13, December 2014. We find the statement that indoor source sizing requirements appear excessive to be somewhat problematic. The current requirements have long been a safe baseline in the communities we serve. Reduction of these figures should be carefully considered. Basing proposed reductions on the average daily water use statewide may be misguided. Average daily use, peak day use, and average yearly use are not the only parts of the sizing requirement equation. Therefore, we are concerned about their use as the sole metrics. Please keep in mind that, in many locations, near peak day use is the norm. In such a circumstance, the average yearly use may be understated. The net effect of this is that sources may be outstripped, leaving connections without water. The requirements should guard against this prospect.

That said, we are mindful of the need and desire to allow the Director discretion to reduce minimum sizing requirements. We urge that local authorities be integrally involved in the process. As such, we ask that the discretionary process be initiated by the local authorities that will ultimately exist for years and decades to come with the reduced sizing requirements. Should those desiring reduced sizing requirements wish to commence such a process, they would approach the local authorities, who in turn would interface with the Director. The local authorities could provide the materials requested by the Director, including the required information pertaining to local water use and local sources – most of which are owned, operated, and/or maintained by the local authority. We address this issue in the attached redline document.

We are concerned with the prospect of use reduction requirements and commitments that may not be permanent, enforceable, or enforced. In other words, promised limited uses may expand in years and decades to come due to a failure to enforce or a lack of enforcing entity. We seek to address this issue in the attached redline document.

Next, we urge your consideration of the fact that peak daily use may well be near the annual norm. Couple this with your recognition that certain sources (i.e., springs, shallow wells, etc.) vary throughout the year and the necessity to consider the use and source on a weekly, monthly, and seasonal basis becomes apparent. We raise this in the attached redline document as well.

We thank you for your consideration of our comments and redline draft. Please let any of the undersigned know if you have any questions or comments.

Sincerely,

Salt Lake City, Department of Public Utilities

Sandy City

Metropolitan Water District of Salt Lake & Sandy

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. Reduction requests are initiated only by a Public Drinking Water System. 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, water source, and water system 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~~

Comment [s1]: This comes from the R309-510-5 Guidance Statement. We suggest it be in the text of the Rule as well.

~~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 only upon the written request of the public water system and the satisfaction of R309-510-5 and the Division's accompanying information sheets.~~.~~

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~~must submit a written 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, week, and month demand, average day, week, and month demand for indoor and irrigation uses, fire flow requirements established by the local fire code official, etc. Further, the supporting information must include complete and adequate information regarding the integrity, capacity, and reliability of the source. 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, weekly, 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 under recorded instrument, 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, or source 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. Voluntary or unenforceable temporary conservation measures shall not be a means to reduce minimum sizing requirements.

~~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 at all times ~~on~~ during the day, week, and month 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. ~~Annualverage y~~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 recorded 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	5 10

b. drive-in, per car space	
Nursing Homes, per bed space	280
Office Buildings & Business Establishments, per shift, per employee (sanitary wastes only) a. with cafeteria b. with no cafeteria	 25 15
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

Comment [s2]: It appears these are only depletion numbers, not diversion numbers. Therefore, these numbers represent an underestimation (by roughly double) of the amount a source will be required to produce.

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.

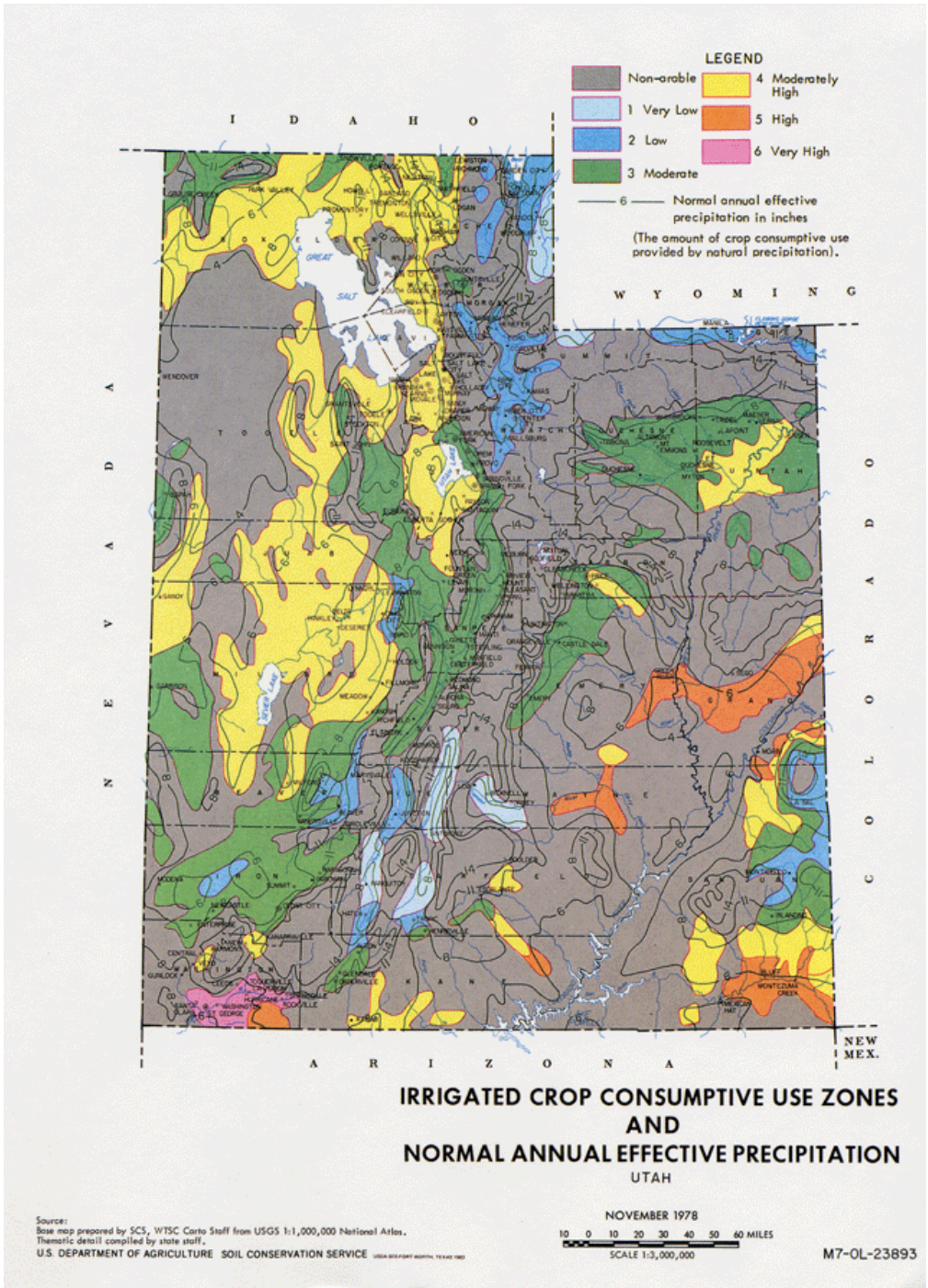
(4) ~~Accounting for~~ Variations in Source Yield.

~~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. Minimum seasonal flow rates shall be evaluated on at least 5 years of historical empirical data and subject to annual review.

(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
NOVEMBER 1978
10 0 10 20 30 40 50 60 MILES
SCALE 1:3,000,000
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
M7-0L-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.

KEY: drinking water, minimum sizing, water conservation
Date of Enactment or Last Substantive Amendment: August 28, 2013
Notice of Continuation: March 13, 2015
Authorizing, and Implemented or Interpreted Law: 19-4-104

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State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson Jr.
Acting Executive Director

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

July 1, 2015

Jeff Niermeyer
Salt Lake City,
Department of Public Utilities
1530 South West Temple
Salt Lake City, Utah 84115

Shane E Pace
Sandy City Water System
9150 South 150 East
Sandy, Utah 84070

Michael L. Wilson
Metropolitan Water District
3430 East Danish Road
Cottonwood Heights, Utah 84093

RE: Response to R309-510 concerns

Gentlemen,

I am sending this letter to you in response to your June 25, 2015 letter regarding our proposed revisions to R309-510 (Minimum Sizing Requirements). Specifically I want to address your concerns in the following order:

1. The Director's discretion to reduce the minimum sizing requirements.
2. The concern over allowing limited use developments that may change over time.
3. The varying fluctuations in sources and its impact on meeting peak demands
4. The Division's response to the Legislative Audit concerning setting of indoor and outside water usage standards.
5. Comments regarding specific recommendations.

First let me state that I feel we are in agreement with your recommended changes. I based this statement on our attempt to perceive the intended reasons for each recommendation. There is, however, some background information and explanations that will show that we are in alignment with your recommendations, without making any of the recommended changes you propose.

The Director's discretion to reduce the minimum sizing requirements. The State Safe Drinking Water Act, our enabling legislation, only gives us authority to regulate "Public Water Systems". The legislation further describes these systems as ones that provide water to 15 or more connections, or serve 25 people for at least 60 days a year. Consequently, any land developer that requests our approval of a low water use development that will be served by an existing public water system, has no standing with us. We would direct the individual or group to work with the designated public water system. Hence, because your proposed changes are already covered by statutory language, we see no need to make the recommended revisions. Stated another way, we recognize that your water systems are the gate keepers, and we would respect your recommendations on any expansions, including those that exceed our standards.

The concern over allowing limited use developments that may change over time. In writing the rule revisions we wrestled with this very issue for the same reasons you presented in your letter. We don't have authority to deal directly with land developers, as stated above. Hence, we have to look to the public water system to ensure that controls are in place to ensure the limited use is maintained over time. If a public water system is unable or unwilling to do so, we would accept the public water system's position and not allow the land developer's preference to influence a change of the system's position.

The varying fluctuations in sources and its impact on meeting peak demands. We recognize that source fluctuations can have a great impact on meeting peak demands. Sources are required to meet the demand of the system. When talking about obtaining a reduction, the patterns of the source can be more closely looked at in comparison to the demands. However, it would be impossible to determine overall peak week, peak month, or other seasonal standards for the entire State. We are not modifying any of the standard requirements with this proposed rule revision. It is anticipated that more extensive changes may occur after a demand study of various systems throughout the State is conducted.

The Division's response to the Legislative Audit concerning setting of indoor and outside water usage standards. Our Division's Legislative Appropriations Committee has jurisdiction over our implementing the recommendations of the audit. Hence, as you can imagine, we don't have the option of ignoring the report. In the Division's response, at the back of the audit report, we outlined a process that we'll follow to ensure that any revisions are justified and appropriate. We will present our proposal which describes in detail the data collection, evaluation and costs of doing the study. The Appropriations Committee then has the decision to either fund it, or decline to fund it. If they decline we won't have the ability to perform the study and further rule changes would not be forthcoming. I suspect they'll fund the study. Because our Rules have to ensure a constant supply of safe drinking water, we will be looking at peaks and not averages in setting minimum source capacity standards. At the conclusion of the study, we'll propose changes to our rules that must go through the public comment process. Hence, you'll have further opportunity to comment on the changes then. If you'd like, we would be willing to share our study plan, that we'll present to our Appropriations Committee, with you. I anticipate it will be available in the September/October 2015 timeframe.

Comments regarding specific recommendations.

R309-510-4 (1) (on page 1) Since all R309 rules apply to only Public Water Systems, it is unnecessary to state here that requests shall be "initiated only by a Public Drinking Water System". This section of the rule deals with "general" sizing provisions for: source, storage and distribution facilities. Hence singling our water source sizing in this section is inappropriate. In R309-510-5 the rules start to directly address reductions of sizing requirements.

R309-510-5 (1) (on page 3) We chose to use the word "may" because water systems are not required to submit reduction requests. We only wanted to acknowledge that water systems "may" request them. It is implied that requests must be submitted in writing given the data and information required.

R309-510-5 (2) (on page 3) The words: "peak week", and "peak month" are suggested to be added in this section as well as the deletion of the words: peak "day" from peak requirements, and "yearly" from average requirements on pages: 4, 5, 6, 8, 9, and 10. The following explanation applies to all uses of these words. We currently use "peak day" and "average year" demand to apply to source sizing requirements and expect to continue to use them unless the Division's water use study indicates that alternative demands should be considered. Peak day could apply to, and require source capacities that meet the peak day requirement for possibly many consecutive days if applicable. Yearly average would only be used to compare with water rights that are expressed as a total yearly volume to ensure sufficient legal use of the water.

R309-510-5 (2) (on page 3) We feel the issue regarding needed supporting data is covered by the last sentence in this paragraph. The key words in this paragraph are: "a review on a case by case basis" because of the wide variety of factors to be considered. The paragraph then goes on to list examples of varying issues. Further this concept is supported by the language in R309-510-5 (3) that requires the requesting water utility to discuss the issues with the Division "to identify the information needed" prior to submitting a request.

R309-510-5 (6) (on page 4) and R309-510-7 (2) Note 2 (on page 5) We deal with a variety of water system owners and as such we feel the issue is covered by requiring "enforceable water use restrictions" that are acceptable to the Director. Voluntary or unenforced conservation practices would not meet this stated requirement.

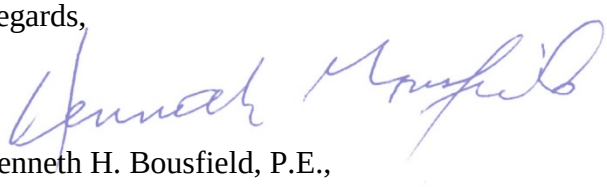
R309-510-5 (7) (on page 3) There is no need to single out sources in this paragraph. A change in a "source" would be a change in the "nature or use" of a water system and therefore is covered by the proposed language.

Comment [s2] related to Table 510-3 (on page 9) We feel paragraph (d) immediately above Table 510-3 temporarily addresses this issue. A more complete answer will become available after we finish the study mentioned in the above paragraph entitled: "The Division's response to the Legislative Audit concerning setting of indoor and outside water usage standards.".

R309-510-7 (4) (a) (on page 10) Requiring seasonal flow rates on all systems will be burdensome and unnecessary in some cases. However the Director has authority to review water systems on a case by case basis as noted in R309-510-4 (5) and R309-510-5 (7).

Please let me know if the above background information and specific explanations meet your needs. We'd be happy to meet with you to discuss any open issues.

Regards,



Kenneth H. Bousfield, P.E.,
Director
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June 26, 2015

VIA EMAIL – bernieclark@utah.gov

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

Re: Town of Alta Comments on the Proposed Revisions to R309-510 (Minimum Sizing Requirements)

Dear Mr. Clark:

Thank you for the opportunity to review and provide comments on the Division of Drinking Water's ("Division") proposed revisions to R309-510 (Minimum Sizing Requirements) ("Proposed Rule"). As expressed in our earlier letter, dated April 21, 2015 ("April Letter") (a copy of which is attached hereto and incorporated by reference), the Town of Alta ("TOA" or "Town") has a significant interest in this issue given its role as the public water system for the TOA, pursuant to a surplus agreement between the Town and Salt Lake City. Additionally, in light of the sensitive environment in which the TOA is located, and where the water is being put to use, the Town is extremely concerned that revisions to the Rule are sufficiently protective of the watershed.

In the April Letter, the TOA initially raised two main concerns: (1) that any reduction request be initiated by the water supplier rather than individual water users; and (2) the TOA explained its concerns with the "Recreational Home Development" definition and that it was not stringent enough. The Town wishes to reinforce this latter point, and comment on additional remaining concerns with the Proposed Rule.

First, the Town remains very concerned with the "Recreational Home Development" definition. It cannot be overstated that a definition for Recreational Home Development, which will be located in a critical watershed, must include specific, enforceable restrictions in perpetuity. Unfortunately, the TOA has learned from its own experience that without substantive and enforceable restrictions, a property owner may not adhere to the seasonal use restrictions, and a recreational home may become a de facto year round residence, thereby using more of a limited resource and potentially harming the fragile ecosystem. To bolster the current Proposed Rule, the TOA requests the Division define a Recreational Home Development to include a

specific limited number of days of use, in addition to limiting the size of the home and number of plumbing fixture units. For instance, a Recreational Home Development should not be allowed to be inhabited or in use for more than a prescribed (and limited) period of use, such as six (6) consecutive months. Second, the Proposed Rule should require a Recreational Home Development be automatically disconnected from the water supplier's system at the expiration of the period of use. Third, all Recreational Home Development should be subject to a recordable restriction so that new owners are on notice of any water restrictions governing that property. Without these assurances, the Rule misses the mark of its intended purpose which is to "minimize the possibility that a Public Water System will run out of water" because doing so "creates risks to public health and safety" especially in such a vital watershed.

Second, the proposed revisions to R309-510-4(3) should be expanded to allow local authorities, such as the TOA, to impose more stringent design ***and sizing*** requirements on public water systems. It is the public water system provider that is most familiar with the water sources, types of use, and is responsible for the health and safety of the community. Therefore, the public water system provider should be allowed to impose more stringent source requirements, in addition to design requirements.

Third, the Town agrees with the existing language in the Proposed Rule that explains that while source minimums might appear higher than necessary, they are required to ensure enough water is available in the future and guarantee that no system runs dry. For this reason, the TOA wants to underscore the importance that any reduction be based on data that accounts for daily, weekly and hourly peak demands, over a multi-year time period, for multiple locations, not simply yearly averages, so that source requirements are sufficiently adequate to protect the watershed and public health and safety. For similar reasons, the TOA supports a requirement that design and sizing criteria are the basis for water capacity requirements rather than consumptive use data.

Lastly, the TOA also requests the Division include previously included language that special consideration for droughts remain in the final rule.

As always, the TOA appreciates the Division's consideration of these comments in this very important rulemaking process.

Kindest Regards

Tom Pollard

Mayor, Town of Alta

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson Jr.
Acting Executive Director

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

July 1, 2015

Tom Pollard
Mayor, Town of Alta
P.O. Box 8016
Alta, Utah 84092-8016

RE: June 26, 2015, Comments on Proposed Revisions to R309-510

Mr. Pollard:

Thank you for taking the time to review the proposed revisions to R309-510 and for providing comments. I would like to address each of the comments and suggested changes included in your letter.

Comment 1: Recreational Home Development Definition:

- The Town of Alta "requests the Division define a Recreational Home Development to include a specific number of days of use…"
- "The Proposed Rule should require a Recreational Home Development be automatically disconnected from the water supplier's system at the expiration of the period of use."
- "All Recreational Home Development should be subject to a recordable restriction so that new owners are on notice of any water restrictions governing that property."

Response 1: By way of a general response to your comments on Recreational Home Developments, the Division of Drinking Water has the authority to regulate Public Water Systems not individual homes, property owners, or developments. Therefore, the Division does not have the authority to limit the number of days per year that a recreational home may be occupied, to require recreational homes to disconnect from a water system, or to require property owners to record water restrictions governing a property. Such requirements and restrictions are more appropriately the responsibility of the local authority.

Comment 2: "The proposed revisions to R309-510-4(3) should be expanded to allow local authorities…to impose more stringent design and sizing requirements on Public Water Systems."

Response 2: As currently written, R309-510-4(3) permits local authorities to impose more stringent design requirements on Public Water Systems than the minimum sizing requirements stated in R309-510.

Comment 3: The town of Alta "requests the Division include previously included language that special consideration for droughts remain in the final rule."

Response 3: The reference to droughts was contained in a guidance paragraph that is being deleted. It was never part of the actual rule. We replaced the guidance with a general guidance statement that emphasizes that the intent of the rule is to minimize the possibility that a Public Water System will run out of water under *any* circumstances. This would include times of drought.

We agree that the rulemaking process is important and appreciate the time you have taken to comment on the proposed revisions. I am available to meet with you to further discuss your comments and concerns and the Division's responses to them.

Sincerely,

Kenneth H. Bousfield, P.E.
Director
Division of Drinking Water
Utah Department of Environmental Quality

Agenda Item 5(B)

ADOPTION OF CHANGE IN PROPOSED 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*.

The proposed amendments to *R309-500* included the following:

1. Rewrite the criteria to clarify how a public water system becomes eligible to request Plan Submittal Waivers.
2. Outline the process for public water systems to obtain Plan Submittal Waivers once eligible.
3. Clarify that approval of waste and wastewater disposal methods related to drinking water projects may be required prior to drinking water plan approval.
4. Provide references to other rules for clarification and simplification and to avoid duplication and contradiction.
5. Eliminate the list of detailed information needed on a project notification form and simply reference the use of the Division's project notification form.
6. Make miscellaneous changes to correct formatting and grammar to make the rule language easier to understand.

The 30-day public comment period for the proposed amendments was held from February 1, 2015, through March 3, 2015. Based on comments received, the staff determined that substantive changes were needed to further clarify the previously proposed amendments.

On May 8, 2015, the Drinking Water Board authorized the division to proceed with the change in proposed rule. The 30-day comment period for the change in proposed rule was held from June 1, 2015, through July 1, 2015.

The change in proposed rule for *R309-500* included 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.

No comments were submitted during the 30-day comment period.

Two versions of R309-500 are attached:

- The Division of Administrative Rules (DAR) Version: DAR maintains the official version of rules and oversees the rulemaking process. 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: Division staff recommends that the Board adopt the change in proposed rule for *R309-500* and authorize the staff to make the rule change effective July 15, 2015.

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,

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

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

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

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

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

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

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

R309-500-12. Other Permits.

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

KEY: drinking water, plan review, operation and maintenance requirements, permits
Date of Enactment or Last Substantive Amendment: August 28, 2013
Notice of Continuation: March 13, 2015
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,

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

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

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

(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 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;

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

R309-500-12. Other Permits.

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

KEY: drinking water, plan review, operation and maintenance requirements, permits
Date of Enactment or Last Substantive Amendment: August 28, 2013
Notice of Continuation: March 13, 2015

Authorizing, and Implemented or Interpreted Law: 19-4-104

Agenda Item 5(C)

PROPOSED SUBSTANTIVE CHANGES
FOR
RULE *R309-550-10*

Although the Division amended R309-550 recently on November 10, 2014, Division staff has determined that a substantive change to R309-550-10 is needed concerning water hauling. In the current rule, only Non-community Public Water Systems must submit water hauling proposals to the Director for approval. The proposed amendment would require all Public Water Systems, Community and Non-community, to submit water hauling proposals to the Director for approval.

Two versions of the amendment to R309-550 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 *R309-550* 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: Division staff believes that the above amendment is substantive and asks the Board to authorize the staff to start the rulemaking process and file the proposed rule amendment for publication in the Utah Bulletin.

R309-550-10. Water Hauling.

Proposals for water hauling shall be submitted to, and approved by, the Director.

(1) Community Water Systems.

Water hauling is not an acceptable permanent source for drinking water distribution in Community Water Systems.

(2) Non-community Systems.

The Director may allow water hauling for Non-Community Public Water Systems by special approval if:

(a) consumers can not otherwise be supplied with good quality drinking water; or,

(b) the nature of the development, or ground conditions, are such that the placement of a pipe distribution system is not justified.

~~Proposals for water hauling shall be submitted to, and approved by, the Director.~~

(3) Emergencies.

Water hauling may be a temporary means of providing drinking water in an emergency. Water systems shall notify the Division as soon as possible of such emergencies.

Guidance: The guidelines for water hauling are ~~contained in the bulletin entitled "Recommended Procedures for Hauling Culinary Water"~~ available from the Division.

R309-550-10. Water Hauling.

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(1) Community Water Systems.

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[~~Proposals for water hauling shall be submitted to, and approved by, the Director.~~]

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