

Drinking Water Board Packet

November 5, 2019

Agenda



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

L. Scott Baird
Executive Director

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

Drinking Water Board
Roger Fridal, Acting Chair
Kristi Bell
Scott Morrison
Jeff Coombs
David O. Pitcher
Eric Franson, P.E.
Barbara Gardner
Blake Tullis, Ph.D.
L. Scott Baird
Marie E. Owens, P.E.
Executive Secretary

DRINKING WATER BOARD MEETING

November 5, 2019 – 1:30 PM

Department of Environmental Quality
Multi Agency State Office Building
DEQ Board Room
195 N 1950 W
Salt Lake City, Utah 84116

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

1. Call to Order
2. Roll Call – Marie Owens
3. Drinking Water Board Elections - Marie Owens
 - A. Board Chair & Acting Chair
 - B. Financial Assistance Committee
4. 2020 Drinking Water Board Meeting Schedule
5. Approval of the August 27, 2019 Minutes
6. Financial Assistance Committee Report
 - A. Status Report – Michael Grange
 - B. Project Priority List – Michael Grange
 - C. SRF Applications
 - i. STATE:
 - a) Bear River WCD - Heather Pattee
 - ii. FEDERAL:
 - a) Central Utah WCD - Lisa Nelson
 - b) Marysvale - De-authorization - Heather Pattee
 - c) Cole Canyon - De-authorization - Heather Pattee
 - d) Central Utah WCD - De-authorization - Michael Grange

7. Rulemaking Activities
 - A. R309-400 Rule - Final Adoption (Board Action Needed) - Rachael Cassady
8. Emergency Response Updates - Ryan Dearing
9. Rural Water Association Report – Dale Pierson
10. Open Board Discussion – Roger Fridal
11. Directors Report – Marie Owens
 - A. Enforcement Report
 - B. Customer Complaint Policy - Rachael Cassady
 - C. Other
12. Public Comment Period
13. Other
14. Next Board Meeting:

Date: Tuesday, January 14, 2020
Time: 1:00 PM
Place: Multi Agency State Office Building
Division of Drinking Water
195 N 1950 W
Salt Lake City, Utah 84116
15. Adjourn

Agenda Item

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Drinking Water Board 2020 Proposed Meeting Schedule

Tuesday January 14, 2020
(Scheduled)

Tuesday February 11, 2020*

Tuesday April 14, 2020

Tuesday June 9, 2020

Tuesday August 11, 2020**

Tuesday November 10, 2020

*Historically the February board meeting is held at the RWAU Annual Conference in St. George. If the board chooses to hold the meeting there, the meeting date would be approx. Feb 24, 2020.

**Historically the August board meeting is held at the RWAU Fall Conference in Layton. If the board chooses to hold the meeting there, the meeting date is TBD per the conference schedule.

Agenda Item

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DRINKING WATER BOARD MEETING
August 27, 2019 – 1:30 PM
Davis Conference Center – Meridian B Room
1651 N 700 W
Layton, Utah 84041

DRAFT MINUTES

1. Call to Order

Roger Fridal, Acting Chairman, called the meeting to order at 1:30 PM.

2. Roll Call

Board Members present: Roger Fridal, Kristi Bell, Jeff Coombs, Scott Morrison, Barbara Gardner, David Pitcher, Scott Baird. Blake Tullis arrived at 1:34 PM, after roll call.

Division Staff present: Marie Owens, Rachael Cassady, Jennifer Yee, Michael Grange, Heather Pattee, Lisa Nelson, Marianne Booth, Allyson Spevak.

3. New Board Member Introductions

- A. Blake Tullis** is with Utah State University and takes David Stevens place on the board representing academia and research.
- B. Barbara Gardner** takes Betty Naylor's place on the board as the public-at-large member. Barbara is connected to water through her husband, David Gardner, who is the general manager of Draper Irrigation WaterPro and he is also the president of the board of Rural Water Association of Utah. Barbara has written newsletters for WaterPro.
- C. Scott Morrison** is the general manager of Mountain Regional Water District and takes Brett Chynoweth's place on the board representing a small water district.

D. David Pitcher is the assistant general manager of Central Utah Water Conservancy District and takes Tage Flint's place on the board representing a large water district.

4. Oath of Office for New Members

Notary Tamie Call administered the oath of office and disclosure statement, in turn, to each of the four new board members; Blake Tullis, Barbara Gardner, Scott Morrison, and David Pitcher.

At this time, Roger asked if anyone had a conflict of interest regarding any item on the agenda. David Pitcher has a conflict with the Duchesne Valley Water Treatment Plant request (Item 6Dii(c)) as he works for Central Utah Water Conservancy District. Roger has a conflict with both Bear River Water Conservancy District requests (Items 6Di(e) & 6Di(f)) as he is the mayor of Tremonton.

- Kristi Bell made a motion that David Pitcher and Roger Fridal be allowed to participate in conversations but not vote. Jeff Coombs seconded. The motion was carried unanimously by the Board.

5. Approval of the Minutes:

A. June 11, 2019

David pointed out a typo on page 6. Scott mentioned one amount to be corrected in the Mexican Hat request. Jeff said on page 4 that he made a motion but the second was not included in the minutes.

- David Pitcher moved to approve the June 11, 2019 minutes as amended. Kristi Bell seconded. The motion was carried unanimously by the Board.

B. July 3, 2019

- Jeff Coombs moved to accept the July 3, 2019 minutes. Scott Morrison seconded. The motion was carried unanimously by the Board.

6. Financial Assistance Committee Report

A. Status Report – Michael Grange

Michael Grange, Technical Assistance Section Manager with the Division of Drinking Water (DDW, the Division) reported there is currently a balance of roughly \$2.1 million in the State SRF fund. Over the course of the next year, the Division is expecting an additional \$4.5 million to come into the fund, for a total of approximately \$6.6 million for project allocation.

Michael then reported a negative showing of approximately \$9 million in the Federal SRF fund. Over the course of the next 12 months, the Division is expecting approximately

\$20.6 million to come into the fund through capitalization grants, state match, and repayment money, for a total of \$11.6 million by January 30, 2020. The negative \$9 million takes into account board actions that are proposed for today's meeting. Also the Board has recently authorized a number of high value projects; specifically the programmatic financing for both Granger Hunter Improvement District and Kearns Improvement District. Although the Board has authorized approximately \$40 million for those two entities, the sum will not go out all at once, rather the money will be expended over the course of 3 to 5 years and these entities have agreed to begin repayment a year after closing.

Michael will work with the Division's Administrative Services Manager, Sandy Pett, to create a cash flow report for the Board which will show more than just total balances, but also show actual projection for the next 12 months. The report will illustrate that we're not authorizing more money for projects than is available.

Roger inquired if generally loan repayment is timely. Michael said for the most part, yes, but there is occasion when a payment is late and a late fee is incurred. Requests to waive the late fee are usually granted for the first late payment but not thereafter. The most common reason for late payment is normally due to turnover within the water system and the incoming person doesn't get the invoice from State Finance in time. Typically there are 2-3 late payments per year.

Michael clarified that the cash flow report will be the fund balance; the actual balance that is remaining on our letter of credit from the federal government and then a statement of incoming repayments from existing loans. This will show the Board that while the overall balance shows a negative number because we've authorized this much, in actuality our cash availability is this much and our income stream over the next year is this much. This will give a clearer picture of the actual cash situation that the board has to deal with. To start, this report will be shared with the Board at each meeting and if there are no significant changes then we can go to twice a year or another schedule of the Board's choosing.

Project Priority List

Michael reported there are three new projects recommended to be added to the Project Priority List including: Central Utah Water Conservancy District with 30 points, to upgrade their treatment plant. Kanab City is being added with 21.5 points, to replace a tank, water line and pressure reducing valves. Genola is being added with 7 points, to add a new tank and a new well. The Financial Assistance Committee recommends the Board approve the updated Project Priority List as presented, with the addition of these three projects.

- Scott Morrison moved to approve the updated Project Priority List. Kristi Bell seconded. The motion was carried unanimously by the Board.

B. Intended Use Plan Update

Michael Grange reported that the Water Quality Board and the Drinking Water Board have recently experienced high demands for infrastructure funding. As FY 2020 begins both boards have limited revenue. The Division of Water Quality and the Division of Drinking Water have researched different ways to finance projects over the next 5 years with loans with principal forgiveness or hardship grants. One method available to the boards is a transfer of funds between the Clean Water State Revolving Fund (SRF) and the Drinking Water SRF programs. EPA has outlined the policy for such a transfer in the Federal Register, which allows an amount equal to 33% of the annual DW SRF capitalization grant to be transferred between the program funds.

In order to do this, each year we must reserve the authority to transfer those funds in the Intended Use Plan (IUP). The following information must be included in the IUP; the total amount of authority being reserved for future transfers, including authority from previous years; the total amount and types of funds being transferred during the term of the IUP; the impact of the transfer on the current year's fund and the long term impact on the fund. Both divisions have developed language to include in their respective IUPs to reserve the authority for these transfers.

Included in the board packet is the amended IUP with the addition of the transfer language, found on page 2. Included in the same document is language to be used in future years regarding fund transfers. This proposed language will be in the IUP when it comes before the Board for review in 2020. At that time, there will be a line for 2019 and a line for 2020, reserving the ability to transfer those funds back and forth between Clean Water SRF and Drinking Water SRF.

As of now, the Division is simply making the Board aware that this change is coming. Any actual transfer of funds will first need Board approval.

Jeff asked if Michael is forecasting that funds will go from Drinking Water to Clean Water or from Clean Water to Drinking Water. Michael says it will depend on the need, and right now the need is greater for Clean Water as they've recently authorized a number of high dollar projects. Over the course of the next several years they have significantly limited funds to provide financial assistance for Clean Water projects. In coming years they may need \$4-5 million from the Drinking Water Program and then at a future time, depending on the language developed for the Memorandum of Understanding, the money will come back to the Drinking Water Program. Michael says this is less likely to happen now that the Drinking Water SRF doesn't currently have surplus funds available for transferring between programs. With the cyclical nature of the funds, especially with repayment on larger loans, the fund may come back to where it has \$40-50 million surplus in the second round repayment bank. At that point if Clean Water needed some extra help then the Board could consider a transfer.

Marie clarified that this transfer only applies to federal funds. This change authorizes the Board to take action; it doesn't obligate the Board to take action. If the Board ever chose to move those funds it could be on a loan basis, with an interest rate, it could allow that money to be used and then come back to the Drinking Water Program.

John Mackey from the Division of Water Quality was present at the board meeting. The Water Quality Board's meeting is scheduled for August 28, 2019 and on their agenda is the same item, Intended Use Plan Update. John said the transfer builds flexibility into the two programs and excess money can be put to good use.

Michael said the language regarding transfer structure and terms and conditions would be included in the Memorandum of Understanding between the two programs. The MOU will be brought before the Board.

Marie pointed out that the 33% authorized each year, whether it's transferred or not, is cumulative in authorization. For instance, if this dollar amount were to be the same for the next 10 years, and 10 years from now we had a need, there could potentially be \$30 million available for transfer at that point.

C. SRF Applications

i. STATE:

a) Tropic Town Deauthorization

Heather Pattee informed the board that Tropic Town was authorized financial assistance in the amount of \$738,000 on June 11, 2019. The project was for a spring development water line upgrade and meter replacement. Staff received a letter from Tropic Town declining the offer of funds from the Board. The Financial Assistance Committee recommendation is that the Drinking Water Board deauthorize a loan of \$738,000 at 3.67% interest for 20 years.

Heather clarified that Tropic Town intends to approach the Community Impact Board (CIB) for funding. Marie explained that the CIB is another funding agency, with money available through mining activities. CIB does not strictly fund drinking water projects, but it can fund drinking water projects in specific areas of the state in which oil and mining activities occur.

- Kristi Bell moved that the Drinking Water Board deauthorize a loan of \$738,000 at 3.67% interest for 20 years. Jeff Coombs seconded. The motion was carried unanimously by the Board.

b) Pinon Forest

Representing Pinon Forest Special Service District was Jerry Nelson, board member and water operator; Jordan Mathis, director of Tri-County Health Department; and Kelly Chappell, district engineer with Ensign Engineering.

Lisa Nelson informed the Board that Pinon Forest is requesting a grant in the amount of \$70,000 for an engineering planning study to re-examine the drilling of a new well and construction of a new water hauling station.

Pinon Forest SSD covers approximately 165, very rocky, square miles in Duchesne County. All of the residents in the area are either on private wells or they haul water. In

2014 the Division authorized a water hauling station and a well, but the condition to that was a phased approach to developing a distribution system which was the ultimate goal. A few months ago the Division received a funding application to put in a second well and water hauling station. At that time the Division thought it was prudent to re-examine the plan, coordinate with the local health department, and Duchesne County to ensure we were all on the same page as to how to achieve the ultimate goal and not exacerbate the problem by creating more water hauling stations and thus make it difficult to put in a distribution system.

Roger asked what a water hauling station is. Jerry explained that currently most people have an underground cistern or a tank and they have to haul water to fill it to supply their homes and/or farm animals. A water hauling station is simply a localized source where water can be picked up and hauled. Anywhere from 175 to 600 gallons are picked up at a time.

Marie said that relying on water hauling for a community water system is prohibited in the Division's rules; it creates a lot of liability. Water hauling happens when people do not have a distribution system directly to their homes but they also don't have a water source of their own. It is a difficult situation in this particular area in that these homes have been allowed to be built with no water source to them. When phase 2 for water hauling came before the Director, the Division had conversations on how to develop this area into a traditional public water system with a distribution system. It is not appropriate for a community water system to rely on hauled water. It is a temporary solution to a longer term goal which is the development of a distribution system.

Jordan agrees with Marie; with drinking water being at the foundation of public health, water hauling as a primary source for a large area is not ideal. TriCounty Health Department in conjunction with the counties they serve developed a rule that water hauling is a last resort. They have to be able to show that there is no other source of water that they can rely upon in order to get approval for building. The entities involved are working to come up with a better solution and it is a strategic priority for the Tri-County board of health. Duchesne County commissioners support the application before the Board today.

Jerry said they're seeing significant growth in the area with over 3700 unit property owners. Their ultimate goal is pipe in the ground. There are several developers that want to begin development in this area, but on the condition that Pinon Forest SSD is able to supply the water. The area is a mix of snowbird and many permanent residents. Kelly said there are engineering challenges regarding the size of the area, expense in laying pipe, bringing sources to the area, and hydraulic challenges due to elevation changes.

Marie said that connection is not voluntary; it is a condition of this loan. Jerry said in their meetings with the county commission they've been discussing ways to facilitate each resident connecting. Jerry clarified that the goal is to speed up installation of the distribution system to accommodate new development. The request is for the master plan, sampling, and testing the many wells in the area.

David inquired if they have coordinated with Duchesne County Water Conservancy District on that organization's master plan. Jerry said they've met with their engineers and provided input. They're also discussing with the developers a cost share for the Pinon Forest master plan but this doesn't seem likely as the developers are already looking at significant costs.

- Jeff Coombs moved that the Drinking Water Board authorize a grant of \$70,000 to Pinon Forest SSD. Blake Tullis seconded. The motion was carried unanimously by the Board.

Discussion- David thinks if they want to work toward a public system they should help contribute, maybe 10%. The motion carried regardless.

c) Angell Springs

Representing Angell Springs is Madelyn Ferguson, a relatively new member of the community, on behalf of Vicky Cummins of Angell Springs Special Service District.

Heather Pattee informed the Board that Angell Springs is in need of replacing their SCADA system as it has failed. The cost of the project is \$75,000 and Angell Springs will be contributing \$7,500 toward the project. The local MAGI for Angell Springs is 89% of the State MAGI and the after project water bill would be \$89.23 which is 2.63% of their local MAGI. Therefore they do qualify as a hardship community to receive principal forgiveness. At this time the water bill is not sufficient to maintain the system. They have taken this issue to their board and are planning on incremental rate increases over several years to get them to the appropriate level. The Financial Assistance Committee recommendation is that the Drinking Water Board authorizes a grant of \$67,500, conditions include they resolve all issues on their compliance report.

Regarding their compliance report; they will receive help with their cross connection control program and Heather will talk to Vicky about the deep rooted vegetation, the draw down on the well, and the storage access. Madelyn says they are working on the vegetation issue. Heather assured the Board that those points will be taken care of before the project is complete.

Marie is concerned that the SCADA project would not address any of those deficiencies, which are procedural in nature. The one physical deficiency that would require money to fix is the tank access being too short and creating a deficiency in the storage. Heather said there hasn't been discussion about how that will be fixed, but Brian with RWAU can determine what is needed to correct it while he's out helping with their cross connection program.

Madelyn confirmed that the SCADA system replacement is their biggest priority as it is very aged and neglected. Kristi inquired if they've looked into other grants such as the community development block grants which fund SCADA to which Madelyn replied that she didn't know.

Heather offered to add to the authorization letter a paragraph requesting a rate ordinance before the funding is issued. Marie and the Board liked that suggestion. Previously, Vicky took to their board the need to increase rates and they were amenable to that but incrementally so. They're currently collecting \$53.71 and based on their expenses they should be collecting \$83.89.

The Board would like the rate increase requirement in the authorization letter and have assurance that a rate increase is happening before the grant is closed. Staff would hold off on disbursing the funds contingent upon receiving that rate increase plan. Heather will put a timeframe in place to free up the grant money if the increase doesn't happen in that time. Curt Ludvigson with RWAU suggested an appropriate amount of time would be a couple of months in order for them to hold hearings and figure out their rates.

David said that the rate increase needs to be a action by the SSD board to say this is what we're intending to do and we've passed a board resolution. Scott agrees and wanted to know how the Division has handled past rate increases. Marie said that the Division doesn't regulate water system rates and fee structures, nor does any other State agency. Michael pointed out that as part of the loan and bond covenants they sign, they provide the Division with an annual financial statement that allows us to see whether or not they have implemented rate increases to collect enough revenue to meet requirements. Michael said if they don't implement increases they are in technical default on the loan and the Division could call it due. Typically, in these cases, the Division just works with the system to increase their rates. But as this is a grant, default would not be applicable.

- David Pitcher moved that the Drinking Water Board approve a grant of \$67,500 to Angell Springs SSD but make closing contingent on having a letter of commitment for implementing a sustainable rate study and conditions include they resolve all issues on their compliance report. Scott Morrison seconded. The motion was carried unanimously by the Board.

d) Paunsaugunt Cliffs

Representing Paunsaugunt Cliffs was Ben Nielson and Gary Callister with Paunsaugunt Cliffs Special Service District.

Heather informed the Board that Paunsaugunt Cliffs is in need of replacing their current meters with radio read meters to improve accuracy, reduce waste and monitor water usage. The cost of the project is estimated at \$20,740. The local MAGI for Paunsaugunt Cliffs is 58% of the State MAGI and their water bill \$57.28, which is 2.58% of the local MAGI. Therefore they do qualify as a hardship community to receive grant. The Financial Assistance Committee recommendation is that the Drinking Water Board authorizes a grant of \$20,740 to Paunsaugunt Cliffs. As of this morning they have a -10 IPS points which is a credit for a current emergency response plan.

Roger pointed out a typo in the packet amount requested, it states \$26,675, and in actuality they're asking for \$20,740.

Scott asked how they decided on these types of meters and Ben explained that they at looked meters from Sensus, Badger and Neptune. For their location in Southern Utah, Sensus representative is Mountainland in Richfield which is approximately 100 miles away, so the locale for technical support plus the supplier is geographically convenient.

- Kristi Bell moved that the Drinking Water Board authorize a grant of \$20,740 to Paunsaugunt Cliffs. Jeff Coombs seconded. The motion was carried unanimously by the Board.

e) Bear River WCD

Representing Bear River Water Conservancy District is Carl Mackley, general manager.

Heather informed the Board there are two separate projects for Bear River. The first project is for a test well in the Collinston area. The cost of the project is estimated to be \$237,500 and Bear River will be contributing \$197,500 toward the project with a request for \$40,000. The local MAGI for Bear River is \$44,654 which is 97% of the State MAGI. Their water bill is \$28.13 which is 0.76% of their local MAGI. Therefore they do not qualify as a hardship community for additional subsidy.

Carl commented that one of Bear River WCD's main functions is to wholesale water to private water companies and municipalities but they also have retail connections as well. So it is complicated to calculate the water bill when you're accounting for both wholesale and retail. For the Collinston system for which this test well is being requested, the base water bill for retail is \$40 plus overages. Their retail rates are different depending on the water system, but their wholesale rate is adopted by their board and is standard throughout all of their six systems. He disagrees with the \$28 water bill for their retail.

Heather explained the water bill calculation; they take the income, the revenue of the system and divide it by the connections, so it is an average value. Kristi pointed out that the packet indicates a loan of \$40,000, but Carl clarified he is hoping to receive a grant instead. Jeff asked if Bear River would receive a loan or does it have to be loan forgiveness or grant only. Carl said they're not interested in a loan. The test well is part of an ongoing project for which they will definitely require financial assistance. They intend to drill a production well, which would be about \$1.5 million including the \$200,000 for the test well. Blake suggested, in light of the fact they don't currently qualify for a grant, to go back and work with the Division on their application to see if a grant is justifiable.

Marie said the Division has had discussions with other wholesalers about looking at the rate impact on the actual consumer. For a wholesaler, a customer is a different entity as opposed to the actual residents. So sometimes it takes more effort to drill down and understand what the rate impact of this particular action would be on the homeowners. Marie said they could go back and initiate another application process with some more of those details.

Marie inquired why the two projects were separated as they were on the same terms and interest rate. Carl said it's perhaps because they're separate systems and they did provide some distinct information in portions of the application.

Michael says that in such cases the Board does have the option to table the request and ask the applicant to come back with additional information. David asked if the Financial Assistance Committee understood that this was a request for a grant or a loan. Kristi confirmed, that no, the FAC didn't know they desired a grant.

Jeff would like the FAC to have more interaction with the systems before the request comes before the Board in order to avert situations like Bear River's. Scott asked if the staff's reports are shared with the systems prior to the board meeting. Heather said that she emails them a week before the board meeting and she tries to call the systems after the FAC call to inform them of what was authorized.

- Jeff Coombs moved to table both requests by Bear River WCD to allow Bear River to redo their application and come before the Board if they so desire. Blake Tullis seconded. The motion was carried unanimously by the Board.

Roger Fridal abstained from the conversation for these requests.

f) Bear River WCD

A motion to table both Bear River WCD requests was made during the previous item 6(i)(e).

At this time Michael explained that they don't ask the systems what they want because everyone would ask for a grant. Rather the Division asks what the system needs and then base the evaluation on that need and the numbers provided on the application. That's why the water systems are not necessarily aware of the packet that goes to the committee, but they communicate with the system as best they can after the committee makes their recommendation for Board action on the terms.

g) Twin Oaks

Representing Twin Oaks was David Asay, Karl Rasmussen, and Jeff Kunz the system operator.

Heather informed the Board that Twin Oaks was authorized funding in the amount of \$161,000 to drill a new well and transmission line on June 11, 2019. Twin Oaks has completed the bid process and bids have come in higher than anticipated. Twin Oaks would like to request an additional \$39,000 in light of the higher cost, bringing the total project to \$202,410 with Twin Oaks contributing \$2,410. The local MAGI for Twin Oaks is 84% of the State MAGI and their water bill is \$86.03 which is 2.66% of the local MAGI. Therefore they do qualify for additional subsidy. The staff recommendation is an extension of the original authorization which was 50% loan and 50% grant. The FAC recommendation is that the Drinking Water Board authorize an increase of funding of

\$39,000 for a loan of \$100,000 at 0% interest for 30 years and a grant of \$100,000 with the condition they resolve all issues on their compliance report. Currently Twin Oaks has -5 IPS points.

Blake asked the current status of the project to which Karl replied they're getting ready to start as soon as the well driller is ready to go and they do have enough money for the well drilling.

- Kristi Bell moved that the Drinking Water Board authorize an additional \$39,000 with same terms as the original authorization for a loan of \$100,000 at 0% interest for 30 years with \$100,000 in grant, conditions include they resolve any issues on their compliance report. David Pitcher seconded. The motion was carried unanimously by the Board.

ii. FEDERAL:
a) Kanab

Representing Kanab was Jay Meacham with Civil Science Engineering.

Lisa Nelson informed the Board that the City of Kanab is requesting funding in the amount of \$7.227 million for construction of (2) new two million gallon concrete storage tanks to replace the two existing failing and deteriorating tanks. The city also intends to replace some existing water lines. The two current tanks which are each 1.5 million gallons were purchased in 1995 from an oil company and then rebuilt and reconditioned to serve as drinking water tanks in 1996. The north tank has since failed and is now offline and there is serious concern that the south tank is facing imminent failure. The local MAGI is \$37,440 and is 82% of the State MAGI so they don't qualify as a disadvantaged community. The staff recommendation for funding is a 2.5% loan at 30 years, which would put them at 1.74% of their MAGI which is bumping right up against the affordability criteria. The staff feel comfortable recommending a 30 year term as the project is two concrete storage tanks.

Lisa informed the group that the Division was recently allowed to authorize terms of 30 years for any request regardless of disadvantaged status and then up to 40 years, but only if that was in the lifecycle of the project.

Roger inquired about the \$958,000 in engineering fees as it seems high to engineer two concrete storage tanks. Roger was informed that the estimate includes the PRV and the pipeline. Lisa says that it's 13% of the project cost and it's within normal range for engineering fees.

Lisa explained that CMS stands for construction management service which basically manages the project once the notice to proceed is issued. Lisa also said that because it's a federal project, incorporated into the request are the costs of compliance with the Davis-Bacon Wage Act and the American Iron & Steel provision.

David asked if the concrete tanks would be buried and Jay said he was unsure. Their steel tanks are exposed and he hasn't seen the hydraulics on it. If the tanks aren't buried they'll have to be stiffer-walled. David advised that durability lasts a lot longer if tanks are buried.

Scott asked if there were concerns regarding rates. Lisa said the concern is that they're going to need to raise their rate by \$15. When the Division moves forward to loan closing they review the system's rate ordinance to ensure, if needed, they've raised the rate and they can afford to repay the debt. Lisa says the system is aware of the need to raise their rates.

Marie inquired about the significant deficiencies related to Cave Lake Springs. This project won't resolve any of those deficiencies, but that spring is inactive and she asked if it is going to be permanently abandoned or what the source capacity was without it. If the system were to bring that spring back online, their deficiency points would go up quickly and put the system in compliance jeopardy. Jay replied no.

- Kristi Bell moved that the Drinking Water Board authorize a loan of \$7.227 million at 2.5% hardship grant assessment fee for 30 years to the city of Kanab. Jeff Coombs seconded. The motion was carried unanimously by the Board.

b) Genola

Representing Genola was Mayor Marty Larson, Councilman Bryan Draper, and Lauren Ploeger with Franson Civil Engineering.

Heather informed the Board that Genola City is requesting financial assistance in the amount of \$2,849,400 to construct a one million gallon concrete tank and to drill a new well. The local MAGI is \$53,288 which is 116% of the state MAGI. The after project bill would need to be \$116.25 which is 2.62% of the local MAGI which does qualify them for additional subsidy. Included in the packet is a table with three different options for Board discussion. The FAC recommendation is that the Drinking Water Board authorizes a loan of \$2,849,400 at 0% interest for 30 years with \$576,400 in principal forgiveness for repayable amount of \$2,273,000. As of this morning their IPS points are -10 because they have a current emergency response plan.

Mayor Larson said they have one well and tank at the south end of town that feeds the entire town. In the past if the well goes down the whole town goes without water. They've done a study and determined the new well site would be on the north side which would provide a dual, redundant system and accommodate population growth.

Mayor Larson explained they have a two part water bill; the drinking water portion is \$78.62 and the second portion for watering lawns and such brings it up to \$116. The drinking water portion would go up by approximately \$11. Last year the town increased their water bill and will do so again this year in anticipation of this project.

Mayor Larson said they have a good site for the tank and a have desired location and a secondary location for the well site. Genola currently has a proposal with the landowner for this site.

- David Pitcher moved that the Drinking Water Board authorize a loan of \$2,849,400 with \$576,400 in principal forgiveness at 0% interest for 30 years, with a repayable amount of \$2,273,000 to the City of Genola. Scott Morrison seconded. The motion was carried unanimously by the Board.

c) Central Utah WCD

Representing Central Utah Water Conservancy District was Cort Lambson, Gerard Yates, and Shawn Lambert, and David Robertson with Lewis, Young.

Lisa informed the Board that the request from Central Utah WCD is for \$18 million in financial assistance to fund a process improvement project at the Duchesne Valley Water Treatment Plant. This will convert the existing treatment plant from direct filtration to a conventional treatment plant. This project was brought before the Board a few months ago for an algae strainer for \$3-4 million. The loan was near closing when the Dollar Ridge Fire happened and thereafter they realized an algae strainer was not going to be sufficient.

They are requesting \$18 million which could be \$4 million more than they actually need. They are applying for a \$4 million FEMA grant but the proposal is that we go ahead and authorize \$18 million and if they receive the FEMA grant we won't close on the full amount. Central Utah is a wholesaler that serves numerous communities. On page 5 of the packet, Lisa attempted to provide an impression of affordability for the ultimate users of this project. The staff recommendation is for a loan with a 1.25% hardship grant assessment fee which will be programmatic financing. Lisa confirmed that there will be an additional application coming before the Board for multiple projects throughout the district for an estimated \$10 million request.

Marie said this is a good project to remind the Board that on federal funds when we put an interest rate on it we actually call that a hardship grant assessment fee. This allows us to recover those interest payments into a separate account which then becomes the grant money in the next round. The grant money the Board has been giving out on federal dollars was generated from previous loans that had this hardship grant assessment fee. From the water system's perspective that fee is just like an interest rate.

Marie is concerned about the short 14 month construction window; do they have a contingency plan between now and then? David responded that water quality comes first and if necessary Central Utah would first start to shut off their industrial customers and they'll produce the water that they can. So far they have been pulling from 5 different depths of the reservoir.

- Jeff Coombs moved that the Drinking Water Board authorize a loan for \$18 million at 1.25% hardship grant assessment fee in lieu of interest for 30 years to the Central Utah WCD to fund the construction of a process improvement project at the Duchesne

Valley Water Treatment Plant. Kristi Bell seconded. The motion was carried unanimously by the Board.

David Pitcher abstained from voting on this motion.

d) Greenwich

Representing Greenwich was Mindy Talbot with Greenwich Water Association and Jeff Albrecht with Savage Albrecht Engineering.

Lisa informed the Board that Greenwich Water Association is requesting \$162,000 in financial assistance to construct a new chlorination building. The Board authorized this project at the last board meeting and since then bids have come in high. They were \$32,000 short and so staff changed the recommendation to mimic the ratio of the initial authorization which was 50-50 split of grant/loan at essentially the same terms.

This project has sat for several years and finally went before the Board for deauthorization. After a change in council and board members the project is back and needs to be done as there are deficiencies associated with this chlorination issue. Since the last board meeting in June a lot of work has been done on this project.

Marie stated that this project will address some deficiencies; however, there are additional deficiencies on the system and Marie would like to know if there is a plan to address those. There are a lot of source protection deficiencies which will take time, effort and commitment and some, like a fence around the spring area, will take money. Marie is concerned that the system hasn't given indication of resolving all the other deficiencies and asked the system to speak to that.

Mindy said they received an extension through the end of the year for their operator to be certified and he will take the test in October. They worked with Mike Osborn from RWAU to complete their source protection plan. They're working on the exception for the spring fencing and they meet both requirements, one is financial hardship and the other is location and size of the fence. The terrain of the location is rocky and drainage runs right alongside of it which causes fencing challenges.

Marie made them aware that while historically financial hardship has been a justification for exceptions, it rarely, if ever, is now. Source protection needs to occur regardless of how expensive it is and so other justification is needed. Jeff says the spring area has ledges and is rocky and to build a fence at the two spring sites is actually comparable to the price of the new chlorination building. Jeff says long term is it something the system could plan for, but the plan at this time to have John Chartier, based on his recommendation, submit a waiver for the hardship reasons.

Marie would like the system to recognize that putting this chlorination facility in place will be more complex to run. In light of this, is their operator paid and secured? Mindy said there's 34 taps on the system and they're all invested and so the operator is not paid; he's a

volunteer and he has two taps on the system. Jeff said they're putting the facility by the tank site which will make it more accessible and easier to maintain chlorination.

Mindy said they've raised the rates as requested and their backup operator is within 5 miles and is certified.

Scott Morrison moved that the Drinking Water Board modify the prior authorization to a loan of \$162,000 at 0% hardship grant assessment fee for 30 years with \$81,000 in principal forgiveness. The repayable amount will be \$81,000. Blake Tullis seconded. The motion was carried unanimously by the Board.

e) Glen Canyon SSD/Big Water

Michael Grange informed the Board that Glen Canyon Special Service District of Big Water was approved for \$1.228 million for 30 years with \$176,000 in principal forgiveness in 2016. The original scope of work was to refurbish an existing tank and a standby generator and fuel tank to the well pump house. Also to acquire and install radio read meters and data collection system to improve metering accuracy and reduce operational costs. Also in the scope of work was to install an 8" distribution line, and maintenance and replacement of 4 PRV facilities. In 2018 Big Water Town came back before the Board to expand their scope to include additional items because they had extra money and projects to use it on.

They are now coming back again to request an additional expanded scope because they have approximately \$98,000 left in their authorized funding. They are requesting this additional scope for a new water line to serve portions of the southwest part of town that are not currently served. This part of town has 7 lots with property owners that have been paying into the system but have not received service. These lot owners would now like to build on their lots and so the town and the SSD want to accommodate that request.

The recommendation is that the Drinking Water Board authorizes an expanded scope of work to include a water line project to the southwest side section of Big Water town.

Marie said this system has not provided their consumer confidence report and they are rapidly rising on the radar of EPA. Marie dislikes when a water system has received money from us that we are going to have to enforce on in the very near future. They must resolve their deficiencies, including their source protection plan and a significant tank deficiency. The system has failed to resolve the deficiencies that were in place when they received the money.

Michael says the requirement to resolve the deficiencies will be a part of the letter of authorization. Marie said the tank with the significant deficiency is inactive, so as long as they've abandoned it and do not plan to bring it on then it's just a matter of the source protection plan and the consumer confidence report. The consumer confidence reports are a severe oversight of transparency, so getting the old and current consumer confidence reports up to date are an important piece. Marie asked Michael to follow up with the

system to ensure they have no intention to bring that tank back online and to follow up on their consumer confidence reports.

- David Pitcher moved that the Drinking Water Board authorize an expanded scope of work to include the water line project with the remaining approved funds, contingent on having the consumer confidence report completed including previous years prior to the pay request being released. Kristi Bell seconded. The motion was carried unanimously by the Board.

7. Rulemaking Activities

A. Current Rulemaking Activities

i. Approval of the IPS Program Document – Rachael Cassady

Rachael Cassady, Rules Program Manager with DDW, seeks approval of the IPS Program Document, found in the board packet. The Board authorized the Division staff to begin public comment on the proposed IPS program document on June 11, 2019. The public comment period was open from June 12-July 12 2019. The program document is the cover page of the IPS Rule, which explains it. The Excel tables show the violations and deficiencies associated with the Safe Drinking Water Act implementation, with the severity, minor significance recommended, and the proposed points with the rule reference. For these items, the packet includes comments received and the Division's response to the comments.

Salt Lake City Water System commented that there wasn't a variation on the total points for public notice. They were correct and that change has been made. Another comment suggested more time was needed to fix significant deficiencies and the Division's response is to wait to start the clock when those water systems are activated.

The recommendation is that the Board approves the IPS Program Document as effective on August 27, 2019.

Kristi said that a panel has yet to be formed to discuss deficiency code M016 in greater detail and she would still like that to occur in order to clarify verified customer complaints. At a previous board meeting, members who have since rotated off the board, offered to head that panel but it didn't happen before they left. Would the Board like to the staff to provide that and bring it back to the board or is the board's desire to have a board committee review that? It was decided that the staff would review it. Kristi agreed with Rachael's affirmation that Kristi is seeking timeframe and quantity rather than population and severity of customer complaints.

Rachael suggested the Division comes to the next board meeting with a clarifying policy on M016 and have a discussion on it. Kristi agreed with this. Jeff said that at that time, based on the policy, it will be determined if additional rule-making is needed for customer complaints. Jeff also said water systems will want to know how this violation will be interpreted and applied as it is a significant violation. Rachael affirmed that is indeed a significant violation as the Division is required to report it to EPA and it is 50 IPS 2020 points.

- Jeff Coombs moved to approve the IPS Program Document as effective August 27, 2019. Kristi Bell seconded. The motion was carried unanimously by the Board.

ii. Authorization to Initiate the Rulemaking Process for R309-400 (the IPS Rule) Revision – Rachael Cassady

Rachael presented the authorization to initiate the rulemaking process for R309-400 (the IPS Rule). In the packet are the proposed substantive rule changes. Proposed is the repeal of the existing rule and reenactment of the new rule in its place. The individual violations and deficiencies were removed from the rule, to be a separate program which was just approved by the Board. The IPS program requires a separate approval from the Board for future revisions. Today's recommendation is that the Board authorizes the beginning of the rulemaking to amend R309-400 and file the proposed rule repeal and reenactment with the Office of Administrative Rules for publication in the Utah State Bulletin. This authorization would be open for public comment starting September 15 through October 15. Following that period, the Division would come before the Board at the November meeting with the summary of those comments and seeking to finalize the rule with an implementation date of January 1, 2020.

- Kristi Bell moved to authorize to begin rulemaking to amend R309-400 and file the proposed rule repeal and reenactment with the Office of Administrative Rules for publication in the Utah State Bulletin. David Pitcher seconded. The motion was carried unanimously by the Board.

8. Rural Water Association Report

Dale Pierson requested that the Board read the Rural Water Association report found in the packet.

9. Open Board Discussion

10. Directors Reports

A. New Division Staff Introduction

Allyson Spevak was introduced as Division of Drinking Water Director, Marie Owens', new administrative assistant.

B. Enforcement Report

In the packet is an enforcement report of the water systems that are currently not approved or under enforcement with the Division.

C. New Fee Proposal

Marie notified the Board of the proposal for new Drinking Water fees which is currently out for public comment. There will be a fee hearing on September 16, 2019. In the board

packet are the proposed fees. A general statement; with these particular fees the objective is to recover costs associated with non-compliance situations in order for the Division to be able to free resources to work proactively with the water systems. This would allow the Division to give the systems technical assistance. This first stage of fees is related to non-compliance, so it is possible for all water systems to avoid these fees by not having violations or getting into non-compliance scenarios.

D. Other

11. Public Comment Period

No public comments were made.

12. Other

A. Scott Baird was introduced as the new Executive Director for the Department of Environmental Quality, replacing Alan Matheson.

13. Next Board Meeting:

Date: Tuesday November 5, 2019
Time: 1:00 PM
Place: Multi Agency State Office Building
Division of Drinking Water
195 N 1950 W
Salt Lake City, Utah 84116

14. Adjourn

- David Pitcher moved to adjourn the meeting. Kristi Bell seconded. The motion was carried unanimously by the Board.

The meeting adjourned at 4:34 PM.

Agenda Item

6(A)

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
AS OF September 30, 2019

SUMMARY		
	Total State Fund:	\$15,193,713
	Total State Hardship Fund:	\$2,423,425
	Subtotal:	\$17,617,138
LESS AUTHORIZED	Less:	
	Authorized Loans & Closed loans in construction:	\$10,483,000
	Authorized Hardship:	\$1,271,890
	Subtotal:	\$11,754,890
	Total available after Authorized deducted	\$5,862,248
PROPOSED	Proposed Loan Project(s):	\$50,000
	Proposed Hardship Project(s):	\$50,000
	Subtotal:	\$100,000
AS OF:		
September 30, 2019	TOTAL REMAINING STATE LOAN FUNDS:	\$4,660,713
	TOTAL REMAINING STATE HARDSHIP FUNDS:	\$1,101,535

(see Page 2 for details)

(see Page 2 for details)

Total Balance of ALL Funds: \$5,762,248

Projected Receipts Next Twelve Months: and Sales Tax Revenue	
Annual Maximum Sales Tax Projection	\$3,587,500
Less State Match for 2020 Federal Grant	\$0
Less State Match for 2019 Federal Grant	(\$2,200,800)
	\$0
Less Appropriation to DDW/Board	(\$1,010,800)
SUBTOTAL Sales Tax Revenue including adjustments:	\$375,900
Payment:	
Interest on Investments (Both Loan and Hardship Accounts)	\$360,000
Principal payments	\$3,110,654
Interest payments	\$773,117
Total Projections:	\$4,619,671

Total Estimated State SRF Funds Available through 9-30-2020	\$10,381,919
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**DIVISION OF DRINKING WATER
STATE LOAN FUNDS
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF September 30, 2019**

Community	Loan #	Cost Estimate	Date Authorized	Date Closed/Anticipated	Authorized Funding		
					Loan	Grant	Total
Mtn Regional-Community Wtr 2% 20 yr	3S254	2,600,000	Jul-18	Dec-19	2,600,000	0	2,600,000
Aurora City 0.75% int 30 yrs	3S258	4,228,000	Aug-18		3,804,000	424,000	4,228,000
Kane Co WCD .81% int 20 yrs	3S1712	210,000	Feb-19		168,000	42,000	210,000
Mexican Hat SSD 0% int 20 yrs	3S1723	436,000	Jun-19		161,000	275,000	436,000
Twin Oaks Local District 0% 30 yrs	3S1720	163,410	Jun-19	Oct-19	81,000	80,000	161,000
Twin Oaks add-on auth prior to closing	3S1720	39,000	Aug-19	Oct-19	19,000	20,000	39,000
Angell Springs SSD	3S1729	75,000	Aug-19	Oct-19		67,500	67,500
Paunsaugunt Cliffs	3S1728	20,740	Aug-19			20,740	20,740
Subtotal Loans and Grants Authorized					6,833,000	929,240	7,762,240
PLANNING LOANS / GRANTS IN PROCESS							
							0
Enoch City	3S256P	27,500	Jul-18	Jul-18		27,500	27,500
Escalante	3S1737P	38,000	Aug-19	Aug-19		38,000	38,000
Caineville SSD mstr plan	3S1738P	30,000	Aug-19	Aug-19		30,000	30,000
Panguitch 0% 5 yr loan master plan	3S1698P	40,000	Nov-18		40,000		40,000
Fairview	3S1736P	40,000	Aug-19	Sep-19		40,000	40,000
Pinion Forest	3S1714P	70,000	Aug-19			70,000	70,000
Eureka	3S1743P	20,000	Sep-19			20,000	20,000
Subtotal Planning in Process					40,000	225,500	265,500
CLOSED LOANS (partially disbursed)							
Daggett Co - Dutch John 0% int 30 yrs	3S216	1,020,000	Jan-15	Feb-16	0	55,000	55,000
Ephraim 1% int, 20 yrs	3S251	1,422,905	Mar-18	Apr-19	560,000	62,150	622,150
Grantsville 1.5% int, 20 yrs	3S249	3,500,000	Mar-18	Dec-18	1,100,000		1,100,000
Pleasant Grove 2% int, 20 yrs	3S255	2,300,000	May-18	Jan-19	1,950,000		1,950,000
							0
							0
							0
Subtotal Closed Loans Partially Disbursed					3,610,000	117,150	3,727,150
TOTAL AUTHORIZED/PLANNING/OR CLOSED BUT NOT YET FUNDED					\$10,483,000	\$1,271,890	\$11,754,890
PROPOSED PROJECTS FOR NOV 2019							
Bear River WCD- Collinston	3S1740	100,000			50,000	50,000	100,000
							0
							0
							0
							0
Total Proposed Projects					50,000	50,000	100,000

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
AS OF September 30, 2019

	5235	5240	
	Loan	Interest	
	Funds	(use for Grants)	Total
Cash:	\$15,193,713	\$2,423,425	\$17,617,138
Less:			
Loans & Grants authorized but not yet closed (schedule attached)	(6,873,000)	(1,154,740)	(8,027,740)
Loans & Grants closed but not fully disbursed (schedule attached)	(3,610,000)	(117,150)	(3,727,150)
Proposed loans & grants	(50,000)	(50,000)	(100,000)
Administrative quarterly charge for entire year	(1,010,800)		(1,010,800)
Appropriation to DDW	0		0
FY 2020 Federal SRF 20% match	0		0
FY 2019 Federal SRF 20% match	(2,200,800)		(2,200,800)
	1,449,113	1,101,535	2,550,648
Projected repayments during the next twelve months			
Thru 09-30-2020			
Principal	3,110,654		3,110,654
Interest		773,117	773,117
Projected annual investment earnings on invested cash balance		360,000	360,000
Sales Tax allocation thru Sep-30-2020	3,587,500		3,587,500
Total	\$8,147,267	\$2,234,652	\$10,381,919
* All interest is added to the Hardship Fee account.			

DIVISION OF DRINKING WATER
FEDERAL SRF
AS OF September 30, 2019

FIRST ROUND FUND		FEDERAL SECOND ROUND FUND		Hardship Fund
1997 thru 2018 SRF Grants		Principal Repayments	Earnings on Invested Cash Balance	Total:
Net Federal SRF Grants:	\$179,244,401	Principal (P):	\$63,131,103	\$1,210,483
Total State Matches:	\$41,251,100	Interest (I):	\$18,290,162	
Closed Loans:	-\$210,194,701	Total P & I:	\$81,421,265	
Total Grant Dollars:	\$10,300,800			\$1,391,150

SUMMARY		
	Total Federal State Revolving Fund:	\$92,932,548
	Total Federal Hardship Fund:	\$1,391,150
	Subtotal:	\$94,323,698
LESS AUTHORIZED & PARTIALLY DISBURSED	Less:	
	Authorized & Partially Disbursed Closed Loans:	\$87,335,336
	Authorized Federal Hardship:	\$419,580
	Subtotal:	\$87,754,916
		(see Page 2 for details)
PROPOSED	Proposed Federal Project(s):	\$6,335,000
	Proposed Federal Hardship Project(s):	\$0
	Subtotal:	\$6,335,000
		(see Page 2 for details)

AS OF:	September 30, 2019	TOTAL REMAINING LOAN FUNDS:	-\$737,788
		TOTAL REMAINING HARDSHIP FUNDS:	\$971,570

Total Balance of ALL Funds after deducting proposed actions: \$233,782

Projected Receipts thru September 30, 2020	
2020 Fed SRF Grant	\$8,100,000
2020 State Match	\$2,200,800
Interest on Investments	\$2,022,000
Principal Payments	\$7,041,203
Interest	\$1,264,893
Hardship & Technical Assistance fees	\$251,699
Fund 5215 principal payments	\$95,800
Total:	\$20,976,395

} Receive 60% in January

Total Estimated Federal SRF Funds Available through: 09/30/2020 \$21,210,177

**DIVISION OF DRINKING WATER
FEDERAL STATE REVIVING FUND**

**PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF September 30, 2019**

COMMUNITY	Project			Authorized Date	Closing Date Scheduled or Estimated	Authorized From Loan Funds (1st or 2nd Round)			Hardship Fund
	Total Project	Terms	Loan #			Loan	Forgiveness	Total	
Swiss Alpine Water Company	947,000	3.53% hgf, 25 YRS	3F300	Mar-18	Dec-19	807,000		807,000	
Twin Creeks SSD (Phase II)	3,976,000	1.87% hgf, 30 yrs	3F1716	Nov-17	Dec-19	3,395,000	300,000	3,695,000	
West Corinne Water Co	553,000	2.5% hgf, 20 yrs	3F305	Aug-18		500,000		500,000	
Lincoln Culinary Water Assn	2,516,000	60/40 1.25% hgf, 30 yrs	3F1696	Jan-19		1,510,000	1,006,000	2,516,000	
Virgin Town	1,200,000	50% PF 0% int, 20 yrs	3F1702	Jan-19		400,000	400,000	800,000	
Canyon Meadows Mutual Wtr	1,925,000	90/10 1.0% hgf, 30 yrs	3F1700	Jan-19		1,540,000	385,000	1,925,000	
Canyon Meadows Mutual Wtr	235,000	2.50% HGA 20 yrs	3F1706	Feb-19		235,000		235,000	
Marysvale	3,665,000	0% 30 yrs	3F1709	Apr-19		2,932,000	733,000	3,665,000	
Kearns Improvement District	21,000,000	1.25% hgf, 20 yrs (portfolio)	3F1725	Jun-19	Dec-19	21,000,000		21,000,000	
Bluffdale City	6,972,000	2% hgf, 20 yrs (972K contribution)	3F1726	Jun-19		6,000,000		6,000,000	
Kanab City	7,227,000	2.5% hgf, 30 yrs	3F1733	Aug-19		7,227,000		7,227,000	
Genola City	2,849,400	0% int 30 yrs (\$576,400 pf)	3F1732	Aug-19		2,273,000	576,400	2,849,400	
Central Utah WCD-Duchesne Valley WTP	18,000,000	1.25% hgf, 30 yrs (portfolio ?)	3F1731	Aug-19		18,000,000		18,000,000	
TOTAL CONSTRUCTION AUTHORIZED:						\$ 65,819,000	\$ 3,400,400	\$ 69,219,400	\$ -
COMMITTED ADVANCES / AGREEMENTS or PARTIALLY DISBURSED CLOSED 2ND ROUND AGREEMENTS:									
	81				Date Closed				
								0	0
Rural Water Assn of Utah	676,000	5 yr contract for Development Specialist	Ongoing	Jan-18	Jun-18			0	89,440
Granger Hunter Improvement District	20,000,000	1.25% HGA 20 yrs (portfolio)	3F1708	Feb-19	Jul-19	17,317,600		17,317,600	
Forest Glen Plat A HOA	1,438,986	0% int, 30 yrs	3F222	Feb-14	Dec-14	57,000	24,986	81,986	
Springdale	7,840,000	.5% int/hgf, 30 yrs	3F264	May-16	Oct-17	571,500	54,850	626,350	
Moab	90,000	100% pf engineering planning study	3F292P	Aug-17	Feb-18		90,000	90,000	
Summit Culinary Water	36,600	100% pf 5 point analysis	3F1694P	Jun-18	Jul-18			0	23,140
Goshen	22,000	5 yr 0% loan master plan	3F1718P	Mar-19	May-19			0	22,000
Axtell Community Service Distribution	40,000	5 yr 0% master plan & gw well siting	3F1719P	Mar-19	May-19			0	40,000
Genola	40,000	100% pf engineering design	3F1735P	Aug-19	Aug-19			0	40,000
Old Meadows	25,000	100% pf master plan	3F312P	Sep-18	Aug-19			0	25,000
Hildale City	40,000	100% pf master plan	3F1704P	Nov-18				0	40,000
Central Iron Co WCD	40,000	100% pf master plan	3F1727P	Apr-19				0	40,000
Hilale City	100,000	eng feasibility study 100% pf	3F1722P	Jul-19	Oct-19			0	100,000
TOTAL PLANNING AUTHORIZED:						\$17,946,100	\$169,836	\$18,115,936	\$419,580
TOTAL CONSTRUCTION & PLANNING:								\$87,335,336	\$419,580
AVAILABLE PROJECT FUNDS:								\$5,597,212	
AVAILABLE HARDSHIP FUNDS:								\$971,570	
PROPOSED PROJECTS FOR NOV 2019:									
Central Utah WCD	10,000,000	Programmatic financing	3F1741			10,000,000		10,000,000	
Marysvale	3,665,000	deauthorization	3F1709	Apr-19		(2,932,000)	(733,000)	(3,665,000)	
TOTAL PROPOSED PROJECTS FOR THIS MEETING:						\$7,068,000	-\$733,000	\$6,335,000	\$0
*RWAU hardship grant is being disbursed monthly									
TOTAL FUNDS AFTER PROPOSED PROJECTS ARE FUNDED:								-\$737,788	
TOTAL FUNDS AFTER PROPOSED HS PROJECTS ARE FUNDED:								\$971,570	
NOTES OF LOAN CLOSINGS SINCE LAST BOARD MEETING:									
Total Recent Loan Closings						\$0	\$0	\$0	\$0

DIVISION OF DRINKING WATER
FEDERAL SRF LOAN FUNDS
AS OF September 30, 2019

	Loan Funds 1st Round	Loan Payments			TOTAL
		2nd Round		Hardship Fund	
		Principal	Interest		
Federal Capitalization Grants and State 20% match thru 2015	\$220,495,501				
Earnings on Invested 1st Round Funds			1,210,483		
Repayments (including interest earnings on 2nd round receipts)		63,131,103	18,290,162	1,391,150	304,518,399
Less:					
Closed loans and grants	-210,194,701				-210,194,701
SUBTOTAL of Funds Available	\$10,300,800	\$63,131,103	\$19,500,644	\$1,391,150	\$94,323,698
Loans & Grants authorized but not yet closed or fully disbursed	-66,439,400	-20,726,100	-169,836	-419,580	-87,754,916
SUBTOTAL of Funds Available less Authorized	-\$56,138,600	\$42,405,003	\$19,330,808	\$971,570	\$6,568,782
Future Estimates:					
Proposed Loans/Grants for current board package	-6,335,000			0	-6,335,000
SUBTOTAL of Funds Available less Proposed Loans & Grants	-\$62,473,600	\$42,405,003	\$19,330,808	\$971,570	\$233,782
PROJECTIONS THRU September-2020					
2021 Fed SRF Grant & State Match	0				
2020 Fed SRF Grant	8,100,000				
2020 State Match	2,200,800				
Projected repayments & revenue during the next twelve months		7,137,003	1,264,893	251,699	8,653,595
Projected annual investment earnings on invested cash balance		1,620,000	360,000	42,000	2,022,000
TOTAL	-\$52,172,800	\$51,162,006	\$20,955,701	\$1,265,269	\$21,210,177

Agenda Item

6(B)

Project Priority List
Presented to the Drinking Water Board
November 5, 2019

**DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST**

There is one new projects being added to the project priority list

Central Utah Water Conservancy District is being added to the Project Priority List with 22.5 points. Their project consists of programmatic financing to fund multiple capital replacement projects.

FINANCIAL ASSISTANCE RECOMMENDATION:

The Drinking Water Board approve the updated Project Priority List.

September 24, 2019

Utah Federal SRF Program

Project Priority List

Authorized

Total Unmet Needs:

\$707,974,341

Total Needs, incl. Recent funding

\$1,041,330,432

\$333,356,091

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
N				22.5	Central Utah WCD	Utah		Programmatic financing	\$10,000,000.00	10000000	
A				33.3	Granger-Hunter ID	Salt Lake	121,083	Reservoir storage, dist lines, booster station, well trmnt	25,950,000	20,000,000	\$20,000,000
A				31.6	Virgin Town	washington	596	New tank and distribution lines	1,200,000	800,000	\$800,000
A				30.7	Canyon Meadows	Wasatch	100	Trans line, Dist line, Tank, treatment plant	1,724,068	1,724,068	\$1,925,000
A				30	Central Utah WCD	Duchesne		Duchesne Valley WTP	\$18,000,000.00	18,000,000	
A				28.4	Kearns Improvement Dist	Salt Lake	51,500	Multiple tanks, booster pump station, trans line upgrade	\$21,000,000	21,000,000	
A				25	Greenwich	Piute	67	Chlorination building	\$130,000.00	130,000	
A				24.3	West Corrine	Box Elder	1,275	Spring redevelopment and transmission line replacement	533,075	479,767	\$500,000
A				21.5	Kanab	Kane	2,145	Tank replacement, main line replacement, PRV's	\$7,301,640.00	7,229,346	
A				20.3	Marysville Town	Piute	420	Well improvement, chlorination bldg, booster pump, dist line	3,665,000	3,665,000	
A				19.5	Twin Creeks SSD	Wasatch	2,500	Treatment Plant, Storage Tank	4,029,650	3,757,000	\$3,695,000
A				18.8	Swiss Alpine	Wasatch	300	New Well and transmission line	955,152	815,152	\$807,000
A				16.6	Lincoln Culinary	Tooele	489	Well development, trans line, dist line, supply line	2,516,000	2,516,000	\$2,516,000
A				14.4	Bluffdale	Salt Lake	15,435	4 MG tank, transmission line	\$6,900,000	6,900,000	
A				7.2	Diamond Valley Acres	Washington	1,370	Well equipping and conn to system	235,000	235,000	\$235,000
A				7	Genola	Utah	1,500	Tank and well	\$2,849,400	2,849,400	

- 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

POTENTIAL PROJECTS

Agenda Item

6(C)(i)(a)

**DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN**

APPLICANT'S REQUEST:

Bear River Water Conservancy District has a project consisting of a test well for the Collinston Project. The cost of the project is estimated at \$237,500. Bear River Water Conservancy District will be contributing \$137,500 towards the project. The request from the Drinking Water Board is \$100,000.

STAFF COMMENTS:

The local MAGI for Bear River WCD is approximately \$44,925 (98% of the state MAGI), the after project water bill would \$76.96, which is 2.06% of the local MAGI. Therefore they do qualify to receive additional subsidy.

	Option#	Loan	%/fee	P.F.	% of local MAGI	Water bill
1	Base	\$100,000	3.58%	\$0	2.06%	\$76.96
2	0%	\$100,000	0%	\$0	2.04%	\$76.27
3	50/50	\$50,000	0%	\$50,000	2.02%	\$75.45

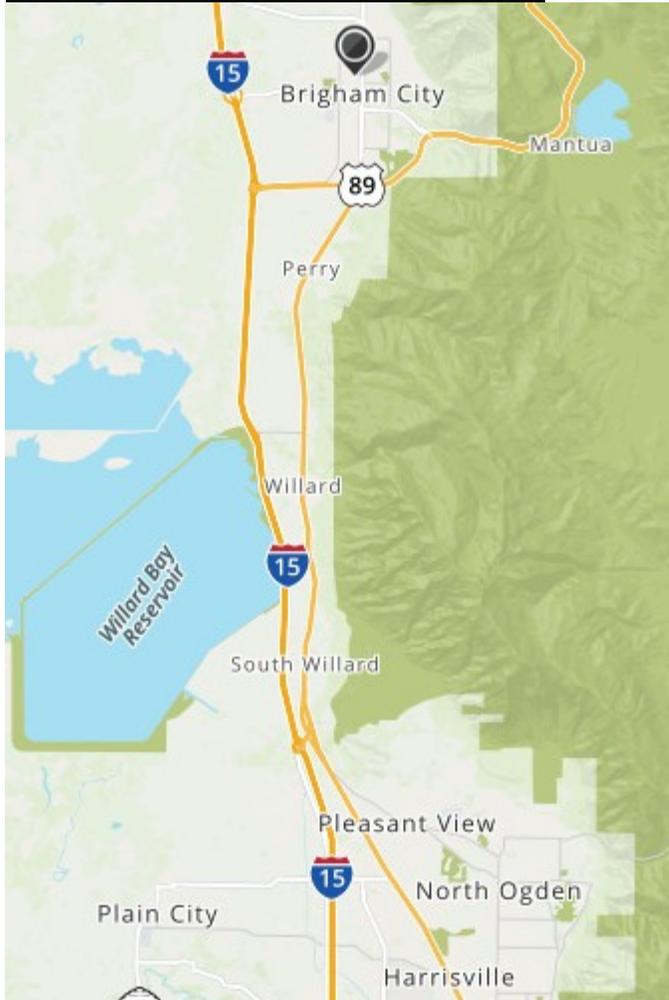
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of \$50,000 and a grant of \$50,000 to Bear River WCD at 0% interest for 20 years. Conditions include that they resolve all issues on their compliance report.

APPLICANT'S LOCATION:

Bear River WCD is located in Box Elder County approximately 25 miles North of Ogden.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

Bear River Water Conservancy District has a project consisting of a test well to provide water to the Collinston project. The test well is Phase I of the project and Bear River does plan on an additional project to equip the well and bring it into production.

POPULATION GROWTH:

Projected populations and number of connections are shown in the table below:

Year	Population	Connections
2020	1,235	292
2030	1,250	295
2040	1,265	299

IMPLEMENTATION SCHEDULE:

FA Committee Conference Call:	Oct 2019
DWB Funding Authorization:	Nov 2019
Begin Construction:	Dec 2019
Complete Construction:	Jan 2020

COST ESTIMATE:

Test Well	\$237,500
Total Project Cost	\$237,500

COST ALLOCATION:

The cost allocation proposed for the project is shown below:

<u>Funding Source</u>	<u>Cost Sharing</u>	<u>Percent of Project</u>
DWB Loan	\$50,000	21%
DWB Grant	\$50,000	21%
System contribution	\$137,500	58%
Total	\$237,500	100%

IPS SUMMARY:

Code	Description	Physical Facilities	Quality & Monitoring	Significant Deficiency Violations
M001	Current Emergency Response Program	-10		
4B	RTCR monitoring		1	
	Total = -10	-10	1	0

CONTACT INFORMATION:

APPLICANT:

Bear River WCD
102 West Forest Street
Brigham City, UT 84302
435-723-7034

PRESIDING OFFICIAL &
CONTACT PERSON:

Carl Mackley
General Manager
102 West Forest Street
Brigham City, UT 84302
435-723-7034
carlm@brwcd.com

RECORDER:

Charles Holmgren
435-279-3303

ENGINEER:

William Bigelow
Hansen, Allen & Luce
859 W. South Jordan Parkway, ste 200
South Jordan, UT 84095
801-566-5599
bbigelow@hansenallenuce.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Bear River WCD
 COUNTY: Box Elder
 PROJECT DESCRIPTION: Test well

FUNDING SOURCE: State SRF

50 % Loan & 50 % Grant

ESTIMATED POPULATION:	340	NO. OF CONNECTIONS:	292 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	\$76.65 *			PROJECT TOTAL:	\$238,100
CURRENT % OF AGI:	2.05%	FINANCIAL PTS:	84	LOAN AMOUNT:	\$50,000
ESTIMATED MEDIAN AGI:	\$44,925			GRANT AMOUNT:	\$50,000
STATE AGI:	\$45,895			TOTAL REQUEST:	\$100,000
SYSTEM % OF STATE AGI:	98%				

	@ ZERO % RATE 0%	@ RBBI MKT RATE 3.58%		AFTER REPAYMENT PENALTY & POINTS 0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.58%		0.00%
REQUIRED DEBT SERVICE:	\$2,500.00	\$3,543.57		\$2,500.00
*PARTIAL COVERAGE (15%):	\$0.00	\$0.00		\$0.00
*ADD. COVERAGE AND RESERVE (10%):	\$250.00	\$354.36		\$250.00
ANNUAL NEW DEBT PER CONNECTION:	\$9.42	\$13.35		\$9.42
O & M + FUNDED DEPRECIATION:	\$106,591.00	\$106,591.00		\$106,591.00
OTHER DEBT + COVERAGE:	\$143,840.00	\$143,840.00		\$143,840.00
REPLACEMENT RESERVE ACCOUNT:	\$11,208.15	\$11,260.33		\$11,208.15
ANNUAL EXPENSES PER CONNECTION:	\$896.02	\$896.20		\$896.02
TOTAL SYSTEM EXPENSES	\$264,389.15	\$265,589.25		\$264,389.15
TAX REVENUE:	\$216,667.00	\$216,667.00		\$216,667.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	\$75.45	\$75.80		\$75.45
% OF ADJUSTED GROSS INCOME:	2.02%	2.02%		2.02%

* Equivalent Residential Connections

Agenda Item

6(C)(ii)(a)

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE

APPLICANT'S REQUEST:

Central Utah Water Conservancy District (CUWCD) is requesting \$10,000,000 in financial assistance to fund multiple capital improvement projects at the Duchesne Aquaduct as well as three of their water treatment plants: Duchesne Valley Water Treatment Plant (DVWTP), Ashley Valley Water Treatment Plant (AVWTP) and Don A. Christiansen Regional Water Treatment Plant (DACRWTP).

STAFF COMMENTS:

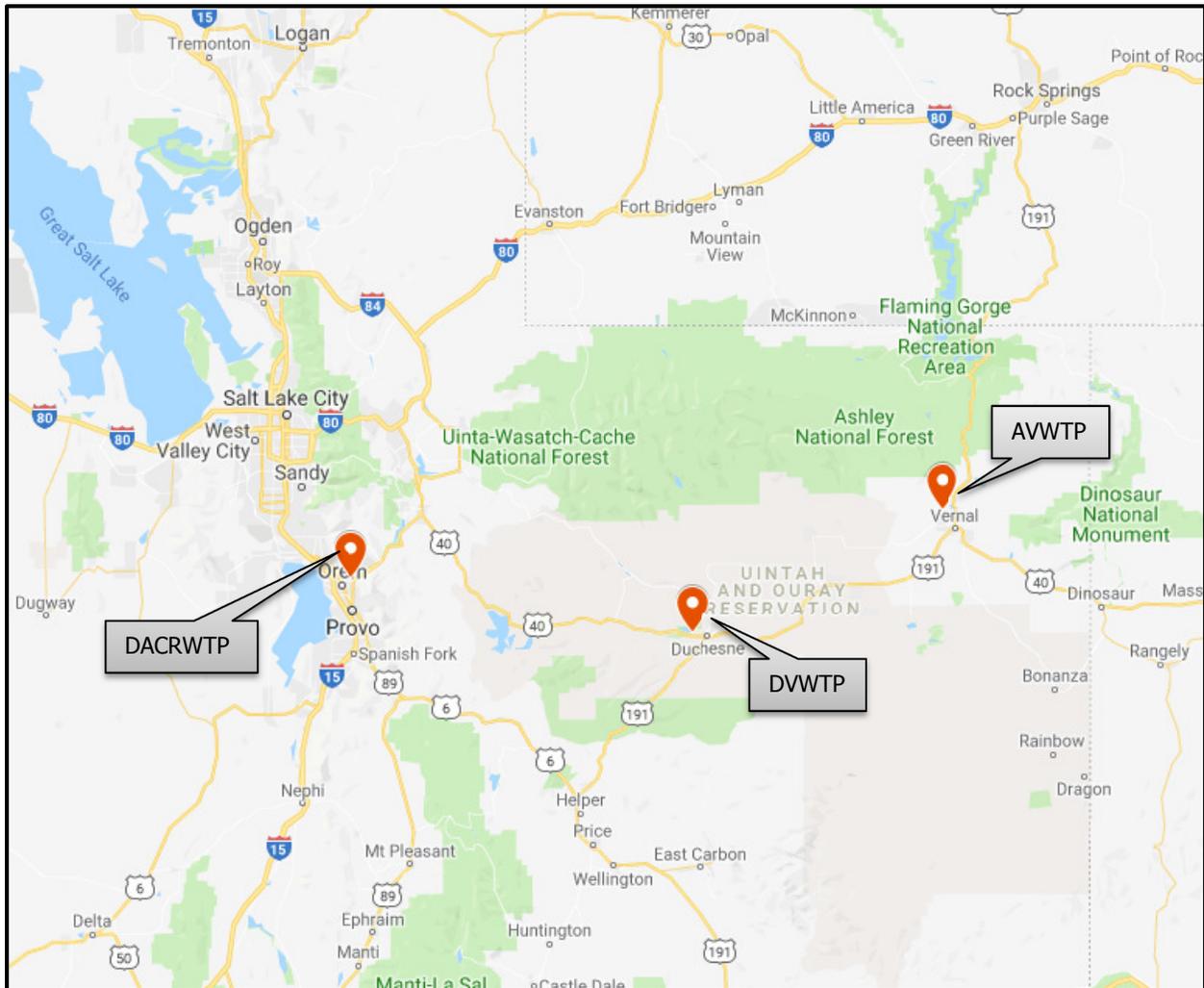
CUWCD is a large water wholesaler to multiple public water systems and an affordability calculation was not done for this application. This project is the second funding request to be submitted by CUWCD this year and staff evaluated it on the basis that it is phase two of their overall programmatic financing project. The first project was the treatment upgrade to DVWTP which the Board authorized on August 27, 2019. Staff's funding recommendation is based on the terms approved by the Board for the previous project and other recent authorizations for projects using programmatic financing.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of **\$10,000,000 at 1.25% hardship grant assessment fee for twenty (20) years** to the Central Utah Water Conservancy District to fund multiple capital improvement projects.

APPLICANT'S LOCATION:

This applicant's projects will be located in Utah, Uintah and Duchesne counties.



PROJECT DESCRIPTION:

These are some of the intended improvements at three of the plants.

ASHLEY VALLEY WATER TREATMENT PLANT

- Red Fleet Butterfly Valve Replacement/Vault/Hydraulic Analysis
- Asphalt Sealing/Crack Repair
- Fall Hazard Mitigation
- Replace Raw Water Valves, Flowmeters, and Pipes
- Clearwell Vent Relocation
- Clearwell Plant Service Water Pump Replacement (Qty. 3)
- Backwash Pump Replacement (Qty. 2)
- Operations Building - Sump Pump Replacement (Qty. 2)
- Lightning Protection - 1986 Structures

- Plant Generator Replacement
- Plant Hydrotank Rehabilitation
- Masonry Sealing (Floc/Sed, BWWR, CW Pump, Filters, Flash Mix, Operations, Utility)
- Road Grading/Binder Application (Drying Beds, South Gate)
- Filters - Replace Valve Actuators (24 Total; 20 Year Avg. Lifespan; 12 Every Other Year at \$10k Each)
- Chemical Feed Pump Replacement (Primary Coagulant & Flocculant)
- Terminal Reservoir Joint Sealant Replacement
- Terminal Reservoir Valve Replacement
- Flocculation - Replace VFDs - Stages 1-3 (4 of 12 VFDs)
- Replace Filter Drain Valves, Modulating BW Valve, & Air Scour Valves
- Chemical Feed Pump Replacement (pH Adjustment & Filter Aid)
- SCADA Hardware & PLCs Replacement
- Asphalt Sealing/Crack Repair

DON A. CHRISTIANSEN REGIONAL WATER TREATMENT PLANT

- Filter Valve Actuator Replacements
- Vertical Turbine Pump Rehab. Pump 22
- Transformer Replacement (Qty. 16)
- Vertical Turbine Pump Rehab. Pumps 10, 11, 12, 35, 36, & 37
- Rapid Mix Vertical Turbine Pump Rehab. Pumps 38 & 39
- Ozone Generator Inspection and Refurbish
- Rehab 15 MG Built-up Reservoir Roof/Baffle Curtain
- Salt Lake Aqueduct Flow Meter Replacement

DUCHESNE VALLEY WATER TREATMENT PLANT

- Chlorine Gas System Repairs/Door Replacement
- 2.8 MG Reservoir Leak Repair
- Pumphouse Entryway Modifications
- Plant Coating Systems (Maintenance/Repair)
- Fall Hazard Mitigation
- Asphalt Maintenance
- Duchesne Aqueduct Improvement Project
- 2.0 MG Finished Storage Reservoir - Caulking Replacement
- Intake Generator Replacement
- Replace Intake Gate Changer System and Valves
- Replace LOX Supply PRV Valve
- Pumphouse Roof Replacement
- Replace SCADA Hardware and PLC Equipment
- Replace Intake Pump VFDs
- Replace Backwash Motor VFDs
- Plant Architectural Coatings
- Replace Switchgear, Transformer, and Breakers (Plant, Intake, and Clearwell)
- Facility Road Maintenance - Roadbase/Binder
- Flocculation Motor and Gear Box Replacement
- HVAC Replacement
- Replace Ozone Equipment

IMPLEMENTATION SCHEDULE:

DWB Funding Authorization:	November 2019
Plan Approval	varies
Bid Opening	varies
Loan Closing	January 2020
Begin Construction	February 2020
Complete Construction	2021
Receive Operating Permit:	varies

COST ESTIMATE:

Legal/Bonding (District will self-pay)	\$ 17,000	
Admin	\$ 20,000	
Engineering - Planning	\$ 340,000	} \$1,299,000 11%
Engineering - Design	\$ 494,000	
Engineering - CMS	\$ 465,000	
Construction	\$ 9,929,000	
Contingency	\$ 0	
Land Acquisition	\$ 40,000	
DDW Loan Origination Fee (LOF)	\$ 100,000	
Total	\$ 11,405,000	

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

<u>Funding Source</u>	<u>Cost Sharing</u>
DWB	\$ 10,000,000
Local Contribution	\$ 1,405,000
	<u>\$ 11,405,000</u>

APPLICANT: Central Utah Water Conservancy District
1426 East 750 North, Suite 400
Orem, UT 84097

CONTACT PERSON: Gerard Yates
1426 East 750 North, Suite 400
Orem, UT 84097
801-226-7189
Gerard@cuwcd.com

PRESIDING OFFICIAL &
TREASURER: Gene Shawcroft, P.E., General Manager
801-226-7120
Gene@cuwcd.com

CLERK: Shawn Lambert
801-226-7138
shawn@cuwcd.com

CONSULTING ENGINEER: Will vary by project

ATTORNEY: Steve Clyde
Clyde Snow & Sessions
201 South Main Street, 13th Floor
Salt Lake City, UT 84111-2216
801-322-2516
SEC@clydesnow.com

BOND COUNSEL Eric Hunter
Chapman and Cutler
215 South State Street -Suite 800
Salt Lake City, UT 84111-2339
801-533-0066

FINANCIAL ADVISOR: David Robertson
Lewis Young Robertson & Burningham
41 North Rio Grande Street, Suite 101
Salt Lake City, UT 84101-1363
801-596-0700
David@lewisyoung.com

Agenda Item

6(C)(ii)(b)

**DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN**

APPLICANT'S REQUEST:

Marysville Town was authorized financial assistance in the amount of \$3,665,000 on April 9, 2019. Their project includes improvements and upgrades to their existing well, a new line to the well, a chlorination building, booster pumps for the upper zones, distribution line, service laterals and misc appurtenances.

STAFF COMMENTS:

Staff has received an e-mail from the Marysville Mayor indicating that the Town does not want to move forward with the project at this time.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board de-authorize a loan of \$3,665,000 at 0% interest for 30 years with \$733,000 in principal forgiveness to Marysville Town.

August 7, 2019

Department of Environmental Quality
Division of Drinking Water
Marie E. Owen, P.E., Director

RE: Marysvale Town (Project No. 3F1709, System #16003)

Drinking Water Board:

Thank you for your time and all effort involved in helping us with funding for Marysvale Town water project.

However, at this time and with much input from the town council and community members we have made the decision to not move forward at this time with this project.

With thanks for all time, effort and paperwork put forth from your department.

A handwritten signature in cursive script that reads "Janet Fautin". The signature is written in a dark ink and is positioned above the printed name of the signatory.

Janet Fautin, Mayor
Marysvale Town

Agenda Item

6(C)(ii)(c)

**DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN**

APPLICANT'S REQUEST:

Cole Canyon Water Company was authorized emergency financial assistance in the amount of \$125,000. Their project includes an emergency connection to Liberty Pipeline Company.

STAFF COMMENTS:

Staff received an e-mail from Cole Canyon informing us they decided to go with private funding for their project and have decided to decline the funding from the Drinking Water Board.

STAFF RECOMMENDATION:

The Drinking Water Board de-authorize a loan of \$125,000 at 3.25% interest for 20 years.

Agenda Item

6(C)(ii)(d)

**DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE**

APPLICANT'S REQUEST:

Central Utah Water Conservancy District (CUWCD) was authorized financial assistance on August 28, 2018 for a loan of \$3,100,000 for the construction of an algal straining facility at the treatment plant.

STAFF COMMENTS:

Staff received a call from Central Utah WCD in October 2018 requesting a hold on the project due to contamination from the Dollar Ridge fire.

Central Utah WCD has since applied for funding from the Drinking Water Board for alternative projects and would like to de-authorize this particular project.

STAFF RECOMMENDATION:

The Drinking Water Board de-authorize a loan of **\$3,100,000 for 30 years with a 1.5% Hardship Grant Assessment Fee** to Central Utah Water Conservancy District.

Agenda Item

7(A)

Rule Adoption of R309-400
Water System Rating Criteria (Improvement Priority System)
Presented to the Drinking Water Board
November 5, 2019

Rule Adoption of the Revised R309-400

PROPOSAL:

We propose to adopt the following changes to R309-400, *Water System Rating Criteria (Improvement Priority System)*:

- Repeal the existing rule and reenact the new rule in its place.
- Removed the individual violations and deficiencies from the rule to be a separate Improvement Priority System (IPS) Program. The IPS program requires a separate approval from the Drinking Water Board for substantive revisions.

HISTORY/CONTEXT:

The IPS rule was first finalized in 1996 as a tool for water systems to track compliance with violations and physical deficiencies. Since its inception in 1996, the IPS rule has had only minor changes. The purpose of revising this rule is to emphasize the importance of significant deficiencies, align better with federal regulations, and ensure that risk to public health is the driving force behind the rule.

The Board authorized the division staff to initiate the rule making process for revising the existing R309-400 rule on August 27, 2019. Due to substantial content change and reorganization of the existing R309-400, the existing rule is repealed and a new rule re-enacted in its place. The new rule incorporates by reference the IPS Program document, which is a separate document that identifies all deficiencies and violations with their associated types and point values. The implementation of the new R309-400 will apply to all water systems in Utah.

During the public comment period from September 15 through October 15, 2019, the Division receives only one comment, which supports this rule revision. A summary of the comment and division response is enclosed.

DIVISION STAFF/DIRECTOR RECOMMENDATION:

Division staff recommends that the Board adopt the R309-400 rule and to authorize the Division of Drinking Water to make the new rule effective.

IMPLEMENTATION SCHEDULE:

The Division anticipates making the repeal and reenactment effective November 15, 2019 with an implementation start date of January 1, 2020.

COST ESTIMATE:

The new R309-400 rule does not add any new requirements to the existing rules in R309. It only enforces them. The proposed amendment to R309-400 is not expected to result in costs or savings to the state budget, local governments, or small businesses.

Response to Comments for Proposed R309-400

Division of Drinking Water Utah Department of Environmental Quality

Comment Period: September 15, 2019, through October 15, 2019
Public Hearing: There was no public hearing

One person submitted a comment to the Division of Drinking Water (DDW) concerning proposed R309-400 rule change during the 30-day comment period. The comment is summarized below along with the DDW's response.

I. Comment by Colby Goodliffe, Hill Air Force Base/American Water

Comment: *The proposed changes to R309-400 are a much needed step to better protect public health. However, I think that the rule still lacks enforcement authority. The way the proposed rule is written, DDW still does not have the ability to force a water system into compliance to protect public health. Citizens expect that a regulatory agency has the knowledge, ability, and authority to enforce rules and regulations, especially when they are directly connected to public health. The new rule only allows DDW to rate a system as "Approved" or "Unapproved". Other than sounding negative, being an "Unapproved" system doesn't carry much weight. There are so many water systems that are managed by part-time people that DDW needs more authority to issue fines, or mandate changes to protect the public.*

Response: The Director's ability to enforce orders or otherwise compel compliance is in the Utah Safe Drinking Water Act and UAC R309-100-8. The Utah Code § 19-4-106(d) empowers the Director to enforce rules promulgated by the Board through the issuance of orders. The Utah Code § 19-4-109 provides that any person who violates a rule or order made or issued according to the Utah Safe Drinking Water Act may be subject to a civil penalty of up to \$5,000 per day of the violation. Currently, the Division of Drinking Water has two staff dedicated to enforcing the rules through orders and compliance agreements. The Division works closely with our local and federal partner agencies to ensure robust and thorough enforcement of all drinking water rules and standards.

R309-400. Improvement Priority System and Public Water System Ratings.

R309-400-1. Purpose.

The purpose of this rule is to establish the Improvement Priority System used by the division to assign compliance ratings to public water systems and to prioritize enforcement action based on points assessed for noncompliance with drinking water rules.

R309-400-2. Authority.

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

R309-400-3. Definitions.

“Improvement Priority System (IPS)” is a point system used by the division to evaluate a public water system’s performance and compliance with the drinking water rules in Title 309, *Environmental Quality, Drinking Water*.

“Public Water System Rating” is assigned to a public water system by the director to characterize the water system’s compliance with drinking water rules and overall operation and performance.

R309-400-4. Improvement Priority System – Assessment of Points.

1. The division shall:
 - a. maintain and make public an improvement priority system (IPS) program that includes:
 - i. a table specifying the number of points associated with each instance of noncompliance with a drinking water rule requirement and noncompliance with a directive or order issued by the director, and
 - ii. the point thresholds for assigning an Approved or Not Approved rating to each type of public water system; and
 - b. obtain approval from the Drinking Water Board for substantive revisions to the IPS program.
2. The division incorporates by reference the IPS program dated August 27, 2019.

3. Implementation of the IPS program approved by Drinking Water Board starts on January 1, 2020.
4. The director may assess points to a public water system and take enforcement action in accordance with the implementation policy and the table of points based on:
 - a. noncompliance with Title R309 of the Utah Administrative Code;
 - b. noncompliance with a directive or order issued by the director; or
 - c. operational practices or performance that may result in a threat to public health.

R309-400-5. Public Water System Ratings.

1. The director may assign a rating to a public water system of:
 - a. Approved based on the total number of points assessed for noncompliance;
 - b. Not Approved based on:
 - i. the total number of points assessed for noncompliance, or
 - ii. an immediate public health threat; or
 - c. Corrective Action based on a current, written agreement with the division to resolve underlying noncompliance according to a compliance schedule.
2. A public water system shall maintain an Approved rating.
3. A public water system with a Not Approved rating shall:
 - a. take immediate action to resolve the noncompliance that resulted in the Not Approved rating; or
 - b. enter into a written agreement with the division to resolve the noncompliance that resulted in the Not Approved rating according to a compliance schedule.

R309-400-6. Administrative Appeals.

1. The assessment of points does not constitute a permit order per R305-7-102(1)(l) and may not be appealed pursuant to R305-7.
2. The assignment of a rating to a public water system constitutes an initial order per R305-7-102(1)(g) and may be appealed by submitting, filing, and serving a written Request for Agency Action pursuant to R305-7-303 within 30 days of the date of the order issued by the director.

KEY: drinking water, environmental protection, penalties

Date of Enactment or Last Substantive Amendment:

Notice of Continuation: March 22, 2010

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

R309. Environmental Quality, Drinking Water.

R309-400. ~~[Water System Rating Criteria]~~ Improvement Priority System and Public Water System Ratings.

~~[R309-400-1. Authority.~~

~~Under authority of Utah Code Annotated, Section 19-4-104, the Drinking Water Board adopts this rule in order to evaluate a public water system's standard of operation and service delivered in compliance with R309-100 through R309-705 hereinafter referred to as Rules.~~

~~R309-400-2. Extent of Coverage.~~

~~This rule shall apply to all public water systems as defined in R309-100.~~

~~R309-400-3. Definitions.~~

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

~~Corrective Action Plan - an agreement between the Division of Drinking Water and a public drinking water system establishing conditions and timelines for addressing significant deficiencies or E. coli contamination of a drinking water source.~~

~~Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.~~

~~Treatment Technique Violation - failure to correct significant deficiencies, address E. coli positive source contamination or adhere to specific terms of a Corrective Action Plan.~~

~~R309-400-4. Water System Ratings.~~

~~(1) The Director shall assign a rating to each public water system in order to provide a concise indication of its condition and performance. This rating shall be assigned based on the evaluation of the operation and performance of the water system in accordance with the requirements of the Rules. Points shall be assessed to water systems for each violation of these requirements (R309-100 through R309-705) as the requirements apply to each individual water system. The number of points that shall be assessed is outlined in the following sections of this rule. The number of points represents the threat to the quality of the water and thereby public health.~~

~~(2) Points are assessed in the following categories: Quality, Monitoring and Public Notification; Physical Deficiencies; Operator Certification; Cross Connection Control; Drinking Water Source Protection; Administrative Issues; and, Reporting and Record Maintenance.~~

~~(3) Based upon the accumulation of points, the public water system shall be assigned one of the following ratings:~~

~~(a) Approved - In order to qualify for an Approved rating, the public water system must maintain a point total less than the following:~~

~~(i) Community water system - 150 points;~~

~~(ii) Non-Transient Non-Community water system - 120 points;
and~~

~~(iii) Non-Community water system - 100 points.~~

~~(b) Not Approved - In order for a public water system to receive a Not Approved rating the accumulation of points for the water system must exceed the totals listed above.~~

~~(c) Corrective Action - In order to qualify for a Corrective Action rating the public water system must submit the following:~~

~~(i) A written agreement to the Director stating a willingness to comply with the requirements set forth in the Rules; and,~~

~~(ii) A compliance schedule and time table agreed upon by the Director outlining the necessary construction or changes to correct any physical deficiencies or monitoring failures; and,~~

~~(iii) Proof of the financial ability of the water system or that the financial arrangements are in place to correct the water system deficiencies.~~

~~(iv) The Corrective Action rating shall continue until the total project is completed or until a suitable construction inspection or sanitary survey is conducted to determine the effectiveness of the improvements or the accumulation of points drops below the threshold for a not approved rating whichever is later.~~

~~(4) The water system point accumulation shall be adjusted on a quarterly basis or as current information is available to the Director. The appropriate water system rating shall then be adjusted to reflect the current point total.~~

~~(5) The Director may at any time rate a water system Not Approved, if an immediate threat to public health exists. This rating shall remain in place until such time as the threat is alleviated and the cause is corrected.~~

~~(6) Any water system may appeal its assigned rating or assessed points as provided in R305-7.~~

R309-400-5. Quality, Monitoring and Public Notification Violations.

~~(1) Total Coliform Rule: All points assessed to public water systems via this subsection are based on violations of the quality standards in R309-200-5(6); or the monitoring requirements in R309-210-5; and the associated public notification requirements in R309-220. The bacteriological points assessed shall be updated on a monthly basis with the total number of points reflecting the most recent twelve month period or the most recent 4 quarters for those water systems that collect bacteriological samples quarterly, unless otherwise noted.~~

~~(a) For each major bacteriological routine monitoring violation, 35 points shall be assessed. For each failure to perform the associated public notification 5 points shall be assessed.~~

~~(b) For each minor bacteriological routine monitoring violation, 10 points shall be assessed. For each failure to perform the associated public notification 2 points shall be assessed.~~

~~(c) For each major bacteriological repeat monitoring violation, 40 points shall be assessed. For each failure to perform the associated public notification 5 points shall be assessed.~~

~~(d) For each minor bacteriological repeat monitoring violation, 10 points shall be assessed. For each failure to perform the associated public notification 2 points shall be assessed.~~

~~(e) For each additional monitoring violation (R309-210-5(2)(e)), 10 points shall be assessed. For each failure to perform the associated public notification 2 points shall be~~

~~assessed.~~

~~(f) For each non-acute bacteriological MCL violation (R309-200-5(6)(a)), 40 points shall be assessed. For each failure to perform the associated public notification 10 points shall be assessed.~~

~~(g) For each acute bacteriological MCL violation (R309-200-5(6)(b)), 50 points shall be assessed. For each failure to perform the associated public notification 10 points shall be assessed.~~

~~(2) Ground Water Rule: All points assessed to public water systems via this subsection are based on violations of the standards in R309-215-16. Points assessed for any significant deficiency shall be deleted as the deficiencies are corrected and are reported to the Director. The bacteriological points assessed shall be updated on a monthly basis with the total number of points reflecting the most recent 12-month period or the most recent four quarters for those water systems that collect bacteriological samples quarterly, unless otherwise noted.~~

~~(a) For failure to collect triggered source samples in violation of R309-215-16(2)(a)(i)(A) and (a)(i)(B), 40 points shall be assessed. For each failure to perform the associated public notification, 2 points shall be assessed.~~

~~(b) For failure to collect assessment source samples in violation of R309-215-16(2)(b)(i), 5 points shall be assessed. For each failure to perform the associated public notification, 2 points shall be assessed.~~

~~(c) For failure to correct a significant deficiency in violation of R309-215-16(4)(a)(i) and (ii), R309-215-16(4)(c) or R309-215-16(4)(d), 35 points shall be assessed. For each failure to perform the associated public notification, 2 points shall be assessed.~~

~~(d) For an Escherichia coli. in violation of R309-215-16(4)(b)(i) and (ii), 40 points shall be assessed. For each failure to perform the associated public notification, 2 points shall be assessed.~~

~~(3) Chemical: All points assessed to public water systems via this subsection are based on violations of the quality standards in R309-200-5; or the monitoring requirements in R309-205, 210 and 215; and the associated public notification requirements in R309-220. The chemical assessments shall be updated on a quarterly basis with the total number of points reflecting the most recent compliance period unless otherwise specified. Points for any chemical MCL violation shall remain on record until the quality issue is resolved. Points for any monitoring violation shall be deleted as the required chemical samples are taken and the analytical results are reported to the Director.~~

~~(a) Inorganic and Metal Contaminants:~~

~~(i) For each major chemical monitoring violation for inorganic and metal contaminants, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~(ii) For each minor chemical monitoring violation for inorganic and metal contaminants, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be~~

~~assessed.~~

~~(iii) For each MCL exceedance for inorganic and metal contaminants, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~(b) Sulfate (for non-community water systems only):~~

~~(i) For each major chemical monitoring violation for sulfate, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~(ii) For each minor chemical monitoring violation for sulfate, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~(iii) For each MCL exceedance for sulfate, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~(c) Radiologic Contaminants:~~

~~(i) For each major chemical monitoring violation for radiological contaminants, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~(ii) For each minor chemical monitoring violation for radiological contaminants, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~(iii) For each MCL exceedance for radiological contaminants, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~(d) Asbestos Contaminants:~~

~~(i) For each major chemical monitoring violation for source water or distribution system asbestos, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~(ii) For each minor chemical monitoring violation for source water or distribution system asbestos, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~(iii) For each MCL exceedance for source water or distribution system asbestos, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~(e) Nitrate:~~

~~(i) For each routine chemical monitoring violation for nitrate, 50 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~(ii) For each MCL exceedance of nitrate, 60 points shall be assessed. For each failure to perform the associated public notification, 10 points shall be assessed.~~

~~(f) Nitrite:~~

~~(i) For each routine chemical monitoring violation for nitrite, 35 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~(ii) For each MCL exceedance of nitrite, 50 points shall be assessed. For each failure to perform the associated public notification, 10 points shall be assessed.~~

~~_____ (g) Volatile Organic Chemicals:~~

~~_____ (i) For each major chemical monitoring violation for volatile organic chemical contaminants, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~_____ (ii) For each minor chemical monitoring violation for volatile organic chemical contaminants, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (iii) For each MCL exceedance for volatile organic chemical contaminants, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (h) Pesticides/PCBs/SOCs~~

~~_____ (i) For each major chemical monitoring violation for pesticide/PCB/SOC contaminants, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~_____ (ii) For each minor chemical monitoring violation for pesticide/PCB/SOC contaminants, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (iii) For each MCL exceedance for pesticide/PCB/SOC contaminants, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (i) Disinfection Byproducts:~~

~~_____ (i) Total Trihalomethanes:~~

~~_____ (A) For each routine chemical monitoring violation for total trihalomethanes, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each MCL exceedance for total trihalomethanes, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (ii) Haloacetic Acids (HAA5):~~

~~_____ (A) For each routine chemical monitoring violation for HAA5, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each MCL exceedance for HAA5, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (iii) Bromate:~~

~~_____ (A) For each routine chemical monitoring violation for bromate, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each MCL exceedance for bromate, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (iv) Chlorite:~~

~~_____ (A) For each routine chemical monitoring violation for chlorite, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each MCL exceedance for chlorite, 30 points shall be assessed. For each failure to perform the associated public~~

notification, 5 points shall be assessed.

~~_____ (j) Disinfectant Residuals:~~

~~_____ (i) Chlorine:~~

~~_____ (A) For each routine chemical monitoring violation for chlorine, 10 points shall be assessed. R309-210-8(3)(a). For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each MCL exceedance for chlorine, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (C) For a disinfected system that does not maintain a trace residual at all points of the distribution system, 2 points shall be assessed. R309-105-10(1) and R309-200-5(7).~~

~~_____ (D) For a disinfected system that lacks an adequate number of disinfection residual sample sites, 2 points shall be assessed. R309-210-8(3)(a)(i)(z15).~~

~~_____ (ii) Chloramines:~~

~~_____ (A) For each routine chemical monitoring violation for chloramines, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each MCL exceedance for chloramines, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (iii) Chlorine Dioxide:~~

~~_____ (A) For each routine monitoring violation for chlorine dioxide, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (B) For each non-acute chlorine dioxide MCL violation, 30 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (C) For each acute chlorine dioxide MCL violation, 50 points shall be assessed. For each failure to perform the associated public notification, 10 points shall be assessed.~~

~~_____ (iv) Ground Water Rule, where a water system has received a 4-Log exemption from triggered source water monitoring:~~

~~_____ (A) For a ground water treatment facility serving greater than 3300 population lacking equipment to measure chlorine residuals continuously entering the distribution system, 20 points shall be assessed. R309-215-10(1).~~

~~_____ (B) For a ground water system serving greater than 3300 people failing to continuously monitor the residual disinfectant concentrations, 10 points shall be assessed. R309-215-16(3)(b)(iii)(A)(I).~~

~~_____ (C) For a ground water system serving less than 3300 people failing to collect a daily grab sample during peak demand to monitor the residual disinfectant concentrations, 10 points shall be assessed. R309-215-16(3)(b)(iii)(A)(II).~~

~~_____ (D) For a ground water system that during the past year, the disinfection process was not operated uninterrupted while water was being produced, points will be assessed based on monthly and quarterly treatment reports. R309-200-5(7).~~

~~_____ (E) For a ground water system that is required to provide continuous disinfection but fails to do so, 10 points shall be assessed for each month the failure continues. R309-520-6(1).~~

~~_____ (k) Lead and Copper:~~

~~_____ (i) For each major chemical monitoring violation for lead and copper contaminants, 20 points shall be assessed. For each failure to perform the associated public notification, 3 points shall be assessed.~~

~~_____ (ii) For each minor chemical monitoring violation for lead and copper contaminants, 10 points shall be assessed. For each failure to perform the associated public notification, 1 point shall be assessed.~~

~~_____ (iii) A system that fails to install, by the designated deadline, optimal corrosion control if the lead or copper action level has been exceeded shall be assessed 35 points. For each failure to perform the associated public notification, 10 point shall be assessed.~~

~~_____ (iv) A system that fails to install source water treatment if the source waters exceed the lead or copper action level shall be assessed 35 points. For each failure to perform the associated public notification, 10 points shall be assessed.~~

~~_____ (v) A system that fails to complete public notification/education if the lead/copper action levels have been exceeded shall be assessed 10 points for each calendar quarter that the system fails to provide public notification/education.~~

~~_____ (vi) A system that still exceeds the lead action level and is not on schedule for lead line replacement shall be assessed 5 points annually. For each failure to perform the associated public notification, 2 point shall be assessed.~~

~~_____ (vii) A system that fails to notify its customers of their lead and copper sample results, 5 points shall be assessed.~~

~~_____ (viii) A system that fails to send the lead and copper certification notice to the Division, 5 points shall be assessed.~~

~~_____ (l) Groundwater Turbidity:~~

~~_____ (i) For each monitoring violation for turbidity, 35 points shall be assessed. For each failure to perform the associated public notification, 5 points shall be assessed.~~

~~_____ (ii) For each confirmed MCL exceedance of turbidity, 50 points shall be assessed. For each failure to perform the associated public notification, 10 points shall be assessed.~~

~~_____ (m) Surface Water Treatment:~~

~~_____ (i) For water systems having sources, which are classified as under direct influence from surface water and which fail to abandon, retrofit or provide conventional complete treatment or its equivalent within 18 months of notification shall be assessed 150 points. For the associated failure to perform public notification 10 points shall be assessed. The points shall be assessed as the failure occurs and shall remain on record until adequate treatment is provided or the source is physically disconnected.~~

~~_____ (ii) Quality and Monitoring: The surface water treatment assessments shall be updated on a monthly basis with the total number of points reflecting the most recent 12-month period.~~

~~_____ (A) Turbidity:~~

~~_____ (I) For each turbidity exceedance that requires tier 1 notification under R309-220-5(1)(e) or (f), 50 points shall be assessed. For the associated failure to perform public notification, 10 points shall be assessed.~~

~~(II) For each turbidity exceedance that requires tier 2 notification under R309-220-5(1)(e) or (f), 35 points shall be assessed. For the associated failure to perform public notification, 10 points shall be assessed.~~

~~(III) For each month where the percentage of turbidity interpretations meeting the treatment plant limit is less than 95 percent, 25 points shall be assessed. For the associated failure to perform public notification, 10 points shall be assessed.~~

~~(IV) For any period of time that exceeds 4 hours where the system fails to continuously measure (or perform grab samples) the combined filter effluent turbidity, 50 points shall be assessed. For the associated failure to perform public notification, 10 points shall be assessed.~~

~~(V) For a water system whose failure to repair continuous turbidity monitoring equipment within 5 working days, 50 points shall be assessed.~~

~~(B) Disinfection:~~

~~(I) For each instance where the disinfectant level in water entering the distribution system is less than 0.2 milligrams per liter for more than 4 hours, 25 points shall be assessed. For the associated failure to perform public notification, 5 points shall be assessed.~~

~~(II) For each instance where there is insufficient disinfectant contact time, 35 points shall be assessed. For the associated failure to perform public notification, 5 points shall be assessed.~~

~~(iii) Treatment Process Control:~~

~~(A) For each instance a treatment facility exceeds the assigned filter rates, 30 points shall be assessed.~~

~~(B) For each month a water system fails to verify calibration of the plant turbidimeters, 5 points shall be assessed.~~

~~(C) For each month a water system fails to submit a water treatment plant report, 50 points shall be assessed.~~

~~R309-400-6. Physical Facilities.~~

~~All points assessed to public water systems via this subsection are based upon violation of R309-500 through R309-705 unless otherwise noted. These points shall be assessed and updated upon notification of the Director and shall remain until the violation or deficiency no longer exists.~~

~~(1) New Source Approval:~~

~~(a) Use of an unapproved source shall be assessed 200 points.~~

~~(2) Surface Water Diversion Structures and Impoundments:~~

~~(a) For each surface water intake structure that does not allow for withdrawal of water from more than one level if quality significantly varies with depth, 2 points shall be assessed. R309-515-5(5)(a).~~

~~(b) Where diversion facilities are not capable of keeping large quantities of fish or debris from entering the intake, 2 points shall be assessed. R309-515-5(5)(e).~~

~~(c) Where impoundment reservoirs have not had brush and trees removed to the high water level, 2 points shall be assessed. R309-515-5(6)(a).~~

~~(d) Where reservoir watershed management has not provided adequate precautions to limit nutrient loading, 10 points shall be assessed. R309-515-5(6)(d).~~

~~(3) Well Sources~~

~~(a) For each well that is not equipped with a sanitary seal, or has any unsealed opening into the well casing, 50 points shall be assessed. R309-515-6(6)(i).~~

~~(b) For each well that does not utilize food grade mineral oil for pump lubrication, 25 points shall be assessed. R309-515-8(2).~~

~~(c) For each well casing that does not terminate at least 12 inches above the well house floor, 18 inches above the final ground surface, or shows evidence of being subject to flooding, 20 points shall be assessed. R309-515-6(6)(b)(vi) and R309-515-6(13)(a) and (d).~~

~~(d) For each well fitted with a pitless adaptor that does not maintain a water tight seal throughout, 50 points shall be assessed. R309-515-6(12)(c)(x).~~

~~(e) For each wellhead that is not properly secured to protect the quality of the well water, 20 points shall be assessed. R309-515-6(13)(f).~~

~~(f) For each well that is equipped with a pump to waste line that does not discharge with a minimum of 12-inch clearance to the flood rim, 20 points shall be assessed. R309-515-6(12)(d)(ix).~~

~~(g) For each well that is equipped with a pump to waste line without a downturned discharge end covered with a No. 4 mesh screen, 5 points shall be assessed. R309-515-6(12)(d)(ix).~~

~~(h) For each well that is equipped with a pump to waste line that discharges to a receptacle without local authorization, 2 points shall be assessed.~~

~~(i) For each well that does not have a means to permit periodic measurement of water levels, 2 points shall be assessed. R309-515-6(12)(e)(i) and (ii).~~

~~(j) For each well casing vent that is not covered with a No. 14 or finer mesh screen, 2 points shall be assessed. R309-515-6(12)(d)(iii) and R309-550-6(6)(b).~~

~~(k) For each well casing vent that is not downturned, 2 points shall be assessed. R309-515-6(12)(d)(iii) and R309-550-6(6)(b). Also Division of Water Rights Rule R655-4-11.7.11.~~

~~(l) For each well casing vent that does not have adequate clearance to prevent the contaminants from entering the well, 2 points shall be assessed. R309-515-6(12)(d)(iii) and R309-550-6(6)(b).~~

~~(m) For each well (excluding the naturally flowing wells) that has discharge piping that is not equipped with 1) a smooth nosed sampling tap 2) check valve 3) pressure gauge 4) means of measuring flow, and 5) shut-off valve, 1 point shall be assessed for each component not present. R309-515-6(12)(d)(iv).~~

~~(n) For each well that pumps directly into a distribution system and does not have a means to release trapped air from the discharge piping (for example, release air through an air release vacuum relief valve, through a pump to waste line or pumps directly to a tank), 5 points shall be assessed. R309-515-6(12)(d)(v).~~

~~(o) For each well house that is not at least 6 inches above the final ground level, is not sloped to drain, or shows evidence of being subject to flooding, 5 points shall be assessed. R309-515-6(13)(b).~~

~~(p) For each well that has a cross connection present in the discharge piping, 20 points shall be assessed. R309-105-12(1) and~~

~~R309-515-6(12)(d)(iii).~~

~~_____ (q) For each well with an air vacuum relief valve on the well discharge piping that is not screened, 2 points shall be assessed.~~

~~_____ R309-515-6(12)(d)(v).~~

~~_____ (r) For each well with an air vacuum relief valve on the well discharge piping that is not downturned, 2 points shall be assessed.~~

~~_____ R309-515-6(12)(d)(v).~~

~~_____ (s) For each well with an air vacuum relief valve on the well discharging piping that does not have a 6-inch clearance to prevent contaminants from entering the piping, 2 points shall be assessed.~~

~~_____ R309-515-6(12)(d)(v).~~

~~_____ (t) For each well that has rotating and electrical equipment that is not provided with protective guards, 2 points shall be assessed.~~

~~_____ (4) Spring Sources:~~

~~_____ (a) For each spring source that allows surface water to stand or pond upon the spring collection area (within 50 feet from collection devices), 10 or 20 points shall be assessed. The number of points shall be based upon the size and extent of the ponding; the possible source (rainfall or incomplete collection); or the presence of moss or other indicators of long term presence of standing water.~~

~~_____ R309-515-7 (7)(i).~~

~~_____ (b) For each spring area that does not have a minimum of ten feet of relative impervious soil or an acceptable alternate design with liner, or the spring collection area shows evidence of damaged liner or impervious soil cover, 10 points shall be assessed.~~

~~_____ R309-515-7(7)(a) and (b).~~

~~_____ (c) For each spring area that has deep-rooted vegetation within the fenced collection area, 10 points shall be assessed.~~

~~_____ R309-515-7(7)(f).~~

~~_____ (d) For each spring area that has deep rooted vegetation interfering with the spring collection, 10 points shall be assessed.~~

~~_____ R309-515-7(7)(f).~~

~~_____ (e) For each spring with a spring collection/junction box that does not have a proper shoebox lid, 5 points shall be assessed.~~

~~_____ R309-515-7(7)(d) and R309-545-14(2).~~

~~_____ (f) For each spring with a spring collection/junction box that does not have a proper gasket on the lid, 5 points shall be assessed.~~

~~_____ R309-515-7(7)(d) and R309-545-14(2).~~

~~_____ (g) For each spring with a spring collection/junction box that lacks an adequate air vent, 5 points shall be assessed.~~

~~_____ R309-515-7(7)(d) and R309-545-15.~~

~~_____ (h) For each spring with a spring collection/junction box with a vent that is not screened with No. 14 mesh screen, 2 points shall be assessed. R309-515-7(7)(d) and R309-545-15.~~

~~_____ (i) For each spring with a spring collection/junction box with a vent that is not down-turned or inverted, 2 points shall be assessed.~~

~~_____ R309-515-7(7)(d) and R309-545-15(1).~~

~~_____ (j) For each spring with a spring collection/junction box with a vent that does not have sufficient clearance to prevent ice blockage, or is not at least 24 inches above the earthen cover, 2 points shall be assessed. R309-515-7(7)(d) and R309-545-15(2).~~

~~_____ (k) For each spring with a spring collection/junction box that lacks a raised access entry, at least 4 inches above the spring box~~

~~or 18 inches above the earthen cover, 5 points shall be assessed. R309-515-7(7)(d) and R309-545-14(1).~~

~~(l) For each spring with a spring collection/junction box that is not secured against unauthorized access, 20 points shall be assessed. R309-515-7(7)(d) and R309-545-14(3).~~

~~(m) For each spring collection area without a proper fence, 10 points shall be assessed. R309-515-7(7)(e).~~

~~(n) For each spring collection area that does not have a diversion channel, or berm capable of diverting surface water away from the collection area, 5 points shall be assessed. R309-515-7(7)(g).~~

~~(o) For each spring system that does not have a permanent flow measuring device, 5 points shall be assessed. R309-515-7(7)(h).~~

~~(p) For each spring area with an overflow or a combined overflow/drain discharge that is not screened with a No. 4 mesh screen, 5 points shall be assessed. R309-515-7(7)(d) and R309-545-13.~~

~~(q) For each spring collection/junction box overflow that does not have a freefall of 12 to 24 inches between the bottom of the discharge pipe and the surrounding ground, 5 points shall be assessed. R309-515-7(7)(d) and R309-545-13.~~

~~(r) For each spring collection/junction box that has any unsealed opening(s) resulting in public health risk, 50 points shall be assessed. R309-515-7(7)(d) and R309-545-9(1).~~

~~(5) Pump Stations.~~

~~(a) For a pumping facility that does not have a standard pressure gauge on the discharge line, 1 point shall be assessed. R309-540-5(6)(c)(i).~~

~~(b) For a pumping facility building without adequate drainage or showing evidence of flooding, 5 points shall be assessed. R309-540-5(2)(a)(v) and (vi).~~

~~(c) For a pumping facility where the discharge line from the air release valve is not screened with number 14 non-corrodible mesh screen, 2 points shall be assessed. R309-540-5(6)(b)(ii) and R309-550-6(6)(b).~~

~~(d) For an air release valve located within a building, if the discharge line terminates less than six inches above the floor, 2 points shall be assessed. R309-515-6(12)(d)(v) and R309-540-5(6)(b)(ii).~~

~~(e) For an air release valve located in a chamber, if the air release valve discharge piping terminates less than 12 inches above grade, or less than one foot above the top of the pipe where the chamber is not subject to flooding, 10 points shall be assessed. R309-540-5(6)(b)(ii) and R309-550-6(6)(b).~~

~~(f) For a pumping facility where the discharge line from the air release valve is not down-turned, 2 points shall be assessed. R309-540-5(6)(b)(ii) and R309-550-6(6)(b).~~

~~(g) For a pumping facility where there is inadequate heating, lighting or ventilation, 5 points shall be assessed. R309-540-5(2)(e), (f) and (g).~~

~~(h) For a pumping facility where there are cross connections present, 20 points shall be assessed. R309-105-12(1).~~

~~(i) For an inline booster pumping facility designed to provide pressure directly to the distribution system, which does not have at least two pumping units such that with any one pump out of service~~

the remaining pump or pumps are capable of meeting the peak day demand of the specific portion of the system served, 20 points shall be assessed. R309-540-5(4)(b).

(j) For a pumping facility which does not have protective guards on rotating and electrical equipment, 2 points shall be assessed. R309-525-21.

(k) For a pumping facility which is not secured against unauthorized access shall be assessed, 5 points. R309-540-5(1)(a)(v).

(6) Hydropneumatic pressure tanks.

(a) For diaphragm or air tanks located below ground without adequate provisions for drainage, maintenance and flood protection, 10 points shall be assessed. R309-540-6(2).

(b) For a pressure tank with a pump cycle that cycles more frequently than once every 4 minutes, 5 points shall be assessed. R309-540-6(5).

(7) Storage:

(a) A water system with uncovered finished water storage shall immediately be assessed a rating of not approved, 200 points shall be assessed. R309-545-9(1) and (2).

(b) For each storage tank roof showing evidence of water ponding with deterioration, 10 points shall be assessed. R309-545-9(4).

(c) For each storage tank that does not have an access to the interior for cleaning and maintenance, 9 points shall be assessed. R309-545-14.

(d) For each storage tank access that does not have a shoebox type lid with a minimum of a 2-inch overlap, 3 points shall be assessed. R309-545-14(2).

(e) For each storage tank access that lacks a proper gasket between the lid and frame, 3 points shall be assessed. R309-545-14(2).

(f) For each storage tank access that lacks a minimum rise of 4 inches above the tank roof or a minimum of 18 inches above an earthen cover, 3 points shall be assessed. R309-545-14(1).

(g) For each storage tank that is not vented, 6 points shall be assessed. R309-545-15.

(h) For each finished water storage tank vent that is not downturned or covered from rain and dust, 2 points shall be assessed. R309-545-15(1).

(i) For each storage tank vent that does not terminate a minimum of 24 inches above the surface of the storage tank roof if the tank is a buried structure, 2 points shall be assessed. R309-545-15(2).

(j) For each storage tank vent that is not screened with number 14 non-corrodible mesh screen, 2 points shall be assessed. R309-545-15(4).

(k) For each storage tank that lacks an overflow, 15 points shall be assessed. R309-545-13.

(l) For each storage tank overflow that does not terminated 12 to 24 inches above the ground, 5 points shall be assessed. R309-545-13.

(m) For each storage tank overflow that is not screened with number 4 non-corrodible mesh screen, 5 points shall be assessed. R309-545-13(3).

(n) For each storage tank overflow that is connected to a sewer

~~system without an adequate air gap, 5 points shall be assessed. R309-545-13(5).~~

~~(o) For each storage tank with a drain that does not discharge through a physical airgap of at least 2 pipe diameters, 5 points shall be assessed. R309-545-10(1).~~

~~(p) For each storage tank with inadequate or improper means of site drainage or showing evidence of standing surface water within 50 feet of the tank, 5 points shall be assessed. R309-545-7(4).~~

~~(q) For each storage tank with any unsealed roof or wall penetrations, 50 points shall be assessed. R309-545-9(2).~~

~~(r) For each storage tank where the roof and sidewalls show signs of deterioration, 10 to 50 points shall be assessed based upon the size and number of cracks, the loss of structural integrity, and the access of contamination to the drinking water. R309-545-9(1).~~

~~(s) For each storage tank without a safe access (such as ladders for tanks in excess of 20 feet, ladder guards, or railings) or safely located entrance hatches, 2 points shall be assessed. R309-545-19(1), (2) and (3).~~

~~(t) For each storage tank with internal coatings not in compliance with ANSI/NSF standard 61, 30 points shall be assessed. R309-545-11.~~

~~(u) For a storage facility that is not secured against unauthorized access, 20 points shall be assessed. R309-545-14(3).~~

~~(8) Distribution System:~~

~~(a) A water system that fails to provide the minimum water pressures as required in R309-105-9 at all times and at all locations within the distribution system, 50 points shall be assessed. R309-105-9 and R309-550-5(1).~~

~~(b) A water system using pipe and materials not meeting the ANSI/NSF 61 standard shall be assessed 30 points. R309-550-6.~~

~~(c) A water system with pipelines installed without adequate separation distance from the sanitary sewer lines shall be assessed 30 points. R309-550-7.~~

~~(d) A new water system constructed after January 1, 2007 or an existing water system modification without adequate pressure as defined in R309-105-9(2) shall be assessed 50 points.~~

~~(e) A water system which has a distribution line that crosses under a surface water body without adequate protection as outlined in R309-550-8(8)(b) shall be assessed 50 points.~~

~~(f) A water system which has distribution system flushing devices, blow-offs or air relief valves, which are directly connected to a sewer or do not have a proper air gap, shall be assessed 20 points. R309-550-6 and R309-550-9.~~

~~(g) For a water system that does not properly follow the AWWA disinfection standards 10 points shall be assessed. R309-550-8(10).~~

~~(h) For a water system that is required by the local fire authority to provide fire protection or has fire hydrants connected with water mains less than 8 inches in diameter, 5 points shall be assessed. These points will only be assessed for water mains installed after 1995. R309-550-5(4) and (5).~~

~~(i) For each air relief valve vent piping, which is not screened with a No. 14 mesh and downturned, 10 points shall be assessed. R309-550-6(6)(b).~~

~~(j) For an air release valve located in a chamber, if the air~~

~~release valve discharge piping terminates less than 12 inches above grade or less than one foot above the top of the pipe where the chamber is not subject to flooding, 10 points shall be assessed. R309-550-6(6)(b).~~

~~(k) For each air relief valve located in a chamber without a drain or adequate sump, or showing evidence of being subject to flooding, 30 points shall be assessed. R309-550-7.~~

~~(l) For each air vacuum release valve chamber that is flooded at the time of inspection, 50 points shall be assessed.~~

~~(m) For an unprotected cross-connection in the distribution system as required in R309-550-9, 50 points shall be assessed.~~

~~(9) Quantity requirements~~

~~(a) A water system without sufficient source capacity to meet peak day and average yearly flow requirements, from 10 to 50 points shall be assessed. The number of points shall be based upon the severity of the shortage, including the number of times and duration of water outages or low pressure. R309-510-7.~~

~~(b) A water system without sufficient storage capacity to meet average day demand, plus the required fire suppression volume if applicable, 10 to 50 points shall be assessed. The number of points shall be based upon the severity of the shortage including the number of times and duration of water outages. R309-510-8.~~

~~R309-400-7. Treatment Processes.~~

~~(1) General Treatment.~~

~~(a) For a treatment facility without anti-siphon control to assure that liquid chemical solutions cannot be siphoned through solution feeders into the process units, 2 points shall be assessed. R309-525-11(9)(b)(ii) and (c).~~

~~(b) For a treatment facility with a process tank that is not properly labeled to designate the chemical contained, 2 points shall be assessed. R309-525-11(8)(c)(vii).~~

~~(c) For a treatment facility with chemicals not stored in covered or unopened shipping containers, unless the chemical is transferred into a covered storage unit, 2 points shall be assessed. R309-525-11(6)(a)(iii).~~

~~(d) For a treatment facility with no cross connection control provided to assure that no direct connections exist between any sewer and the drain or overflow from the feeder, solution chamber, or tank by providing that all pipes terminate at least six inches or two pipe diameters, whichever is greater, above the overflow rim of a receiving sump, conduit, or waste receptacle, 10 points shall be assessed. R309-525-11(9)(b)(iii).~~

~~(e) For a treatment facility with no spare parts available for all feeders to replace parts that are subject to wear and damage, 2 points shall be assessed. R309-525-11(7)(b)(v).~~

~~(f) For a treatment facility where incompatible chemicals are fed, stored or handled together, 2 points shall be assessed. R309-525-11(7)(a)(iv).~~

~~(g) For a treatment facility where daily operating records do not reflect chemical dosages and total quantities used, 2 points shall be assessed. R309-105-14(3).~~

~~(h) For a water system that fails to maintain and properly calibrate all instrumentation needed to verify the treatment process,~~

~~2 points shall be assessed. R309-525-25(4).~~

~~(i) For a treatment facility without the means to accurately measure the quantities of chemicals used, 20 points shall be assessed. R309-525-11(7)(a)(i) and R309-525-11(6)(b)(iii).~~

~~(j) A water system that does not keep acids and caustics in closed corrosion-resistant shipping containers or storage units, 2 points shall be assessed. R309-525-11(11)(a)(i).~~

~~(k) For a treatment facility that does not have the vent hose from the feeder to discharge to the outside atmosphere above grade or have the end covered with #14 non-corrodible mesh screen, 2 points shall be assessed. R309-520-7(2)(f).~~

~~(l) For a treatment facility that uses any chemical that is added to water being treated for use in a public water system for human consumption that does not comply with ANSI/NSF Standard 60, 25 points shall be assessed. R309-525-11(5).~~

~~(m) For a treatment facility that does not have a finished water sampling tap(s), 2 points shall be assessed. R309-525-18.~~

~~(n) For a treatment facility that is not performing adequate process control testing consistent with the specific treatment process, 30 points shall be assessed. R309-525-19.~~

~~(o) For a surface water treatment facility that does not have continuous residual disinfection equipment to measure the residual in mg/L entering the distribution system, 20 points shall be assessed. R309-215-10(1).~~

~~(p) For a treatment facility without provisions for disposing of empty bags, drums or barrels by an acceptable procedure that will minimize operator exposure to dusts, 2 points shall be assessed. R309-525-11(6)(b) and (c).~~

~~(q) For a treatment facility that does not provide cross connection control on the make-up waterlines discharging to solution tanks, 10 points shall be assessed. R309-525-11(9)(b)(i).~~

~~(r) For a treatment facility with solution tank overflow pipes that do not have a free fall discharge or are not located where noticeable, 2 points shall be assessed. R309-525-11(8)(b)(v).~~

~~(s) For a treatment facility without adequate spill containment provisions, 2 points shall be assessed. R309-525-11(6)(a)(iv)(B).~~

~~(t) For a treatment facility with acid storage tanks that are not vented to the outside atmosphere with separate screened vents, 2 points shall be assessed. R309-525-11(8)(b)(vi).~~

~~(u) For a treatment facility without provisions for the proper disposal of water treatment plant waste (such as sanitary, laboratory, sludge, and filter backwash water), 5 points shall be assessed. R309-525-23.~~

~~(v) For a treatment facility where cross connection control is not provided on the feed lines to the solution tanks, 10 points shall be assessed. R309-525-11(9)(b) and (c).~~

~~(w) For a treatment facility that does not have a means to measure water flow rate, 10 points shall be assessed.~~

~~(x) For a surface water treatment facility where the piping is not labeled and color coded to identify the direction of flow and the contained liquid, 2 points shall be assessed. R309-525-8.~~

~~(y) Treatment facilities not secured against unauthorized access, 20 points shall be assessed.~~

~~(z) For a treatment facility using expired chemical reagents~~

for process control, 5 points shall be assessed.

~~(aa) For a treatment facility with no access to lab or test kits for process testing, 2 points shall be assessed. R309-525-17(1).~~

~~(bb) For a treatment facility lacking cross connection control for the in-plant water supply, 10 points shall be assessed. R309-525-11(9)(b)~~

~~(2) Disinfection.~~

~~(a) General.~~

~~(i) For a chlorination facility which is not heated, lighted or ventilated as necessary to assure proper operation or the equipment and serviceability, 2 points shall be assessed. R309-520-7(1)(l).~~

~~(ii) For a disinfection facility without cross connection control on the solution feeders into the process units as required in R309-525-11(9)(c), 10 points shall be assessed. R309-525-11(9)(b)(ii).~~

~~(iii) For a chlorination facility where there is no standby disinfection equipment of sufficient capacity available to replace the largest unit, 10 points shall be assessed. R309-520-7(1)(k).~~

~~(iv) For a disinfection facility where the correct reagent is not used for testing free disinfectant residual, 2 points shall be assessed.~~

~~(v) For a treatment facility where the pre- and post-chlorination processes are not independent of each other, to prevent possible siphoning of partially treated water into the clear well, 50 points shall be assessed. R309-525-11(9)(b)(iv).~~

~~(vi) For a disinfection facility where chemical solution tanks are not kept covered, 2 points shall be assessed. R309-525-11(8)(b)(iii).~~

~~(vii) For a disinfection facility without disinfectant residual test equipment, 2 points shall be assessed. R309-520-7(1)(j).~~

~~(viii) For a disinfection facility where there is no means to measure the volume of water treated, 2 points shall be assessed. R309-520-7(1)(i).~~

~~(b) Gas chlorination.~~

~~(i) For a gas chlorination facility without an automatic switch over of chlorine cylinders to assure continuous disinfection, 2 points shall be assessed. R309-520-7(2)(a).~~

~~(ii) For a gas chlorination facility without scales for weighing cylinders, 2 points shall be assessed. R309-520-7(2)(k).~~

~~(iii) For a gas chlorination facility without a leak repair kit, 15 points shall be assessed. R309-520-7(2)(p).~~

~~(iv) For a gas chlorination facility without respiratory equipment available and stored at a convenient location, 5 points shall be assessed. R309-520-7(2)(o).~~

~~(v) For a gas chlorination facility housed in a water treatment plant building where the chlorine gas feed and storage area is not enclosed and separated from other operating areas, 2 points shall be assessed. R309-520-7(2)(h).~~

~~(vi) For a gas chlorination facility where the chlorination equipment rooms are not vented such that the ventilating fan(s) take suction near the floor, as far as practical from the door and air inlet, with the point of discharge so located as not to contaminate air inlets of any rooms or structures, 5 points shall be assessed. R309-520-7(2)(e)(ii).~~

~~(vii) For a gas chlorination facility where the chlorination equipment rooms are not vented such that air inlets are through louvers near the ceiling, 2 points shall be assessed. R309-520-7(2)(e)(iii).~~

~~(viii) For a gas chlorination facility where the chlorination equipment rooms are not vented such that separate switches for the fans and lights are outside of the chlorine room, at the entrance to the chlorination equipment room and protected from vandalism, 2 points shall be assessed. R309-520-7(2)(e)(v).~~

~~(ix) For a gas chlorination facility where the vent hose from the feeder to discharge to the outside atmosphere is not above grade or does not have the end covered with #14 non-corrodible mesh screen, 2 points shall be assessed. R309-520-7(2)(f).~~

~~(x) For a gas chlorination facility without a bottle of ammonium hydroxide (56%) available for leak detection, 2 points shall be assessed. R309-520-7(2)(p).~~

~~(xi) For a gas chlorination facility where full and empty cylinders of chlorine gas are not restrained in position to prevent upset, 2 points shall be assessed. R309-520-7(2)(i)(ii).~~

~~(xii) For a gas chlorination facility with full and empty cylinders of chlorine gas stored in areas in direct sunlight or exposed to excessive heat, 2 points shall be assessed. R309-520-7(2)(i)(iii).~~

~~(xiii) For a gas chlorination facility in a water treatment plant building where the chlorine room is constructed in a manner that any openings between the chlorine room and the remainder of the plant are not sealed, 2 points shall be assessed. R309-520-7(2)(h)(ii).~~

~~(xiv) For a gas chlorination facility housed in a water treatment plant building that lacks outward-opening doors with panic bars, 2 points shall be assessed. R309-520-7(2)(h)(iii).~~

~~(xv) For a gas chlorination facility housed in a water treatment plant building with floor drains that do not discharge to the outside of the building and are not connected to other internal or external drain systems, 5 points shall be assessed. R309-520-7(2)(h)(iv).~~

~~(xvi) For a gas chlorination facility without a means of chlorine leak detection, such as a bottle of ammonia hydroxide solution or chlorine leak detection equipment, 15 points shall be assessed. R309-520-7(2)(p).~~

~~(c) Chlorine dioxide.~~

~~(i) For a chlorine dioxide disinfection facility where provisions are not made for proper storage of sodium chlorite to eliminate any danger of explosion 2 points shall be assessed. R309-520-10(3)(b) and R309-525-11(11)(b)(i).~~

~~(ii) For a chlorine dioxide disinfection facility where sodium chlorite is not stored by itself in a separate room and away from organic materials that would react violently with sodium chlorite, 2 points shall be assessed. R309-520-10(5)(a) and R309-525-11(11)(b)(i)(A).~~

~~(iii) For a chlorine dioxide disinfection facility where sodium chlorite storage structures are not constructed of noncombustible materials, 2 points shall be assessed. R309-520-10(3)(b)(iv) and R309-525-11(11)(b)(i)(B).~~

~~(iv) For a chlorine dioxide disinfection facility where a sodium chlorite storage structure is not located in an area where a fire~~

may occur, water should be available to keep the sodium chlorite area sufficiently cool to prevent decomposition from heat and resultant potential explosive conditions. 2 points shall be assessed if this is not the case. R309-520-10(4)(d) and R309-525-11(11)(b)(i)(C).

~~(v) For a chlorine dioxide disinfection facility that stores combustible or reactive materials in the operating area, 2 points shall be assessed. R309-520-10(5)(a).~~

~~(vi) For a chlorine dioxide disinfection facility that does not store personal protective equipment nearby, 5 points shall be assessed. R309-520-10(5)(c).~~

~~(vii) For a chlorine dioxide disinfection facility that does not have an emergency eyewash and shower immediately outside the operating area, 2 points shall be assessed. R309-520-10(3)(b)(viii).~~

~~(viii) For a chlorine dioxide disinfection facility that lacks an emergency shutoff for flows to the chlorine dioxide generator, 2 points shall be assessed. R309-520-10(3)(b)(ix).~~

~~(ix) For a chlorine dioxide disinfection facility that lacks a distinguishable alarm triggered by an ambient air chlorine dioxide sensor, 2 points shall be assessed. R309-520-10(3)(b)(v).~~

~~(x) For a chlorine dioxide disinfection facility that lacks wash down water available in the operating area, 2 points shall be assessed. R309-520-10(3)(b)(xvi).~~

~~(xi) For a chlorine dioxide disinfection facility that does not maintain the temperature of the chlorine dioxide operating area between 60 and 100°F, 2 points shall be assessed. R309-520-10(5)(d).~~

~~(xii) For a chlorine dioxide disinfection facility that lacks an Operation and Maintenance Manual including safety and emergency response procedures, 2 points shall be assessed. R309-520-10(5)(f).~~

~~(d) Ultraviolet (UV)~~

~~(i) For a UV disinfection facility that lacks an operating procedure in place to handle UV lamp breakage, power supply interruption, response to alarms, 2 points shall be assessed. R309-520-8(4)(b).~~

~~(ii) For a UV disinfection facility that does not calibrate and operate UV intensity sensors per manufacturer's instruction, 2 points shall be assessed R309-520-8(4).~~

~~(iii) For a UV disinfection facility that does not use ANSI/NSF Standard 60 chemicals in the cleaning of the UV, 25 points shall be assessed. R309-520-8(3)(j).~~

~~(iv) For a UV disinfection facility that can't isolate the UV disinfection system or each UV reactor for maintenance, 2 points shall be assessed. R309-520-8(3)(g).~~

~~(v) For a UV disinfection facility that lacks a backup power source for the UV disinfection system, 2 points shall be assessed. R309-520-8(3)(l).~~

~~(vi) For a UV disinfection facility that lacks a redundant primary disinfection mechanism, 5 points shall be assessed. R309-520-8(3)(m).~~

~~(e) Ozone~~

~~(i) For an ozone disinfection facility without a minimum of two ozone aqueous residual analyzers, 2 points shall be assessed. R309-520-9(7)(c).~~

~~(ii) For an ozone disinfection facility using chemicals that~~

do not meet ANSI/NSF Standard 60 quench the residual ozone, 25 points shall be assessed. R309-520-9(4)(h)

~~(iii) For an ozone disinfection facility lacking properly functioning ozone off-gas blowers from the contactor, 2 points shall be assessed. R309-520-9(5)(b)~~

~~(iv) For an ozone disinfection facility that lacks a system for treating the final off-gas from each ozone contactor, 2 points shall be assessed. R309-520-9(5)(a)~~

~~(v) For an ozone disinfection facility discharging an ozone concentration in the gas discharge exceeding 0.1 ppm by volume, 2 points shall be assessed. R309-520-9(5)(d)~~

~~(3) Fluoridation.~~

~~(a) General~~

~~(i) For a fluoridation facility that does not calculate fluoride concentrations, including chemical dosages and total water quantities daily, 2 points shall be assessed. R309-105-14(3).~~

~~(ii) For a fluoridation facility without a fail-safe device incorporated in the fluoride feed control system to prevent overfeeding fluoride, 30 points shall be assessed. R309-535-5(3).~~

~~(iii) For a fluoridation facility that uses fluoride chemicals that do not conform to the applicable AWWA standards or with ANSI/NSF Standard 60, 25 points shall be assessed. R309-535-5.~~

~~(iv) For a fluoridation facility without scales, loss-of-weight recorders or liquid level indicators, as appropriate, 2 points shall be assessed. R309-535-5(2)(a).~~

~~(v) For a fluoridation facility without proper personal protective equipment as required in R309-525-11(10) for operators handling fluoride compounds, 10 points shall be assessed. R309-535-5(4).~~

~~(vi) For a fluoridation facility lacking a sampling location for measuring the final fluoride level, 2 points shall be assessed. R309-525-18.~~

~~(vii) For a fluoridation facility that does not have a means to measure the flow of water to be treated, 2 points shall be assessed. R309-535-5(2)(g).~~

~~(viii) For a fluoridation facility without fluoride testing equipment not properly verified or calibrated, 2 points shall be assessed. R309-525-25(4).~~

~~(ix) For a fluoride facility adding fluoride compound before lime-soda softening, 2 points shall be assessed. R309-535-5(2)(c).~~

~~(x) For a Fluoridation facility lacking cross connection control so that no direct connections exist between any sewer and a drain or overflow from the feeder, solution chamber or tank, 10 points shall be assessed. R309-525-11(9)(b)(iii).~~

~~(xi) For a fluoridation facility storing incompatible chemicals in the fluoride storage or injection areas, 10 points shall be assessed. R309-525-11(7)(a)(iv).~~

~~(xii) For a fluoridation facility lacking a floor drain to facilitate the washdown of floors, 2 points shall be assessed. R309-535-5(5)(b)~~

~~(b) Acid~~

~~(i) For a fluoridation facility without deluge showers and eye wash devices, 10 points shall be assessed. R309-535-5(4).~~

~~(ii) For a fluoridation facility lacking adequate spill~~

~~containment provisions, 2 points shall be assessed R309-525-11(6)(a)(iv)(B).~~

~~(iii) For a fluoridation facility lacking a vent in the fluorosilicic acid storage units that vents to the atmosphere, 2 points shall be assessed. R309-525-11(8)(b)(vi).~~

~~(c) Dry~~

~~(i) For a fluoridation facility where the make-up water used for sodium fluoride dissolution is not treated to reduce hardness to less than 75 mg/l as calcium carbonate, 2 points shall be assessed. R309-535-5(2)(i).~~

~~(ii) For a fluoridation facility without a spring opposed diaphragm type anti-siphon device for all fluoride feed lines and dilution water lines, 10 points shall be assessed. R309-535-5(2)(f).~~

~~(iii) For a fluoridation facility with saturators that do not have a flow meter on the inlet or outlet line, 2 points shall be assessed. R309-535-5(2)(l).~~

~~(iv) For a fluoridation facility without an adequate level of fluoride crystals in the saturator, 2 points shall be assessed. R309-525-11(8)(b)(i).~~

~~(v) For a fluoridation facility without a NIOSH/MSHA certified dust respirator approved for fluoride dust removal as required in R309-525-11(10) for operators handling dry fluoride compounds, 10 points shall be assessed. R309-535-5(4).~~

~~(vi) For a fluoridation facility where an overflow from the day tank will not drain by gravity back into the bulk storage tank or a containment system, 10 points shall be assessed. R309-525-11(8)(c)(v).~~

~~(vii) For a fluoridation facility using the sodium fluoride dry chemical where the saturators are not of the up-flow type, 2 points shall be assessed. R309-535-5(2)(l).~~

~~(viii) For a fluoride facility where fluoride chemicals stored in uncovered or opened shipping containers and are stored inside a building on pallets, 2 points shall be assessed. R309-535-5(1).~~

~~(ix) For a fluoride feed pump that is not tied directly to the well pump or service pump, 30 points shall be assessed. R309-535-5(2)(k).~~

~~(x) For a fluoridation facility lacking a vent in the dry chemical storage areas that vents to the atmosphere outside the building, 2 points shall be assessed. R309-535-5(5)(a).~~

~~(xi) For a fluoridation facility using sodium fluoride dry chemical and lacking a hopper equipped with an exhaust fan and dust filter and under a negative pressure during transfer of dry fluoride compounds, 10 points shall be assessed. R309-535-5(5)(a).~~

~~(xii) For a fluoridation facility that does not vent air from fluoride handling equipment through a dust filter to the outside atmosphere of the building for dust control during transfer of dry fluoride compounds, 10 points shall be assessed. R309-535-5(5)(a).~~

~~(xiii) For a fluoridation facility using sodium fluoride dry chemical and lacking a means of disposing of empty bags, drums or barrels handled in a manner that minimizes operators' exposure to fluoride dusts shall be assessed, 10 points. R309-535-5(5)(b).~~

~~(4) Filtration Treatment.~~

~~(a) For a filtration facility that does not have equipment for each individual filter to continuously monitor the effluent turbidity,~~

~~30 points shall be assessed.~~

~~(b) For a surface water filtration facility that does not have at least two filter units, each capable of meeting the plant design capacity, 20 points shall be assessed. R309-525-15(3).~~

~~(c) For a conventional surface water filtration facility that does not have the ability to filter to waste (to allow a filter to ripen before introduction finished water into the clearwell), 20 points shall be assessed.~~

~~(d) For a filtration facility where instrumentation and controls are inoperable, 2 points shall be assessed.~~

~~(e) For a filtration facility where a backwash tank is not provided with finished drinking water, 20 points shall be assessed. R309-525-15(7)(a)(ix).~~

~~(f) For a conventional surface water filtration facility where the backwash waste water is not settled prior to being recycled to the head of the treatment plant, 2 points shall be assessed. R309-525-15(7)(a).~~

~~(g) For a membrane filtration facility where automatic membrane integrity tests are not performed at least daily, 2 points shall be assessed. R309-530-8(3)(b).~~

~~(h) For a membrane filtration facility not using ANSI/NSF 60 approved chemicals, 25 points shall be assessed. R309-525-11(5)(b).~~

~~(i) For a membrane filtration facility lacking cross-connection control protection for the treatment process, 10 points shall be assessed.~~

~~(5) Ion Exchange~~

~~(a) For an ion exchange facility without a depth of the exchange resin at least 3 feet, 2 points shall be assessed. R309-535-8(1)(b)(iii).~~

~~(b) For an ion exchange facility using a salt for the brine solution not having an ANSI/NSF 60 certification, 25 points shall be assessed. R309-525-11(5)(b).~~

~~(c) For an ion exchange facility make-up water inlet that lacks protection from back-siphonage, 2 points shall be assessed.~~

~~(d) For an ion exchange facility where the overflow discharge piping is not protected with a corrosion resistant screen or is not terminated with a downturned bend with adequate clearance to prevent cross connection, 10 points shall be assessed. R309-525-11(9)(b).~~

~~(e) For an ion exchange facility that lacks a brine measuring tank or means of metering provided to obtain proper dilution, 2 points shall be assessed. R309-525-11(8)(b)(i).~~

~~(6) Sequestration~~

~~(a) For a polyphosphate sequestration facility that uses chemicals not meeting ANSI/NSF 60 certification, 25 points shall be assessed. R309-535-11(5)(d).~~

~~(b) For a sequestration facility using phosphate chemicals where total phosphate applied exceed 10 milligrams per liter as PO₄, 2 points shall be assessed. R309-535-11(5)(b).~~

~~(c) For a sequestration facility that lacks sample taps located on each raw water source, each treatment unit influent and each treatment unit effluent, 2 points shall be assessed. R309-535-11(5)(d).~~

~~(d) For a sequestration facility that lacks the testing equipment for accurately measuring the phosphate dosage, 2 points~~

shall be assessed. R309-535-11(5).

R309-400-8. Operator Certification.

(1) A water system that is required to have a certified operator and does not, 30 points shall be assessed.

(2) A water system where the operator is not certified at the appropriate level, 10 points shall be assessed.

(3) A grade 3 or 4 water system that does not have all direct responsible charge operators (as specified in R309-300-5(5)) certified at the level of the system, 5 to 15 points shall be assessed. The number of points shall be based on the percentage of time that the water system is operated by operators not certified at the required level.

(4) A water system where the certified operator does not live within a one hour response time, 20 points shall be assessed.

(5) A water system may be credited up to a maximum of 20 points, which shall remain on record for as long as the conditions apply. The following items are eligible for credit:

(a) A water system that is not required to have a certified operator and does shall be credited 10 points.

(b) A water system that has operators that are certified at a higher level than required shall be credited 10 points.

(c) A water system that has operators certified in other areas that are not required by that water system, such as treatment shall be credited 10 points.

R309-400-9. Cross Connection Control Program.

(1) A water system, which does not have any of the below listed components of a cross connection control program in place, 50 points shall be assessed.

(2) A water system, which only has some of the components of a cross connection control program in place, shall be assessed the following number of points:

(a) A water system which does not have local authority to enforce a cross connection control program (e.g., ordinance, bylaw or policy), 10 points shall be assessed.

(b) A water system that does not provided public education or awareness material or presentations on an annual basis, 10 points shall be assessed.

(c) A water system that does not have an operator with training in the area of cross connection control or backflow prevention, 10 points shall be assessed.

(d) A water system with no written records of cross connection control activities, such as, backflow assembly inventory and test history, 10 points shall be assessed.

(e) A water system that does not have on-going enforcement activities (hazard assessments and enforcement actions), 10 points shall be assessed.

R309-400-10. Drinking Water Source Protection.

Drinking water source protection (for ground water and surface water sources): Points shall be assessed for each source after a system fails to complete source protection requirements according to schedules or deadlines specified in R309-600 and R309-605, unless

~~extensions have been requested from and granted by the Director. The points shall remain until such time as the violation or deficiency is corrected or resolved.~~

~~_____ (1) For a water system that has not appointed a designated person for source protection and notified the Division, 5 points shall be assessed.~~

~~_____ (2) For a water system that has not upgraded a Preliminary Evaluation Report to a Drinking Water Source Protection plan, 30 points shall be assessed.~~

~~_____ (3) For a water system that has not submitted an updated Drinking Water Source Protection plan, 10 points shall be assessed.~~

~~_____ (4) For a water system with any new (see R309-110) sources for which a Preliminary Evaluation Report has not been submitted, 150 points shall be assessed. These points shall be included with the points for an unapproved source, not added to them.~~

~~_____ (5) For a water system that has any existing (see R309-110) sources that have come into use for which a source protection plan has not been submitted, 30 points shall be assessed.~~

~~_____ (6) For a water system that has reconstructed or redeveloped a water source and has not submitted a revised source protection plan, 20 points shall be assessed.~~

~~_____ (7) For a water system that has a disapproved plan, update or Preliminary Evaluation Report, 20 points shall be assessed.~~

~~R309-400-11. Administrative Issues.~~

~~_____ Points in this area shall be assessed at the time that the failure occurs or upon notification of the Director, and shall remain until the issue is resolved unless otherwise specified.~~

~~_____ (1) Administrative Data -~~

~~_____ (a) A water system, that has not designated a person or organizational official responsible for the system including a current address and phone number, 10 points shall be assessed.~~

~~_____ (b) A water system project constructed without proper plan approval, 50 to 200 points shall be assessed based on an evaluation of the project which shall include the structural or engineering integrity of the project; whether the plans and specifications were prepared and stamped by a licensed professional engineer; the adequacy of the materials used and the impact on the operation of the water system (good or bad).~~

~~_____ (2) A water system with a current written Emergency Response Program shall be credited 10 points that shall remain on record as long as the Program remains current.~~

~~_____ (3) A water system with a written Financial Management Plan including an appropriate rate structure, infra-structure replacement fund, and master plan shall be credited 10 points that shall remain on record as long as the Plan is current.~~

~~_____ (4) Sampling Site Plans:~~

~~_____ (a) A water system, which does not have an adequate bacteriological sampling site plan, 5 points shall be assessed.~~

~~_____ (b) A water system, which does not have a lead/copper sampling site plan, 10 points shall be assessed.~~

~~_____ (5) Customer Complaint:~~

~~_____ (a) 25 to 100 points may be assessed for valid and documented customer complaints. The customer complaints include but are not~~

limited to the following:

- ~~_____ (i) Turbidity;~~
- ~~_____ (ii) Pressure;~~
- ~~_____ (iii) Taste and Odor;~~
- ~~_____ (iv) Sickness (water suspected); and~~
- ~~_____ (v) Waterborne Disease Outbreak (R309-104-9).~~
- ~~_____ (vi) Periods of Water Outage~~

~~_____ (b) The number of points shall be based upon the extent and documentation of the problem and the potential impact to public health. The documentation shall consist of an investigation by Department of Environmental Quality, Department of Health or Local Health Department personnel and may include an epidemiological study linking the drinking water to reported outbreaks of illness where appropriate.~~

~~_____ (c) In the case of a documented waterborne disease outbreak, the water system shall automatically be rated Not Approved for at least the duration of the threat to the quality of the drinking water and as long as it takes the water system to correct any deficiency that caused the outbreak.~~

~~_____ (d) Points shall only be assessed once per issue and shall not be additive based on the number of calls per issue. These points shall be assessed and updated upon verification of the complaint by the Director and shall remain on record until the issue or deficiency no longer exists. Points may have already been assessed in other areas as appropriate.~~

~~_____ (6)(a) The Director may issue directives to a water system that include, but are not limited to the following:~~

- ~~_____ (i) Administrative Orders;~~
- ~~_____ (ii) Rule defined action;~~
- ~~_____ (iii) Rule defined compliance schedule;~~
- ~~_____ (iv) Variance/Exemption requirements;~~
- ~~_____ (v) Bilateral Compliance Agreement;~~
- ~~_____ (vi) Notice of Violation and Compliance Order; and~~
- ~~_____ (vii) Compliance Action/Enforcement Order.~~

~~_____ (b) If the water system does not comply with the directive, the Director may assess 25 to 200 points to the water system. Points shall be assessed based upon the severity of the non-compliance, the threat to public health and the underlying basis for the original directive.~~

~~_____ (7) Data Falsification - The Director may assess a water system points for data falsification. The water system may be assessed 25 to 200 points for each occurrence based upon:~~

- ~~_____ (a) the severity of the falsification;~~
- ~~_____ (b) the threat to public health;~~
- ~~_____ (c) the intent of the water system personnel; and,~~
- ~~_____ (d) the type of falsification.~~
- ~~_____ (i) Reports only good data~~
- ~~_____ (ii) Doctored results from the laboratory~~
- ~~_____ (iii) Non-valid sample~~

~~_____ Data reported to the Director includes but is not limited to Water Treatment Plant Reports, Disinfection Reports, bacteriological and chemical analyses, and Annual Reports. This assessment of points shall be in addition to any other penalty provided by law.~~

~~_____ (8) Water Hauling:~~

- ~~_____ (a) For a community water system that is hauling water as a~~

~~permanent method of culinary water distribution, 150 points shall be assessed. R309-550-10(1).~~

~~(b) For a non-community system that is hauling water as a permanent method of culinary water distribution without approval from the director, 150 points shall be assessed. R309-550-10(2).~~

~~(c) For a water system, which has been granted an exception to haul water, if any part of the water hauling guidelines is not followed, 50 points shall be assessed. R309-550-10.~~

~~R309-400-12. Reporting and Record Maintenance Issues.~~

~~Points may be assessed for failure to provide required reports to the Director by the reporting deadline. The points shall be assigned as the failure occurs and shall remain on record for a period of one year.~~

~~(1) Monthly Reports:~~

~~(a) For each failure to report the monthly water treatment plant report, 100 points shall be assessed.~~

~~(2) Quarterly Reports:~~

~~(a) For each failure to report the quarterly disinfection report, 50 points shall be assessed.~~

~~(3) Annual and Other Reports:~~

~~(a) A public water system that fails to submit water use data required by a state agency or fails to verify the accuracy of the data by including a certification by a certified operator or a professional engineer performing the duties of a certified operator shall be assessed 50 points.~~

~~(b) Community water systems that fail to send a certification to the Division stating how the consumer confidence report was distributed to its customers as required in R309-225-7(3), 10 points shall be assessed.~~

~~(c) Community water systems that fail to mail a copy of the consumer confidence report to the Division as required in R309-225-7(3), 10 points shall be assessed.~~

~~(d) A public water system that fails to submit operational reports or other reports required by the Division shall be assessed 20 points.]~~

R309-400-1. Purpose.

The purpose of this rule is to establish the Improvement Priority System used by the division to assign compliance ratings to public water systems and to prioritize enforcement action based on points assessed for noncompliance with drinking water rules.

R309-400-2. Authority.

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

R309-400-3. Definitions.

"Improvement Priority System (IPS)" is a point system used by the division to evaluate a public water system's performance and compliance with the drinking water rules in Title 309, *Environmental Quality, Drinking Water*.

"Public Water System Rating" is assigned to a public water system by the director to characterize the water system's compliance with drinking water rules and overall operation and performance.

R309-400-4. Improvement Priority System - Assessment of Points.

The division shall:

maintain and make public an improvement priority system (IPS) program that includes:

a table specifying the number of points associated with each instance of noncompliance with a drinking water rule requirement and noncompliance with a directive or order issued by the director, and the point thresholds for assigning an Approved or Not Approved rating to each type of public water system; and

obtain approval from the Drinking Water Board for substantive revisions to the IPS program.

The division incorporates by reference the IPS program dated August 27, 2019.

Implementation of the IPS program approved by Drinking Water Board starts on January 1, 2020.

The director may assess points to a public water system and take enforcement action in accordance with the implementation policy and the table of points based on:

noncompliance with Title R309 of the Utah Administrative Code;

noncompliance with a directive or order issued by the director; or operational practices or performance that may result in a threat to public health.

R309-400-5. Public Water System Ratings.

The director may assign a rating to a public water system of:

Approved based on the total number of points assessed for noncompliance;

Not Approved based on:

the total number of points assessed for noncompliance, or an immediate public health threat; or

Corrective Action based on a current, written agreement with the division to resolve underlying noncompliance according to a compliance schedule.

A public water system shall maintain an Approved rating.

A public water system with a Not Approved rating shall:

take immediate action to resolve the noncompliance that resulted in the Not Approved rating; or

enter into a written agreement with the division to resolve the noncompliance that resulted in the Not Approved rating according to a compliance schedule.

R309-400-6. Administrative Appeals.

The assessment of points does not constitute a permit order per R305-7-102(1)(1) and may not be appealed pursuant to R305-7.

The assignment of a rating to a public water system constitutes an initial order per R305-7-102(1)(g) and may be appealed by submitting, filing, and serving a written Request for Agency Action pursuant to R305-7-303 within 30 days of the date of the order issued by the director.

KEY: drinking water, environmental protection, penalties
Date of Enactment or Last Substantive Amendment:
Notice of Continuation: March 22, 2010
Authorizing, and Implemented or Interpreted Law: 19-4-104

Agenda Item

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DRINKING WATER BOARD PACKET
Rural Water Association Report

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Rural Water Association of Utah

Drinking Water Board Report, Activities Overview

Employee/Position: Terry Smith - Management Technician

Report Date Range: August - September, 2019

August -

Onsite:

12th - Brian Head. After proctoring a op-cert exam, I met with the system managers to discuss chlorination options. They are planning on installing treatment in reaction to several positive samples over the past year. Later on I created a spreadsheet to help the public works director calculate the annual cost of each option (gas, liquid, tablets).

14th - Met with Kaysville to discuss distribution chlorination booster options. While there I asked about rates and funding - they indicated that they would like me to help them with a rate/budget analysis. We set up a date to meet later in November.

15th - Minersville. Met with the town manager, clerk and mayor to go over the rate model I had created. We then used this to input various rate scenarios to arrive at what would work best to bring in sufficient revenue for the RD loan they are going to take on.

19th - Kanosh Town. Worked with their new operator, training him on proper distribution system isolation, flushing, etc. After the former operator quit with very little notice, he was thrown into this job with very minimal training/experience.

29th - Leeds Domestic Water. One of the council members called me to ask if I could respond onsite ASAP. Their tank was nearly dry, and the well would not pump water to it. Additionally, they had lost their former operator, and didn't have anyone familiar with the well operation. Upon arrival, I found that the hydraulic check valve was not opening. I quickly repaired this to the point that it would work, and instructed them on the parts that needed to be ordered and replaced.

Offsite:

- At the mayor's request, I started water rate/budget analysis for Willard City.
- Milford City water rate and budget analysis spreadsheet.

September -

Onsite:

5th - Mona City. Critical response request - due to the fact that their tanks were nearly dry because of a malfunctioning control valve. Additionally, the chlorinator was not functioning because of lack of pressure not being created by the malfunctioning valve. I met with the operator and trained him on how to operate and repair both. Additionally, as I traveled past the system a couple of weeks later, I met with him again, helped him installed the new parts, and then adjust the valve.

23rd - Mountain Springs Water Company. I met with a board member, as well as their operator, to look at and advise on chlorination options pertaining to their two wells. I also instructed them on the best option to treat their water in the interim, while going through the approval process to get permanent chlorination plants installed.

30th - Paragonah Town. I assisted their operator in getting a delinquent source protection update completed.

Offsite:

- At their request, I assisted Clark Bench, a small water system near Lake Powell, with completing the DDW information request pertaining to them possibly becoming a public water system.
- I assisted Brian Head's public works director in doing a chlorination cost analysis by creating a spreadsheet to allow him to input various options.
- Created a spreadsheet for Angell Springs, in order to help them with rate, budget and asset depreciation analysis.
- Due to a change in council members (3), Willard City has requested that the rate analysis I'm currently working on be put on hold until after the first of the year.

Rural Water Association of Utah

Drinking Water Board Report - Activities Overview

Employee/Position: BRIAN PATTEE, Compliance Circuit Rider/Training Supervisor

Report Date Range: August 2nd 2019—October 17th 2019

August 2nd thru August 31st 2019

Onsite:

- Cottonwood Coves – IPS compliance, Cross Connection control
- DDW – IPS 2020 Training workshop 35+ Systems

Offsite or Direct Contact w/ Operator:

- Angel Springs - IPS , Cross Connection Control
- Hollow Mtn.– Cross Connection Program Assistance
- Spanish Fork – Cross Connection Program Assistance
- Cottonwood Coves – IPS compliance, Cross Connection control
- Center Creek Culinary Water – IPS compliance, Assistance

DDW- ACS Meeting

DDW- Cross Connection Control Certification Program Rule Change, Training Planning & Preparation.

Fall Conference Cross Connection Control Certification, 25 Systems

Spanish Fork cross Connection Control Certification, 8 Systems

Training Needs Workshop –Facilitation and Moderating

September 1st thru September 30th 2019

Onsite:

- Center Creek Culinary Water – Cross Connection Program, I PS, all System Instruction & Assistance
- Dansie Water – IPS violation assistance, Cross Connection control.

Offsite or Direct Contact w/ Operator:

- IPS 2020 Logan – 37 System attendance
- Weber basin Job Corps – sampling questions
- Kanab – Cross Connection Control Program Questions
- South Robison Springs- Chlorine Determination
- Croyden – Source Protection Issues
- Bear Paw – Violation assistance
- Lewiston – CCC Program review
- Wanship- IPS violation review

Instructed Cross Connection Control Workshop Springville – 33 attendees

Facilitated Water Conservation Certification at DNR Sept. 26,27,

Brian Pattee

October 1st thru October 17th 2019

Onsite:

- Grantsville – New Well & Facility Inspection Survey

Offsite: or direct Contact with Operator:

- Metro Water - CCC Coalition Meeting Participation
- Lehi – CCC Coalition Meeting Participation
- Cottonwood Coves – sampling questions
- Croydan – Source Protection
- Hinkley – CCC Hazard assessment
- Moab – CCC Training scheduling
- Rubys Inn – Sampling Question

Grantsville – Cross connection Certification Facilitation 14 attendees trained & Certified
Operator Certification Program workshop – RWAU Midway

DDW- Cross Connection Control Certification Program Rule Change, Training Planning
& Preparation. DDW CCC Committee Work



RURAL WATER ASSOCIATION OF UTAH

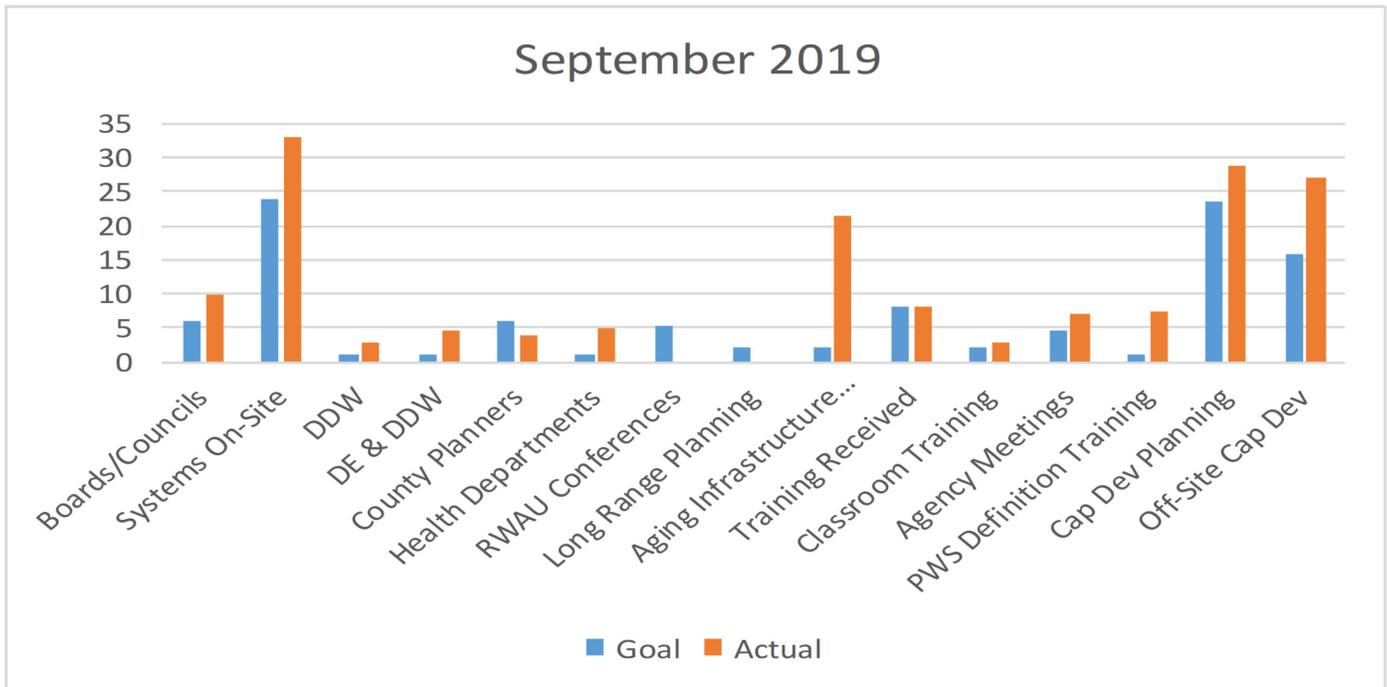
76 Red Pine Drive • Alpine, UT 84004 • Phone: 801-756-5123 • Fax: 801-756

Drinking Water Board Report

Development Contract

June 2018 – May 2023

RWAU Employee: Curtis Ludvigson



Work Performed	Goal	Actual
Boards/Councils	6	10
Systems On-Site	24	33
DDW	1	3
DE & DDW	1	4.5
County Planners	6	4
Health Departments	1	5
RWAU Conferences	5.33	0
Long Range Planning	2	0
Aging Infrastructure Planning	2	21.5
Training Received	8	8
Classroom Training	2	3
Agency Meetings	4.5	7
PWS Definition Training	1	7.5
Cap Dev Planning	23.5	29
Off-Site Cap Dev	16	27
Total	103.33	162.5

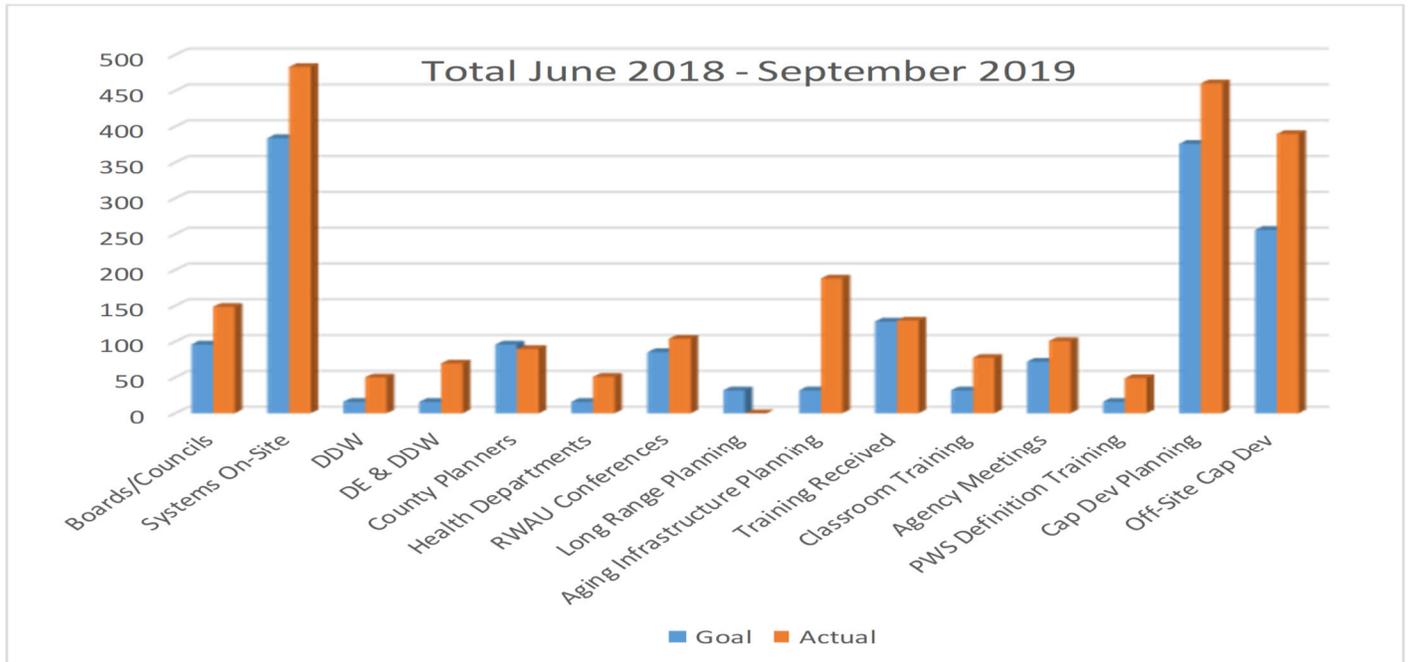


RURAL WATER ASSOCIATION OF UTAH

76 Red Pine Drive • Alpine, UT 84004 • Phone: 801-756-5123 • Fax: 801-756

Drinking Water Board Report Development Contract June 2018 – May 2023

RWAU Employee: Curtis Ludvigson



Work Performed	Goal	Actual
Boards/Councils	96	148.5
Systems On-Site	384	483.25
DDW	16	50
DE & DDW	16	69.5
County Planners	96	89.75
Health Departments	16	50.75
RWAU Conferences	85.28	104
Long Range Planning	32	0
Aging Infrastructure Planning	32	188
Training Received	128	129.5
Classroom Training	32	77.5
Agency Meetings	72	100.75
PWS Definition Training	16	49
Cap Dev Planning	376	460.25
Off-Site Cap Dev	256	389.75
Total	1653.28	2390.5



RURAL WATER ASSOCIATION OF UTAH

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On-Site Assistance & Work Performed

Kanab	Review of Budget and Rates
Big Water	Training on Compliance of CCR's and Source Protection Updates
Orderville	Training on Aging Infrastructure and Budget Review
Hatch	Budget and Rates Review
Panguitch	Follow up on projects east of town and also on the mountain where the fire was.
Junction	Training on Aging Infrastructure, discuss potential need on system
Stockton	Budget and Rates Review and Training on Master Planning
Genola	Review of plans for the upcoming project and tour of new well and tank site pro-
Nephi	Discussions on progress of project and review of their budget for the project
Levan	Training on Master Planning, project funding, RFP
Lynndyl	Training on project funding, MAGI, rates and fees
Jensen	Analyzing their rates and budget, determining the qualifications for grants and
Johnson Water	Training on Aging Infrastructure and Master Planning
Myton	Training on Master Planning and Aging Infrastructure
Loa	Working on Water Rates Analysis
Koosharem	Aging Infrastructure training and rates analysis
Mt Pleasant	Training on our Apprenticeship program
Uintah	Working on Water Rates Analysis
Morgan	Training on the IPS 2020 Rule changes, planning for growth and master planning
Coalville	Training on MAGI and funding availability for projects. Prepare RFP
Kamas	Discuss funding for projects, rates and fees, planning grants and master planning
Francis	Master Planning, Rate Structuring, MAGI training and project funding

Agency & Other Meetings

Entity	Hours
Rural Development	2.0
DDW	3.0
Division of Water Resources	2.0

Agenda Item

11(A)

Enforcement Report as of October 3, 2019

PWS ID	PWS Name	PWS Type	Pop Served	IPS Pts	Rating	Rating Date
Finalized AO						
UTAH09034	Bear Paw Lakeview Resort	Non-Community	80	90	Not Approved	03/31/2016
UTAH11043	Old Meadows	Community	48	95	Not Approved	04/18/2017
UTAH10033	Sorrel River Ranch	NTNC	260	10	Not Approved	07/26/2017
UTAH18028	Sandy City	Community	99750	17	Approved	03/11/1980
UTAH25124	Alpine Cove SSD	Community	230	100	Not Approved	3/4/2019
UTAH09069	Paradise Park	Non-Community	120	31	Not Approved	6/14/2018
UTAH25023	Brickerhaven Subdivision	Non-Community	150	131	Not Approved	9/5/2019
Corrective Action Systems						
UTAH25013	GOSHEN TOWN WATER SYSTEM	Community	925	161	Corrective Action	3/8/2016
UTAH21050	LIZARD BENCH WATER	Community	63	40	Corrective Action	11/8/2018
UTAH25077	RIVERBEND GROVE, INC.	Non-Community	25	461	Corrective Action	12/13/2016
UTAH15038	TAGGARTS GRILL	Non-Community	60	100	Corrective Action	2/6/2018
UTAH09077	BRISTLECONE	Non-Community	180	2	Corrective Action	1/1/2019
UTAH26049	SWISS ALPINE	Community	300	75	Corrective Action	4/14/2016
UTAH12020	YOUNG LIVING FARMS	NTNC	250	25	Corrective Action	4/10/2019
UTAH23028	DELLE AUTO TRUCK STOP	Non-Community	138	66	Corrective Action	5/30/2019
UTAH22009	WEBER MEADOWVIEW	Non-Community	65	140	Corrective Action	5/30/2019
UTAH27077	MOUNTAIN SPRINGS WATER	Community	660	-10	Corrective Action	6/18/2019
UTAH02051	CEDAR RIDGE	Community	100	0	Corrective Action	6/11/2019
UTAH26026	BRYANTS FORK SUMMER HOMES	Non-Community	50	-10	Corrective Action	6/11/2019
UTAH02078	M & J TRAILER HOME COMMUNITY	Community	27	65	Not Approved	8/20/2018
UTAH07067	SOUTH DUCHESNE	Community	128	115	Not Approved	4/24/2019
UTAH25133	JEHOVAHS WITNESS CHURCH	Non-Community	100	148	Corrective Action	9/16/2019
UTAH03006	COVE WATERWORKS	Community	52	120	Corrective Action	9/17/2019
UTAH22001	CLUFFWARD PIPELINE	Community	188	72	Corrective Action	9/30/2019
Failure to Comply						
UTAH26073	DIAMOND HILLS ASSOCIATION	Non-Community	125	246	Not Approved	1/14/2010
Not Approved Systems						
UTAH07061	VALLE DEL PADRES SUBDIV	Non-Transient	98	585	Not Approved	6/10/1999
UTAH09084	JNB MARINE	Non-Community	36	66	Not Approved	9/17/2002
UTAH11091	SUMMIT CHATEAU IN BRIAN HEAD	Community	80	88	Not Approved	3/1/2008
UTAH02069	SUNSET PARK WATER CO.	Community	44	70	Not Approved	5/29/2013
UTAH22019**	WANSHIP COTTAGES	Community	79	200	Not Approved	4/11/2019
UTAH26074	SOAPSTONE SUMMER HOMES	Non-Community	110	53	Not Approved	4/3/2014
UTAH15001	CROYDON PIPELINE CORPORATION	Community	92	40	Not Approved	7/7/2015
UTAH06008	WEBER BASIN JOB CORPS	Community	230	5	Not Approved	6/15/2016
UTAH07039	CAMPERWORLD LAKESIDE PARK	Non-Community	28	120	Not Approved	11/03/2016
UTAH10034	SUN ARCHVIEW LLC	Non-Community	506	64	Not Approved	4/18/2017
UTAH26042	LITTLE DEER CREEK CAMP	Non-Community	60	45	Not Approved	11/1/2017
UTAH13032	BRYCE-ZION CAMPGROUND	Non-Community	170	-20	Not Approved	3/15/2018
UTAH26061	CAMP ROGER YMCA	Non-Community	210	60	Not Approved	3/15/2018
UTAH09074	LAKE FRONT ESTATES	Non-Community	25	48	Not Approved	3/15/2018
UTAH25035**	WILDWOOD SUBDIVISION	Non-Community	162	202	Not Approved	3/15/2018
UTAH18172	COTTON WOOD COVES	Community	250	-10	Not Approved	9/27/2018
UTAH03005	CORNISH TOWN WATER SYSTEM	Community	270	31	Not Approved	9/27/2018
UTAH22072	ECHO RESORT	Non-Community	915	37	Not Approved	9/27/2018
UTAH19037**	WIND WHISTLE CAMPGROUND	Non-Community	39	0	Not Approved	9/27/2018
UTAH07023**	YELLOWSTONE CAMPGROUND	Non-Community	25	155	Not Approved	9/27/2018
UTAH09078	BARKER REC	Non-Community	30	-5	Not Approved	3/18/2019
UTAH22036	BRIDGER LAKE CG	Non-Community	65	65	Not Approved	3/18/2019
UTAH12028	HOUWELINGS TOMATOES	Non-Transient	150	390	Not Approved	5/29/2019
UTAH09016	BLUE SPRUCE CG	Non-Community	30	16	Not Approved	8/19/2019
UTAH29086	PINE VIEW HOMEOWNERS	Community	105	180	Not Approved	9/17/2019
UTAH26050	BACK FORTY RANCH HOUSE	Non-Community	70	130	Not Approved	8/19/2019
UTAH25179	RIGTRUP EGG FARM	Non-Transient	35	319	Not Approved	10/2/2019
UTAH23069	ERDA WARD	Non-Community	600	135	Not Approved	10/2/2019
UTAH25072	LAKE SHORE WARD	Non-Community	750	101	Not Approved	10/2/2019

Agenda Item

11(B)

Utah Division of Drinking Water Policy of Handling Water-Related Customer Complaints

Statement of Purpose

Drinking water systems deliver water to the public and feedback from the public is an important tool for monitoring water quality and quantity. Having a program to manage customer complaints is essential for public water systems to adequately protect public health. This policy outlines how the Division of Drinking Water (DDW) implement the M016 deficiency on customer complaints as a part of the R309-400 rule and specifies the responsibilities of public water systems with regards to water-related customer complaints.

Deficiency

M016: History of verified customer complaints regarding drinking water quality or quantity.

Significant Deficiency, 50 IPS2020 points

Implementation

Water System Responsibilities:

1. The water system is responsible to respond to all customer complaints including receiving the complaint, investigating the complaint, and taking reasonable action to resolve the complaint, particularly if there is a potential health risk found.
2. All public water systems should have in place a written procedure for receiving, tracking and handling customer complaints.
3. A water system's procedure for tracking and handling customer complaints should be made available for review at the time of a sanitary survey.
4. Water system's records of customer complaints and the resolutions should be made available at the time of the sanitary survey or upon DDW request.
5. A public water system that receives drinking water from another water system should notify that water system within two business days of receiving a customer complaint related to the supplied water.
6. The water system's customer complaint policy should identify a mechanism to receive all customer complaints in a timely manner and document each complaint.

7. Water systems are expected to respond to each customer complaint with investigation. The investigation must identify imminent health risk and show due diligence.
8. Water systems are expected to take action to mitigate customer complaints related to the quantity, quality or pressure of drinking water provided by the water systems.

DDW Responsibilities:

1. If DDW receives a customer complaint, DDW staff will communicate any reported customer complaints to the local health departments (LHD) and applicable water systems as soon as possible.
2. DDW will consider assessing the M016 Significant Deficiency if it finds a water system fails to take adequate actions to manage customer complaints. DDW will send a notice of deficiency to the water system.
3. The DDW may resolve the M016 deficiency only when a water system has demonstrated a consistent pattern of adequately managing customer complaints and successfully meeting the drinking water quality, quantity and pressure expectations.

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DRINKING WATER BOARD PACKET
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U.S. 6 reopened in Spanish Fork Canyon after mudslide cleanup

POSTED 7:46 PM, AUGUST 8, 2019, BY JOSHUA ELLIS AND SCOTT MCKANE, *UPDATED AT 06:26PM, AUGUST 9, 2019*

<https://fox13now.com/2019/08/08/flash-flood-prompts-evacuations-in-utah-county/>

UPDATE: U.S. Highway 6 has been reopened.

ELK RIDGE, Utah — Residents near Loafer Canyon have been allowed back into their homes, but U.S. 6 in Spanish Fork Canyon remains closed Friday morning after a mudslide.

Utah Highway Patrol stated shortly before 11 a.m. they expect the road to remain closed until about 6 p.m. Friday.

There are no reports of injuries and no information on property damage in Loafer Canyon, according to Sgt. Spencer Cannon with the Utah County Sheriff's Office.

Residents in Elkridge are back home Friday morning after flooding in nearby Loafer Canyon prompted evacuations Thursday night.

"We walked up the canyon, and it was just running a little bit, didn't look like it was going to be too bad," said Brandon Fry, a resident impacted by the flooding. "And then we had a couple vehicles that were up further racing down and said 'Get out of here, it's not good,' and then you could just hear it coming down the canyon."

Cleanup efforts are underway in the area Friday morning and officials ask people to avoid the area unless they live in the vicinity.

They also encourage residents to be aware of future weather warnings and to prepare for possible flooding.

Meanwhile, mudslides have closed Little Cottonwood Canyon.

Little Cottonwood Canyon remains closed after mudslides; brief openings announced

POSTED 7:01 AM, AUGUST 9, 2019, BY TAMARA VAIFANUA, REBECCA GREEN AND DAVID WELLS, *UPDATED AT 10:25PM, AUGUST 9, 2019*

<https://fox13now.com/2019/08/09/mudslides-close-little-cottonwood-canyon-strand-several-in-vehicles/>

LITTLE COTTONWOOD CANYON, Utah -- Little Cottonwood Canyon is closed Friday as crews work to clear the aftermath of nine different mudslides, but the canyon will open briefly Friday evening.

Unified Police said the canyon will be open to uphill traffic between 5 to 5:30 p.m. and downhill traffic from 5:30 to 6 p.m. Friday.

A tweet from the town of Alta said traffic in both directions will be allowed between 6 and 6:30 a.m. Saturday, if SR-210 hasn't fully reopened by then.

Authorities said they began receiving reports of the mudslides around 8 p.m. Thursday near the base of the canyon and near Snowbird Resort.

Several people were trapped in their cars for hours between those two points until crews could bring in heavy equipment to clear out a path.

"We're talking 2, 3, 4-feet deep just of mud, then there's some pretty large boulders in the way too," Det. Ken Hansen of Unified Police said of the mess. "We really lucked out by no one hitting a rock or anything... A lot of times these slides occur kind of slowly so you can see them coming, and I'm hoping that's what happened here."

The motorists who were stranded were taken to Alta and Snowbird to spend the night, and around 9:30 a.m. Friday they were allowed to drive back down the canyon. No injuries were reported.

While the stranded motorists were allowed to make their way back down, the road remains closed and may not open again until Saturday.

John Gleason, a Utah Department of Transportation spokesman, said Friday that employees with 30 years experience in the canyon have said they've never seen anything like this. UDOT states there are nine different slide areas that left debris ranging from 2 to 15-feet deep.

"Rocks the size of small cars and an avalanche of debris," Gleason stated in a tweet. "In some areas the slide reached 15 feet deep. Our crews will be hard at work for the next several days making sure the road is safe."

Gleason said water is still flowing in the area Friday as of about 8:20 a.m., and the rushing water unearthed a gas line in the area.

The slides are believed to have been caused by recent and heavy rainfall. A mudslide has also closed US 6 in Spanish Fork Canyon and another slide prompted evacuations in that area briefly.

Authorities urge Utahns to be cautious while driving in canyons or other steep areas after rainstorms.

Oil runs down SLC gutters, storm drains after heavy rain

POSTED 10:16 PM, AUGUST 8, 2019, BY ERIN COX, *UPDATED AT 07:14AM, AUGUST 9, 2019*

<https://fox13now.com/2019/08/08/oil-runs-down-slc-gutters-storm-drains-after-heavy-rain/>

SALT LAKE CITY — An unexpected rainstorm Thursday morning caused oil from a chip and seal road project to run down gutter and storm drains near the Jordan River.

Rick Glem has lived in the neighborhood for forty years and has never seen the gutter filled with oil.

“It would be like dumping your motor oil down a storm drain, not a good thing to do,” said Glem.

It’s called tack oil — two parts water, one part oil.

Crews with Salt Lake City and other agencies were using tack oil and a fog spray in a fog spray they put over the roads after chip and sealing.

The project, Glem said, was not timed well.

“Somebody made a bad call,” said Glem. “I don’t want to say they messed up, because you’re dealing with the weather.”

Holly Mullen, a spokesperson for the Salt Lake City Department of Public Utilities said their response was quick, preventing further harm than there could’ve been.

“We had our vacor truck out here, which was a very big vacuum truck that sucked up a lot of the oily substance,” said Mullen.

Crews also placed booms and pom poms in the gutters to stop the flow, then placed mats over the storm drains which allows water to flow through, but not oil.

“We feel really good that things are sound and safe,” said Mullen.

Streets from 6th to 10th north in Rose Park are blocked off while crews finish off the roads.

Mullen said the Jordan River is safe from the oil as the gutters flow towards a sewage treatment plant north of the area.

The cleanup cost around \$3,000 for crews from Salt Lake City.

Toxic algal bloom found at Yuba Lake

by McKenzie Stauffer

Thursday, August 8th 2019

<https://kutv.com/news/local/toxic-algal-bloom-found-at-yuba-lake>

(KUTV) — A warning advisory has been issued for Yuba Lake after a toxic algal bloom was discovered in the water, according to Utah Department of Environmental Quality.

The algal bloom was discovered after Utah DEQ's Division of Water Quality took water samples from the north shore, located 25 miles south of Nephi.

[Utah DEQ@UtahDEQ](#)

HABS UPDATE: The @CUPHD issued a Warning Advisory for Yuba Lake after toxin test results from water column samples collected by the @UtahDEQ's Division of Water Quality at the north shore showed microcystin levels of 128 micrograms per liter. <http://habs.utah.gov>

The results showed microcystin levels of 128 micorgrams per liter, Utah DEQ tweeted.

People are being advised not to swim or water ski in the area. If you're boating, be sure to avoid areas with algae scum. Utah DEQ also says to keep animals away, avoid drinking the water and be sure to clean fish well and properly discard the guts.

Recent visitors to Yuba Lake who are experiencing GI distress, skin irritations and/or headaches, please contact Utah Poison Control at 1-800-222-1222 or call your local physician.

BYU research shows link between phosphorus levels, algal blooms on Utah Lake

By Katie England Daily Herald

Aug 10, 2019

https://www.heraldextra.com/news/local/education/college/byu/byu-research-shows-link-between-phosphorus-levels-algal-blooms-on/article_53455804-eb0c-5cfc-9371-e452c9d6199a.html

Though phosphorus has long been referenced as one factor that causes the harmful algal blooms on Utah Lake, researchers at Brigham Young University have found a link between the levels of the nutrient in the lake and the algal blooms the lake has become infamous for in recent years.

Over a two-year period, the research team measured phosphorus concentrations in lake sediment, pore water and the water column.

After this initial study was complete, the research found that the phosphorus concentrations are higher on the east side of Utah Lake, which is where treated wastewater from Utah County cities is discharged into the lake. Wastewater isn't treated for phosphorus, meaning the discharge puts higher concentrations of phosphorus into the lake, according to Greg Carling, a BYU geology professor and co-author of the published paper on the research.

"I would say this was the first study to quantitatively look at phosphorus chemistry across the lake," Carling said. "People have been talking about it, but nobody has actually gone in and measured phosphorus in sediment and pore water across the lake."

The phosphorus basically acts like a fertilizer for the cyanobacteria, which is what produces the toxins that frequently shut down portions of the lake. While these blooms occur all over the lake, they occur more commonly on the east side where levels of phosphorus are higher.

"What we found from that study is there likely is a link between legacy phosphorus that had accumulated over decades and the location of harmful blooms," Carling said.

While the study doesn't prove that phosphorus is the only factor related to harmful blooms on the lake, Carling said it does confirm that phosphorus is related to harmful algal blooms.

One surprising part of the study, Carling said, was that they found much of the phosphorus in the sediment was "mobile" meaning it could easily transfer to the water column.

Because of the levels of phosphorus in the system, though, Carling said even if wastewater plants started treating for phosphorus immediately, it would likely take years before you would see a drop in phosphorus levels in Utah Lake.

“Even if you immediately start to clean up the water column, it’s possible that we still get phosphorus coming up from the sediments, and that could take years or decades to be completely removed,” Carling said. “So it’s not like something we could just put in hundreds of millions of dollars, clean up the treatment plants and see an immediate improvement. It’s going to be something of a longer process.”

Exactly how long it would take is unknown, though it is a question that’s being asked by experts on a state-level science panel Carling sits on. Studies on other lakes show it could take anywhere from 10 to 30 years.

“That’s the whole point of the science panel,” Carling said. “They want to know what’s the target amount of phosphorus we can put in the lake to achieve better water quality?”

Even with a target goal for phosphorus achieved, it’s still likely there would continue to be algal blooms on Utah Lake.

Many factors go into the blooms, such as water temperature, weather and nutrients. There are people who argue that there is enough naturally-occurring phosphorus in the lake that there will still be algal blooms even if no human-contributed phosphorus is put in the lake. Other factors like increased temperatures due to global warming could also exacerbate algal blooms regardless of phosphorus levels, Carling said.

“There are lots of things that go into creating harmful algal blooms, Carling said. “Nutrients are just one thing that can readily be controlled.”

But, Carling said, no matter what is done to restore Utah Lake, it will never be a clear, blue lake like Lake Tahoe.

There is ongoing research at BYU to see what historic levels of phosphorus in the lake were, Carling said, by gathering a sediment core. Finding that type of historical information about the lake is one of the most important parts of understanding how to restore Utah Lake to its optimal condition, Carling said.

While it won’t happen overnight, Carling said he’s optimistic about the possibility of improving the lake.

“I think we can come up with solutions that will improve the lake,” Carling said. “...It’s a resilient lake. It’s pretty good at processing the nutrients we put into it and cleaning itself up. I think if we’re willing to do simple things, like remove some of the input, the lake will take care of itself. I don’t think we need anything too extreme like dredging the lake.”

A North Carolina woman took her three dogs to a pond to play. Within hours, her pups had died from toxic algae

By Scottie Andrew and Melissa Gray, CNN

Updated 11:33 AM ET, Mon August 12, 2019

<https://www.cnn.com/2019/08/11/us/three-dogs-died-algae-trnd/index.html>

(CNN)A doggy play date in a North Carolina pond turned tragic after three pups died from toxic algae. Now, their owners say they hope their loss will educate fellow dog lovers about the dangerous blooms.

Melissa Martin and Denise Mintz took their beloved dogs Abby, Izzy and Harpo to a pond in Wilmington on Thursday night to cool off. But within 15 minutes of leaving the pond, Abby, a West Highland white terrier, began to have a seizure.

Martin rushed her to a veterinary hospital, with Izzy and Harpo right behind her. Upon their arrival, Izzy, also a Westie, started seizing, and both terriers rapidly declined. Then Harpo, her 6-year-old "doodle" mix therapy dog, began to seize and show signs of liver failure.

By midnight Friday, all three dogs had died, she said.

The culprit, Martin's veterinarian said, was poisoning from blue-green algae present in the pond where they played.

"What started out as a fun night for them has ended in the biggest loss of our lives," Martin wrote in a Facebook post that has since been shared more than 15,000 times.

Martin told CNN she didn't notice the algae at first, but her veterinarian told her that what appeared to be debris from flowers were blooms of cyanobacteria.

She said she didn't see any signs warning of toxic algae near the pond, which sits next to a popular walking trail. It's her mission now, she says, to erect signs about toxic waters and warn pet owners about the blooms.

"I will not stop until I make positive change," she said. "I will not lose my dogs for nothing."

Blue-green algae is most common in the summer

Toxic algae blooms are more likely to infest bodies of fresh water when the weather is warm and waters are stagnant, according to the North Carolina Department of Health and Human Services.

Some algal blooms leave a film of muck on the surface and make the water ruddy, but others are difficult to immediately detect, such as the blooms in the pond where Martin's dogs were exposed.

There's no cure for the poisoning, and exposure nearly always leads to death in dogs. Drinking from a body of water where blue-green algae lurks or licking it off fur can kill a dog within 15 minutes of exposure, according to Blue Cross for Pets, a UK animal charity.

The North Carolina Department of Environmental Quality periodically updates a map of the state where algae blooms have been reported, but in the case that a health notice isn't posted, it's best for humans and pets alike to avoid waters that smell bad or look odd in color or murky, the state's health and human services department said.

Dangerous toxins force closure of Vernal reservoir

Toxins measured at nearly 11 times the recreation health standard

By [Amy Joi O'Donoghue@Amyjoi16](mailto:AmyJoi.O'Donoghue@Amyjoi16) Aug 13, 2019, 12:38pm MDT

<https://www.deseret.com/utah/2019/8/13/20804127/vernal-matt-warner-reservoir-cyanobacteria-microcystin>

VERNAL — Dangerous toxins at nearly 11 times the recreation health standard forced the closure of the Matt Warner Reservoir near Vernal on Tuesday.

The Tri-County Health Department issued a danger advisory Tuesday after receiving lab data for water samples collected Aug. 6 at the boat ramp.

The agency is posting closure signs at the water body.

The onset of a blue-green algal bloom, also called cyanobacteria, indicates stagnant water and hot temperatures. Samples collected at this waterbody contained microcystin concentrations and anatoxin-a.

Microcystin is one of the most widespread in the cyanobacteria family and is a potent liver toxin and possible carcinogen.

Testing at boat ramps showed cell counts of more than 109 million per milliliter at the surface and at 1.8 million at elbow depth.

Anatoxin a is a fast-acting neurotoxin that is lethal.

DEQ adds four new algal bloom warnings

by Tiffany Justice

Tuesday, August 13th 2019

<https://kutv.com/news/local/deq-adds-four-new-algal-bloom-warnings>

KUTV — The Utah Department of Environmental Quality is out with its harmful algal bloom results and there are four more warnings.

Permanent warning signs have been posted at Utah Lake.

2019 Updates

Calder Reservoir

Last Update: August 13, 2019

Last Sample Date: August 6, 2019

Advisory Level: Warning

Jordan River and Canals

Last Update: August 12, 2019

Last Sample Date: August 6, 2019

Advisory Level: Warning

Manning Meadow Reservoir

Last Update: August 13, 2019

Last Sample Date: August 1, 2019

Advisory Level: Warning

Matt Warner Reservoir

Last Update: August 12, 2019

Last Sample Date: August 6, 2019

Advisory Level: Danger

The DEQ's also reminding visitors to Utah reservoirs and bodies of water to pay attention to posted signs, toxic algal blooms can be harmful to pets.

Late June, the Division of Water Quality isolated clumps of green cyanobacteria on the surface of the Zelph Calder Reservoir and throughout the water column.

The agency is asking everyone to avoid areas of algae scum, keep animals away, don't ingest the water and clean fish well.

Some researchers at Brigham Young University are trying to figure out why the blooms have cropped up recently in Utah. Permanent warning signs have been erected at Utah Lake.

Recreational advisory issued for Eden Reservoir in Wyoming

POSTED 9:07 PM, AUGUST 14, 2019, BY JOSHUA ELLIS, *UPDATED AT 02:32PM, AUGUST 15, 2019*

<https://fox13now.com/2019/08/14/recreational-advisory-issued-for-eden-reservoir-in-wyoming/>

SWEETWATER COUNTY, Wyo. — The Wyoming Department of Health has issued a recreational use advisory for Eden Reservoir in Sweetwater County, due to a toxic algal bloom.

The reservoir is not closed but the WDOH said harmful cyanobacteria, commonly known as blue-green algae, may be present in certain areas of the waterbody.

The advisory will remain in place until the bloom has fully dissipated, according to the release.

It is recommended to avoid contact with the water in the vicinity of the bloom and avoid ingesting water from the bloom — boiling and filtration will not remove the toxins, the WDOH said.

Pets and livestock should be kept away from water near the bloom and fish should be rinsed with clean water and only the fillet portion should be consumed.

Toxic algal bloom forces closure of Matt Warner Reservoir in Uintah Co.

POSTED 11:03 AM, AUGUST 14, 2019, BY DAVID WELLS

<https://fox13now.com/2019/08/14/toxic-algal-bloom-forces-closure-of-matt-warner-reservoir-in-uintah-co/>

UINTAH COUNTY, Utah — The Tri-County Health Department has issued a Danger Advisory after a harmful algal bloom developed at Matt Warner Reservoir in Uintah County.

The reservoir is closed after water samples showed cyanobacteria levels 11 times higher than the “recreation health-based threshold,” according to a news release from the Health Department.

According to the Utah Department of Environmental Quality, harmful algal blooms like the one at Matt Warner Reservoir occur when cyanobacteria in the water multiply to form visible colonies or blooms.

Some types of cyanobacteria can produce toxins that affect the liver or nerves, and can cause a wide range of health effects, from mild skin rashes to death. [Click here](#) for more information on the health effects of harmful algal blooms.

Soldier Hollow boil order lifted

POSTED 6:07 PM, AUGUST 15, 2019, BY JOSHUA ELLIS, *UPDATED AT 01:56PM, AUGUST 17, 2019*

<https://fox13now.com/2019/08/15/boil-order-issued-for-soldier-hollow-complex/>

UPDATE: The boil order has been lifted, according to the DEQ.

MIDWAY, Utah — The Charleston Water Conservancy District issued a boil order for the Solider Hollow Complex, which includes the golf course, grill and Olympic venue, after E. coli was detected in the water supply Wednesday.

The Utah Department of Environmental Quality said visitors to the complex between 3:30 p.m. Tuesday and 6:00 p.m. Wednesday are being asked to monitor their health for possible E. coli infections.

The DEQ said the contamination happened after a construction accident Tuesday resulted in a break in the pipes.

The contamination was not detected until Wednesday afternoon.

Arizona, Nevada cuts to Colorado River water negligible

By Felicia Fonseca | The Associated Press • Published: August 16 Updated: August 17, 2019

<https://www.sltrib.com/news/environment/2019/08/17/arizona-nevada-cuts/>

Albuquerque, N.M. • Arizona and Nevada will face their first-ever cuts in Colorado River water next year, but the changes aren't expected to be overly burdensome for either state.

The water is delivered through Lake Mead, one of the largest manmade reservoirs in the country that straddles the Arizona-Nevada border.

The U.S. Bureau of Reclamation said Thursday that Lake Mead barely will fall below 1,090 feet on Jan. 1, triggering cuts for the junior users in the river's lower basin, at 1,089.4 above sea level.

For Arizona, that means less water for underground storage, recharging aquifers and for agricultural use. About 7% of its 2.8 million acre-feet, or 192,000 acre-feet, will be left behind Lake Mead.

That's about the same amount Arizona voluntarily has given up for a few years, said Chuck Cullom, Colorado River programs manager for the Central Arizona Project, which gets more than half of Arizona's entitlement to the Colorado River.

Nevada won't see the effects of its 3% cut. The state's allocation is 300,000 acre-feet annually, but it's on track to use about 225,000 acre-feet this year, said Bronson Mack, a spokesman for the Southern Nevada Water Authority. An acre-foot equals nearly 326,000 gallons and is enough to serve one to two average households a year.

"Conservation has reduced our water use significantly enough that we can make these contributions to the drought contingency plan without impacting future water," he said Friday.

The states joined California, Colorado, New Mexico, Utah and Wyoming in signing the drought plan earlier this year that raised the bar for triggering shortages. Under the 2007 guidelines alone, a shortage would not have been declared until Lake Mead dropped below 1,075 feet, and the cuts would be more drastic.

The goal is to keep Lake Mead fuller so it can continue delivering water downstream and producing hydropower. The drought plan also loops in California on water cuts.

Mexico will give up 3%, or 41,000 acre-feet, of its 1.5 million acre-feet of water next year under a separate accord. Under the drought contingency plan, Arizona, Nevada and Mexico can recover the water they're giving up to Lake Mead if the reservoir rises to a certain level.

The cut to Arizona represents about 12 percent of the Central Arizona Power water supply, and Cullom said the utility will eliminate water deliveries to underground water banks and for replenishing aquifers.

Cullom said the utility has provided incentives to farmers to reduce their reliance on the water delivered through a series of canals since 2015 in preparation for any shortages. The agricultural pool of water will see a 15 percent reduction next year, he said.

Most farmers don't rely solely on the Central Arizona Project but instead have a mix of water sources that include other rivers and groundwater.

"I don't see it as an overall net reduction of water for irrigation districts in Maricopa County, it will just be rebalancing of water that they're using," said Shane Leonard, general manager of the Roosevelt Water Conservation District in Maricopa County.

The cuts come despite a wet winter across much of the West, one of only five years that saw above-average precipitation in a 20-year drought, said Terry Fulp of the U.S. Bureau of Reclamation.

"We've got to stay diligent, we have got to stick to the plan," he said. "We're not out of the woods yet."

Tom Butine: Does southern Utah need the Lake Powell Pipeline?

By Tom Butine | Special to The Tribune • Published: August 18 Updated: August 18, 2019

<https://www.sltrib.com/opinion/commentary/2019/08/18/tom-butine-does-southern/>

The Lake Powell Pipeline (LPP) proposal arose from a belief that Utah has an unused share of the Colorado River and a fear of water shortages stifling Washington County's rapid population growth. Although many leaders across the state say southern Utah needs the LPP, this statement is not based on facts. Decisions about the LPP should be driven by a strategic plan, based on verified facts rather than beliefs and fears, answering the following questions in sequence:

- **Can the Colorado River support the LPP?** Answering "yes" assumes Utah is either entitled to more Colorado River water or that Utahns with senior water rights will share their water. These assumptions are unsupported by facts about river flows and Utah's use. Utah may already be using more than its share of the river. The river cannot support even its current uses. We had better not need water that doesn't exist.

- **The next question: Is the LPP affordable?** The basis for the estimated \$1.5 billion cost is undisclosed and may be significantly under-estimated. The state will determine its financing ability, but not affordability. LPP users would eventually pay for it through increased property taxes, connection fees and/or usage fees. There is no plan to understand the impact of these increases. Payment should be based primarily on usage fees, to encourage wise use. Utah is financially challenged to maintain even existing water infrastructure. We'd better not need water that isn't affordable.

- **If the prior questions are answered "yes", then we can ask: Is the LPP needed?** Washington County's projected 2065 population is 510,000 (triple the current population). If that really happens, the current non-agricultural water use of 300 gallons per person per day must drop to 180 for the local supply to support it. Studies indicate that comparable vibrant, growing, attractive Southwest communities use that amount now. With modest investments in high-yield, low-cost conservation and the trend to smaller yards and efficient homes, Washington County should easily get there by 2065. An honest evaluation of conservation costs and yields, and comparisons with other communities, is required. We should be good stewards of the water we have before wanting more.

- **Finally, assuming we get to this question, when could it make sense to build the LPP?** Answer: as late as possible. Construction costs may increase with time, but the largest cost of building the LPP, by far, is interest on the loan. Waiting would allow the larger population to

pay the debt quicker, incurring less interest (and operations/maintenance) costs. Conservation would prove itself, and answers to the prior questions will be clearer.

Responsible leaders would implement strategic planning for our water: engaging stakeholders in transparent processes, defining goals and the strategies to achieve them, finding unbiased answers to drive decision-making. Many of our leaders don't seem to support this approach. Instead, they claim that without the LPP, family members will be forced to move away, the landscape will be barren, and the economy will fail. They claim that the Colorado River is one of the safest water sources, that water is already being used wisely, and that more conservation would cost too much. These claims meet the definition of propaganda: "information that is not objective, used primarily to influence an audience, presenting facts selectively, using loaded language to produce an emotional rather than a rational response." This is not leadership.

Our water is a complex, expensive resource to manage, with severe consequences for mismanagement. Let's collectively engage in honest, transparent strategic planning for our water, basing our decisions on verified facts and data, rather than rushing into irresponsible risks. Responsible leadership would take this path.

Tom Butine *is an aerospace engineer/scientist with experience in technical program management, and the board president of Conserve Southwest Utah, a group of 2,000 Washington County citizens concerned about water and conservation of our natural resources.*
Contact: board@conserveswu.org.

First came the fire that nearly devoured two Utah towns. Now comes the threat of dangerous, deadly slides.

By Brian Maffly • Published: August 19 Updated: August 19, 2019

<https://www.sltrib.com/news/environment/2019/08/19/first-came-fire-that/>

Kirk Richards, a Utah artist known for his religious paintings, moved to a new hillside subdivision to draw inspiration from the mountains and forests out his back door.

After eight years in the Woodland Hills home, he and his family still find solace in those steep surroundings, but in the past year they have become a menace, threatening to release forces of nature that could obliterate neighborhoods in minutes.

First, the threat was fire; now, it's earth mixed with water. The steep canyons above Woodland Hills and the neighboring town of Elk Ridge were so badly burned in last summer's Bald Mountain Fire that they are primed to slide if doused with enough rain.

The Richards have gotten used to being evacuated.

"During the fires, we were out for 10 days," said Richards, who lives and paints in the home he shares with his wife and four kids, ages 10 to 18. "With the rainstorms that followed, we evacuated a second time. That was disruptive to our lives."

Officials with the two Utah County towns are scrambling to secure federal grants and acquire property to engineer solutions to the threat of debris flows, but that won't happen before this year's monsoon season, now in full swing.

"We will be relieved when a more permanent structure is put in place, for our safety, the beauty of the neighborhood and our ability to use the property and driveway," said Richards, whose home is protected with sandbags and concrete barricades. "We are in limbo until something like that is put in place."

An Aug. 8 thunderstorm dropped enough rain on the east side of the Loafer Mountain to bury parts of Birdseye under 4 feet of mud, but Woodland Hills and Elk Ridge got lucky, according to Brian McInerney, a hydrologist with the National Weather Service.

The slower pace of rain on the north side triggered only modest floodwaters in Loafer Canyon, where some homes were damaged, providing a mild taste of what could happen.

It's enough to keep Woodlands Hills Mayor Wendy Pray up at night.

Protect Your Dog From Harmful Algal Blooms

By Christine Osborne

<https://deq.utah.gov/communication/news/protect-your-dog-from-harmful-algal-blooms>

A hot summer day, a cool swim in a lake with your canine companion...what could be better? Unfortunately, as several dog owners learned last week, that perfect summer outing can turn deadly quickly if the lake or pond contains toxins from a harmful algal bloom. While there are no confirmed reports of dog fatalities in Utah this summer, dogs in Texas, Georgia, and North Carolina died recently after exposure to toxins in lakes and ponds.

Dogs are particularly susceptible to the effects of harmful algal blooms (HABs). Many pet owners are unaware of the dangers of harmful blooms or even how to spot one.

What Are Harmful Algal Blooms (HABs)?

HABs aren't actually caused by algae. They are actually caused by cyanobacteria, naturally occurring organisms that can photosynthesize like plants. Cyanobacteria are present in most waterbodies and are generally beneficial. Blooms occur when excess nutrients such as nitrogen and phosphorus enter waterways and cause their populations to explode.

What Do HABs Look Like?

Blooms can look like pea soup, spilled paint, or water that has a green or blue-green hue. They often form floating scums or mats that accumulate along shorelines. Many harmful blooms in Utah resemble grass clippings or small nodules floating in the water. Visit DEQ's [photo gallery](#) on its [HABs webpage](#) to find pictures of Utah blooms.

How Can You Tell if There Are Toxins?

You can't tell whether a waterbody contains toxins just by looking at it. Lab test results from water samples are the only way to know for sure if toxins are present and at what levels. Toxins are usually released when the cyanobacteria die off or are broken apart in a process known as lysing. Dogs can accidentally lyse these cells by chewing on algal mats or scum, which releases the toxins immediately into their systems. If you are unsure whether it's safe for your pet to be in or near the water, follow the old adage: when in doubt, keep out.

What Are the Signs of Exposure?

Cyanobacteria produce three kinds of toxins: liver toxins (hepatotoxins), nerve toxins (neurotoxins) and skin (dermal) toxins. The onset of symptoms can range from minutes to hours

after exposure. If you suspect exposure, seek immediate care from your veterinarian. These toxins are fast-acting, and there is no known cure. Even with proper veterinary care, most exposures are fatal. Prevention is the best way to protect your dog.

Signs of cyanotoxin poisoning include:

Repeated vomiting (usually green liquid)

Diarrhea or dark, bloody stool

Loss of appetite

Dark urine or reduced/ no urine output

Stumbling

Seizures, convulsions, and/or paralysis

Excessive salivation/drooling

Disorientation or inactivity

Difficulty breathing

How Can I Keep My Dog Safe?

Don't let dogs wade, drink the water or eat/walk in beach debris.

Keep your dog on a leash near shorelines.

If your dog goes in the water, remove him or her immediately.

Don't let them lick their fur or paws after getting out of the water.

Rinse and wash them thoroughly with clean water and use a towel or rag to remove algal debris.

Before you head out to your favorite lake or reservoir, visit the [DEQ HABs page](#) to see if your destination is under a [health advisory](#) for cyanobacteria. DEQ posts HABs lab results as soon as they are received, but conditions can change quickly on any waterbody. Be mindful of current conditions and avoid areas that appear to be experiencing a bloom. Since DEQ isn't able to sample every lake or pond in the state, it's important for you to use your judgment before letting your dog frolic in his or her favorite swimming hole.

The scientists at DEQ want you and your pet to have a fun, HAB-free summer. Use these tips and resources to keep you and your furry family members safe when recreating in Utah's waters.

Visit DEQ's website for more information on [how to protect your dog from harmful algal blooms](#). Obey all posted health advisories — they are issued when lab confirmation shows toxin

or cyanobacteria levels above health thresholds. If you observe a possible HAB, please notify the 24-hour DEQ Spill Line at 801-536-4123. If you believe your dog has been exposed to a HAB, please call the Utah Poison Control Center (UPCC) at 1-800-222-1222 even if you visit your veterinarian. UPCC keeps data on animal exposure, and this information helps DEQ and the Utah Department of Health monitor exposures and their locations.

Experts warn Utah dog owners about toxic algae blooms amid fatal cases in other states

by: Rosie Nguyen

Posted: Aug 20, 2019 / 03:52 AM GMT-0600 / Updated: Aug 20, 2019 / 03:55 AM GMT-0600

<https://www.abc4.com/news/local-news/experts-warn-utah-dog-owners-about-toxic-algae-blooms-amid-fatal-cases-in-other-states/>

ALT LAKE CITY (ABC4 News) – Nationally, toxic algae blooms have been responsible for at least six dog deaths in four other states. Although none have occurred in Utah so far this year, experts said dog owners still need to be aware of how to protect their pets from harmful cyanobacteria.

Deann Shepherd with the Humane Society of Utah explained that toxic algae are microscopic cyanobacteria that can produce poisonous toxins that are dangerous to people, but even more dangerous to dogs.

“Among animals, dogs are most at risk because of their preference for swimming, ingesting water, and licking their fur,” said Shepherd.

Dr. Kate Fickas with the Utah Department of Environment Quality (DEQ) said algae poisoning impacts dogs faster and more severely because they have smaller livers than humans. Symptoms can appear within minutes or hours.

“With liver toxins, you’re going to see gastrointestinal distress, lethargy, and quick symptoms of them just not feeling well,” she said. “With neuro symptoms, you might see convulsions, seizures, respiratory issues, and/or foaming at the mouth. It’s often too late to treat and you might see your dog pass within a number of hours.”

The Environmental Working Group said they’ve recorded fatal dog cyanobacteria poisoning cases in North Carolina, Texas, Vermont, and Minnesota so far this year.

Shepherd said there’s no cure for algae poisoning and exposure almost always leads to death in dogs.

“Drinking from a body of water where blue-green algae lurks or licking it off fur can kill a dog within 15 minutes of exposure,” she said.

According to Dr. Fickas, our state is on track for the number of algae bloom advisories this year. Last year, the Utah Department of Environmental Quality reported 24 algae bloom

advisories. As of Monday, there's been 11 advisories this year, but scientists believe the state may reach or even surpass last year's numbers by the end of September.

So how do you spot an algae bloom? Experts said it's best to know that it can come in a variety of appearances.

"It could look like pea soup or appear in a bright cyan green color. Sometimes, you may not even see surface scum. Another type might look like grass clippings, like someone spilled their lawn mower bag straight into the body of water. Other signs can be spilled paint and sometimes we see it in clumps," said Dr. Fickas.

However, scientists said you can't always tell whether a body of water contains toxins just by looking at it. Sometimes, lab test results are the only way to know for sure.

Dr. Fickas recommends always keeping your dogs leashed when approaching a body of water, until you can do a surface-level scan of the water.

"With dogs, you can't tell them to stay away from the water. If a dog wants to get in the water, he or she is going to jump in. Dogs are also prone to chomping on these algae blooms. They might look tasty or licking their fur," she said. "If you spot an algae bloom, give us a call at the Division of Water Quality and we'll send someone out there right away to so we can protect pets and their owners."

Other recommendations are:

- Don't let your dogs wade, drink the water or eat/walk in beach debris
- If your dog goes in water suspected to have toxins, remove him or her immediately
- Don't let them lick their fur or paws after getting out of contaminated water
- Rinse and wash them thoroughly with clean water and use a towel or rag to remove debris

Utah DEQ is currently investigating suspected cases of dog poisoning caused by algae bloom. But so far, none have been confirmed.

Before you head out to your favorite lake or reservoir, check the [Utah DEQ's Harmful Algae Bloom page](#) to see if your destination is under a health advisory for Cyanobacteria.

Officials: Don't swim, water ski in Mantua Reservoir during algae bloom

By Steve Kent staff writer

Aug 20, 2019

https://www.hjnews.com/news/local/officials-don-t-swim-water-ski-in-mantua-reservoir-during/article_8ead4814-1634-5fc7-a5d3-91cbf7e0951c.html

After recent samples indicated a harmful algae bloom, the Department of Environmental Quality is advising people not to swim, water ski in Mantua Reservoir and to keep pets out.

The reservoir isn't closed and fishing is still allowed, but officials are awaiting the results of more tests before deciding on further action. In the meantime, people are being warned:

- Don't swim or water ski.
- Don't drink the water.
- Keep pets and livestock away.
- Clean fish well and discard guts.
- Avoid areas of scum when boating.

Exposure, especially by ingestion, to water from a lake or reservoir undergoing an algae bloom can be harmful because certain types of algae — including cyanobacteria, which was found in high concentrations in the recent samples from Mantua — produce toxins.

“The toxin levels are just barely beginning, but as those cells die, the toxins theoretically will go higher unless the temperature changes and the weather changes,” said Bear River Health Department Environmental Health Director Grant Koford.

Cyanobacteria, also known as blue-green algae, can cause bright green blooms and produce cyanotoxins, which are harmful to the liver and nervous system. Dogs are particularly vulnerable to cyanotoxins, in large part because they're sensitive to the toxins and in part because it can be hard to keep them from swimming in or drinking the contaminated water or even eating algal mats.

“It's user-beware, and we certainly don't want anybody to have ill effects from the algal bloom,” Koford said.

If you believe a person or animal has been exposed to a harmful algal bloom, the DEQ recommends calling the Utah Poison Control Center at (800)222-1222.

Algae multiplies rapidly when a body of water is high in nutrients and when high sunlight accelerates growth. Excess nutrients like nitrogen and phosphorus get into bodies of water when runoff contains fertilizer from lawns and fields.

Even blooms that aren't toxic to humans or pets can disrupt aquatic ecosystems by taking up oxygen and blocking sunlight.

Despite people hearing more and more about algae blooms, Koford said he isn't convinced that they're happening more frequently recently.

"We have better tests now, but I'm not convinced that they haven't been happening all along, because there's been phosphorous and sunlight forever," Koford said. "Our capability of detecting them is much greater now."

The DEQ will continue to monitor the reservoir and may even close it if levels continue to increase.

For more info and updates on the reservoir, visit deq.utah.gov/health-advisory-panel/mantua-reservoir.

Blue-green algae, deadly to dogs, found in nearly a dozen Utah lakes

by Ginna Roe

Tuesday, August 20th 2019

<https://kutv.com/news/local/blue-green-algae-deadly-to-dogs-found-in-nearly-a-dozen-utah-lakes>

(KUTV) — The toxic blue-green algae that’s responsible for killing several dogs across the country is here in Utah.

The Utah Department of Environmental Quality said they’ve spotted it in nearly a dozen lakes around the state. The blooms are only continuing to grow as we approach September.

Kelsee York is a water monitoring technician with the DEQ. She travels to 60 different lakes each month to test the water for harmful blooms.

Mantua Reservoir in Box Elder County is one of the lakes they’re concerned about.

“We visually have assessed that there is a bloom here,” York said.

“The fact that this is a lake wide bloom with this much bloom material is why we have such a high concern with Mantua right now,” she said.

When the blue-green algae begins to decompose, it releases toxins that are especially harmful to dogs.

“Pets in particular are more susceptible to these liver or neurotoxins and they’re also more susceptible to be fully submerged in the water with the harmful algal bloom,” Dr. Kate Fickas, an environmental scientist with the DEQ, said.

Willem Becker, a veterinarian at Granite Veterinary Specialists said sickness from blue-green is not uncommon in dogs.

“You can have a dog that can be sick fairly quickly. Onset of signs can happen within 15 to 30 minutes,” he said.

The toxins impact the dog, either by poisoning the liver or causing neurological damage.

“If your dog is vomiting, having diarrhea, black, tarry-stools, you should seek veterinary attention,” he said.

The DEQ said pet owners need to be on the lookout for cyan green colored water. Often water with harmful algae blooms with have grass cuttings it, look like cottage cheese or have a neon glow.

“It’s everywhere. It’s everywhere in the water body,” York said about Mantua Reservoir. She knows the harmful algae is present, now she’ll take her water samples to a lab to determine the amount of toxins in the water.

“Wash off your dog. Try to not let them drink this,” she said.

The DEQ’s list of bodies of water that currently contain harmful algae include:

1. Blackridge Reservoir
2. Calder Reservoir
3. Jordan Narrows
4. Manning Meadow Reservoir
5. Mantua Reservoir
6. Matt Warner Reservoir
7. Payson Lakes
8. Utah Lake
9. Upper Box Creek Reservoir
10. Wheeler Farm
11. Yuba Lake

You can keep up to date with [the list on their website.](#)

New US Geo Survey Shows Less Groundwater In Moab Than Expected

By MOLLY MARCELLO • AUG 20, 2019

<https://www.upr.org/post/new-us-geo-survey-shows-less-groundwater-moab-expected>

The U.S. Geological Survey recently released a long-anticipated report showing 30 to 40 percent less groundwater in Moab than previously estimated. Scientists spent years collecting data from wells, springs and streams to better understand groundwater resources throughout the Spanish Valley watershed.

"So there hasn't been a comprehensive water budget analysis of the Spanish Valley area since the early 1970s," said Melissa Masbruch, co-author of the report and hydrologist with the USGS at the Utah Water Science Center. "And so we wanted to revise any of those groundwater budget estimates from that previous report and figure out the sources of recharge to the two main aquifers in the study area."

The USGS estimates the total amount of groundwater entering and leaving Moab's aquifer system at 13 to 15,000 acre-feet per year, rather than 22,000 acre-feet per year as estimated in 1971.

"We took discharge measurements from streams, springs and wells in the study area," Masbruch said. "We took water quality estimates, including what we call environmental tracers which are constituents in the water that we can use to track sources and flow paths of the groundwater. We also took water levels – it's another tool that we can use to look at movement of the groundwater through the through the aquifers.

In a press release, the USGS stated that these findings could inform local and state water managers as they evaluate how much additional development can be sustained in the Moab area.

Lake Powell pipeline costs can be covered, audit says, but critic wonders if this pricey ‘boondoggle’ is needed

By Brian Maffly

• Published: August 20

Updated: August 26, 2019

<https://www.sltrib.com/news/environment/2019/08/20/audit-says-washington/>

A new legislative audit has concluded Washington County water bosses will likely be able to generate sufficient revenue to pay the massive costs of building and operating the proposed Lake Powell pipeline, but only through large fee, rate and tax increases and if the county triples its population during the next 50 years.

While offering an optimistic picture, the audit outlined several areas of uncertainty that could have a “significant impact” on whether the county covers all the project’s actual costs in a timely way. The document pointed to many holes in state law that raise questions about when and if the county would have to repay the state hundreds of millions of dollars in related costs beyond the estimated \$1.4 billion construction tab, which could soar to \$2.4 billion by 2025.

The Washington County Water Conservancy District’s “ability to repay the state, especially in the first 15 years, will largely depend on how the state structures the repayment terms and conditions,” states the audit released Tuesday in the Utah Legislature’s audit subcommittee. “In addition, the final costs of the [pipeline], costs of other water projects the district has planned, and [the district’s] ability to increase rates will affect its ability to repay the state.”

The 140-mile line would divert 86,000 acre-feet of the Colorado River across southern Utah each year to Sand Hollow Reservoir through a 69-inch pipe to feed the mushrooming St. George metro area. About 4,000 acre-feet, or 5% of the flow, would be offloaded in Kane County. The Washington district is developing 21 other water projects, representing another \$700 million in potential obligations.

The audit did not study whether Washington County actually needs the water, nor did it judge the reliability of the state’s cost estimates. Pipeline critics contend that proponents have gotten both wrong, arguing Washington County can meet its future water needs through conservation and by tapping water currently assigned to agriculture.

They also contend the pipeline's bills could far exceed the state's estimate. A recent analysis conducted by the Utah Rivers Council looked at Colorado Springs' construction of a smaller pipeline in 2016.

Extrapolating that 50-mile line's \$12.5 million-per-mile cost, the Lake Powell pipeline would cost \$1.75 billion. But the Utah pipe would move more water through a bigger pipe over a greater elevation gain and feature several hydropower components, driving up the project's tab to \$3.2 billion, not including financing costs, the study concludes.

"This \$3.2 billion price tag is a bombshell that kills any claim this project can be repaid by local residents," the council's executive director, Zach Frankel, warned in an Aug. 14 news release.

"The only way the district can repay it is if you extend the life of the loan to 85 years, which is ludicrous," Frankel added in an interview. "Most water projects are financed to 30 years. Fifty years is generous; 85 years is absurd because you are paying so much interest."

District officials, however, contend Frankel "grossly overinflated" the Powell pipeline costs by using inappropriate comparisons with the Colorado Springs pipeline. The most serious error arose from the assertion that the Colorado pipe cost \$12.5 million per mile, "more than double the actual cost of the pipe components," according to John Fredell, who oversaw the Colorado construction and now manages the Powell project.

The state already has spent \$38 million on engineering, design, permitting and environmental reviews. The project is undergoing reviews by the Federal Energy Regulatory Commission and other agencies. Construction is expected to begin between 2023 and 2028 and would take five years to complete, according to audit supervisor August Lehman.

Population gains are central to the audit's conclusion that the pipeline could cover its bills, Lehman told the audit subcommittee Tuesday. Auditors cite Kem C. Gardner Policy Institute projections that Washington County's population will jump from 173,000 to 509,000 by 2065.

Auditors anticipate per-capita use would drop between 15% and 25% in response to planned rate hikes. Critics counter that demand could drop by far more than that, judging from what has happened elsewhere. St. George water rates are 30% to 85% less than those in other desert cities, such as Tucson, Ariz., which has seen per-capita water use drop dramatically in the face of rate hikes.

"The auditor ignores the market," Frankel said. "There is no way they could increase [wholesale water] rates 357% and see a drop in use of only 25%. If water use drops through the floor, then so do the revenues used to repay Utah taxpayers."

He contends that if Washington County residents reduce water to the level of Tucson residents, the pipeline would not be needed.

“The pipeline is an unnecessary boondoggle,” Frankel said, “that will tragically burden Washington County residents with pain and anguish.”

The district intends to raise the money for the project through big hikes in fees imposed on new residential construction, along with increases in property taxes and water rates.

The water district has spelled out a plan to boost impact fees by \$1,000 annually from \$7,417 through 2026, reaching \$15,448; increase wholesale water rates \$0.10 annually from the 2016 rate of \$0.84 to \$3.84 per 1,000 gallons; and up the property tax rate of 0.0648% to 0.1% by 2025 from a tax base currently valued at \$19 billion.

Already saddled with some of the state’s highest impact fees, second only to Park City’s, the Washington water district is designing fee hikes to cover three-fourths of the project’s costs.

“These fees are vulnerable to recessions,” Lehman cautioned, while the planned tax hike would translate to \$50 a year on a typical home.

The audit’s biggest question mark concerns \$500 million in bond costs. It is unclear from state law if the water districts in Washington and Kane counties must cover those, Lehman said. Nor is it clear whether they can defer some construction costs, enabling them a longer repayment window.

Auditors recommended the Legislature enact measures to clarify water districts’ financial obligations. Otherwise it would be left up to the Utah Board of Water Resources to resolve these questions for the Powell project.

In its formal response to the audit, the Washington County district said it was already setting aside money for a \$200 million down payment on the project and is creating a fourth revenue stream in the form of a monthly surcharge on each water connection. This stream would offset future revenue deficiencies.

“As the LPP project continues to progress, additional efforts will be made to reduce cost, such as value engineering the final design and breaking the project into multiple components to allow local contractors the opportunity to competitively bid services,” wrote Ron Thompson, the district’s general manager. “We are committed to managing and reducing expenses to minimize borrowing costs and potential financial impacts to taxpayers.”

He also argued the project’s bond costs should not be included in the districts’ repayment obligations — as has been the case with other state-supported water projects in Utah.

“The state has a tradition of offering loans at a subsidized or low-interest rate,” Thompson wrote. “Given these well-established traditions, it’s unclear why the LPP would be subject to different conditions that would complicate funding for a project that would benefit the state.”

One subcommittee member pressed Thompson on why residents of northern Utah should be on the hook for the project.

“Water raises everything and everyone uses it,” Thompson replied. “In the state’s model, it’s an investment, and they get their money back. They get the jobs it creates and the revenue it generates.”

The district asserts that the pipeline will support sales and income tax revenues in excess of \$20 billion between 2026 and 2060, supporting 102,000 jobs, 106,000 businesses and \$9 billion in personal income.

What's in our water? Report warns of growing 'invisible' crisis of pollution

Climate emergency and population growth blamed for deteriorating water quality, with 'cocktail of chemicals' changing as countries become richer

Peter Beaumont

Tue 20 Aug 2019 16.00 EDT Last modified on Wed 28 Aug 2019 06.08 EDT

<https://www.theguardian.com/global-development/2019/aug/20/whats-in-our-water-report-warns-of-growing-invisible-crisis-of-pollution>

The planet is facing a mounting and “invisible” water pollution crisis, according to a hard-hitting World Bank report, which claims the issue is responsible for a one-third reduction in potential economic growth in the most heavily affected areas.

The study, which assembled the world’s largest database of water pollution, assesses how a combination of bacteria, sewage, chemicals and plastics suck oxygen from water supplies and transform water into poison for people and ecosystems.

While much international attention has been focused on the question of water quantity, not least as the planet warms, a secondary impact of the climate emergency has been its effect on water quality.

Because of the huge number of different pollutants entering the environment, researchers focused on the key measures for water quality laid down in the UN’s sustainable development goals, in particular nutrient loads, salt balances, and the overall environmental health.

The authors of the report employed a variety of technologies to study the problem, including satellite imaging of major algae blooms and artificial intelligence to assess the data they were collecting.

In particular researchers looked at a key measure called biological oxygen demand (BOD) to assess how much organic pollution is in water, using it as an indicator of overall water quality.

The researchers noted that when BOD crosses a certain threshold, GDP growth in areas affected by the problem drops by as much as a third because of the impact on health, agriculture and ecosystems.

Although issues with water pollution affect both rich and poor countries, the researchers suggest that developing countries have the least resources to deal with the issue.

A key contributor to poor water quality is nitrogen, which, applied as fertiliser in agriculture, eventually enters rivers, lakes and oceans where it transforms into nitrates.

Early exposure of children to nitrates affects their growth and brain development, impacting their health and adult earning potential.

The run-off and release into water from every additional kilogram of nitrogen fertiliser per hectare can increase the level of childhood stunting by as much as 19% percent and reduce future adult earnings by as much as 2%, compared with those who are not exposed.

Researchers also looked at the growing issue of salinity – salt contamination – blamed on more intense droughts, storm surges and rising water extraction. They estimated that at current levels its impact on agriculture means that the food lost because of saline water across the world would feed 170 million people.

The report notes that even wealthy countries still have serious issues with water pollution.

“Even high-income economies with well-resourced institutions find themselves unable to cope with the challenges,” the authors report, citing the notorious contamination of the drinking water supply in Flint in the US.

“Four decades after the passing of the Clean Water Act and the Safe Drinking Water Act, over 100,000 residents in Flint were exposed to lead in their drinking water.

“It required a national movement and three years for water to return to acceptable safety levels, but not before potentially thousands of children had been exposed to the irreversible harm caused by lead poisoning,” said the report.

“In Europe, countries such as France, Germany and Greece have been fined by the European Court of Justice for violating the regulatory limits for nitrates. Almost a third of monitoring stations in Germany present levels of nitrates exceeding the European Union’s limits.”

“When it comes to what’s the cause of this problem, there are two forces,” Richard Damania, a World Bank senior economic advisor and a lead author of the report, told the Guardian.

“The first is climate change, which affects both water quantity and quality. The second is population growth and production. The debate has always focused on the issue of quantity, but it becomes obvious when you look below the surface that there are thousands of pollutants.

“We find that water pollution is a problem that affects both rich and poor countries, however the cocktail of chemicals changes as countries develop. In poor countries it is faecal bacteria and as GDP increases then nitrogen [from fertilisers] becomes the issue.”

“Clean water is a key factor for economic growth,” added the World Bank Group president, David Malpass.

“Deteriorating water quality is stalling economic growth, worsening health conditions, reducing food production, and exacerbating poverty in many countries.

“Their governments must take urgent actions to help tackle water pollution so that countries can grow faster in equitable and environmentally sustainable ways.”

Routine testing confirms algae bloom did not cause massive fish die-off at Pineview

By MEGAN OLSEN Standard-Examiner

Aug 22, 2019

https://www.standard.net/news/environment/routine-testing-confirms-algae-bloom-did-not-cause-massive-fish/article_399b2759-df67-5c3a-bd5c-3e5f82ca9aa3.html

WEBER COUNTY — At the beginning of August, visitors to Pineview noticed dead fish littering the shores and floating in the water.

Staff from the Utah Division of Wildlife Resources examined the scene and determined that thousands of young black crappie had died.

A few days after the die-off began, Chris Penne, aquatic biologist with DWR, said that multiple factors were at play, and the fish likely did not die as a result of contamination in the water.

A combination of high temperatures, receding water levels and a large population of fish all likely played a role in the die-off, Penne said.

“All things the same, if we didn’t have so many fish right now, I don’t think you’d be seeing this,” Penne said. “There’s no denying that temperature is part of it, but we’ve had these temperatures in other years and haven’t had this issue, so when you get this many fish, when they get a lot more crowded, that’s where you start getting problems.”

Algae blooms had not been detected prior to the die-off, Penne said.

Routine water testing hasn’t detected any algae blooms since then, and testing for E. coli in the reservoir has indicated that it’s within acceptable limits, according to Michela Harris, environmental health division director with the Weber-Morgan Health Department.

The Weber-Morgan Health Department does not conduct routine testing for contaminants other than algae blooms and E. coli, according to Lori Buttars, public information officer with the department.

“The Ogden City culinary water system performs routine cyanobacteria (blue-green algae) monitoring of the water supply,” Harris said in a message. “They did not detect any algae. They continue to work with (Utah) Division of Drinking Water to ensure that the drinking water supply is safe for consumption at all times.”

Health department staff test Pineview for E. coli contamination monthly, Harris said. If any signs of an algae bloom are present, they take samples for analysis.

“As with all recreational water bodies, Pineview is untreated water and not for consumption,” Harris said. “If an algae bloom is detected, avoid areas of scum, use caution and keep children and pets out of the water.

“We continue to monitor the lake closely and encourage the public to contact our office with any water quality concerns.”

USGS: Moab watershed 30-40% smaller than previously reported

By Carter Pape

Aug. 16, 2019

<https://moabtimes.com/2019/08/16/usgs-moab-watershed-30-40-smaller-than-previously-reported/>

A long-awaited study from the U.S. Geological Survey shows that the availability of groundwater in the Moab valley is significantly less than a study from 1971—the most recent study investigating the size of the area’s watershed.

A press release accompanying the report’s release said that the new estimates for the amount of water entering and leaving the Moab valley watershed (excluding roughly 1,000 acre-feet to and from the Grandstaff and Ice Box Canyons watershed areas) is 13,000 to 15,000 acre-feet per year.

The previous estimate for that same area was 22,000 acre-feet per year.

According to the press release, the new estimate is based on the outflow of groundwater from local aquifers, which “provides a more robust assessment of how much water is in an aquifer system than recharge measurements.”

“These findings will be useful to local and state water managers in evaluating how much additional development can be sustained in the Moab area with the groundwater available,” said lead author and Geological Survey scientist Melissa Masbruch. “This information can also help decision-makers make informed choices as they develop a future groundwater management plan.”

The Times-Independent will have in-depth reporting on the new study in its Thursday edition, Aug. 22, including reaction from local, state and federal officials.

How Utah pays for water use and what we can learn

By [Amy Joi O'Donoghue@Amyjoi16](mailto:AmyJoiO'Donoghue@Amyjoi16) Aug 27, 2019, 12:54pm MDT

<https://www.deseret.com/utah/2019/8/27/20835225/utah-paying-for-water-supply-use>

SALT LAKE CITY — Grappling with the prospect of a continued population explosion and cycles of prolonged drought, Utah's water masters are up to no easy task in the future when it comes to divvying out the precious resource.

Against that backdrop, the [Utah Foundation](#) released the report “High and Dry” on Tuesday, examining water supply, management and how water is paid for in the state.

The report is the first in the “Paying for Water” series by the foundation, which took a deep dive into the complexities of water management spanning 308 public water suppliers across Utah.

Data compiled in the report builds on the growing and robust debate over the extent to which property tax revenues play in the development, funding and delivery of water.

“Water providers nationally take varying approaches to paying their bills,” Utah Foundation President Peter Reichard said. “But the real question is not whether Utah water providers are unusual, but rather whether the approaches they take are best suited to the needs of our state.”

The report notes most water providers, particularly cities, do not use property taxes to support water service operations. However, it said, some retail water providers purchase water from a wholesaler that does collect property taxes for operational purposes.

“This has the effect of lowering the water rates for retail providers' customers, even though the retailer itself does not collect property taxes,” the report said.

As a result of that relationship between wholesale and retail water providers, the report said more than 90% of Utahns likely pay lower water rates than they would otherwise because they live within a jurisdiction of a water provider — either wholesaler or retailer — that relies on property taxes.

Only 20% of Utahns live in the jurisdiction of just one water provider, adding nuances to a system in which historically, property taxes, impact fees and water rates all play strong roles in how residents pay for water.

The property tax role in water prices, however, has led to the criticism by groups like the Utah Rivers Council that argue it is a subsidy that keeps rates artificially low.

The advocacy group has long maintained that if residents were to pay the “true cost” of water, consumption would go down and negate building large, expensive water delivery projects.

Utah Foundation did note an analysis released in 2016 that looked at water use data for eight Western metropolitan areas, including most of Salt Lake County. The probe found that Salt Lake County had the third-highest use per capita among those population centers, behind the Salton Sea Basin in Southern California and the Las Vegas region.

Of the more than 5 million acre-feet Utahns divert for water use, less than 3 million acre-feet of water is consumed, meaning a significant portion is reused by being treated and put back in the system.

Just 20% of the total diverted water is distributed through public utility systems, and of this, residential users consume more than two-thirds, using most it for outdoor purposes.

Criticism of management of Utah’s water resources, stoked by a series of legislative audits, led to more stringent reporting requirements by water providers and mandatory secondary water metering on new construction after April 2020.

Some cities and providers have already moved to voluntary metering, and the Utah Foundation predicts as density increases along the Wasatch Front, there will be less surface area requiring outdoor water and overall household consumption will decrease.

The foundation notes that a survey by the U.S. Government Accountability Office asked state water managers whether they expected local, regional or statewide water shortages within the next 10 years if there are average water conditions.

The report noted that Utah was one of five states — and the only state in the West — to report it expected no shortages within 10 years in both the 2003 and 2013 surveys.

“There may not be a one-size-fits-all approach in Utah,” the report said. “Utah’s 308 water providers vary widely in their tiered rate structures, size and funding mechanisms. Per-capita water use also varies widely, depending on climate, geography and community characteristics.”

On the same day the foundation released its report, the Utah Division of Water Resources announced it is opening a 30-day comment period for a first-ever region-by-region conservation goal for municipal and industrial water use.

The draft plan, which is open to comment through Sept. 25, is based on Utah’s diverse geography and specific populations in nine regions that include the Bear River, Central Utah, the Wasatch Front and the eastern Utah region.

To formulate the new water conservation goals, the Division of Water Resources gathered public input, conducted a survey and hosted eight open houses across the state. A team then worked with a third-party consultant to provide input on the goals.

The division posted the [report](#) on its website and an opportunity to provide comment.

Lagoon chemical spill kills fish in creek, but no harm to humans

POSTED 5:25 PM, AUGUST 27, 2019, BY SPENCER BURT, *UPDATED AT 08:09AM, AUGUST 28, 2019*

<https://fox13now.com/2019/08/27/lagoon-chemical-spill-kills-fish-in-creek-but-no-harm-to-humans/>

FARMINGTON, Utah — A chemical used to disinfect drinking water at Lagoon Amusement Park leaked into a nearby creek during the weekend, killing more than 100 fish.

A leak in the line between a pump and a tank of sodium hypochlorite — a liquid bleach — occurred sometime before employees checked the system Sunday morning, according to Rachele Blackham, the environmental health director with the Davis County Health Department.

The leak was not reported until Sunday at about 9 p.m., Blackham told Fox 13.

Officials have not determined how much spilled, but the tank holds up to 1,000 gallons and only a little was left at the bottom. Blackham said the leak was most likely caused by a broken tube connecting the tank and pump.

A portion of the chemical went into a sanitary sewer and some reached a storm drain that leads to Farmington Creek, Blackham said. The Division of Wildlife Resources said it counted more than 100 bluegill and 11 rainbow trout, among others.

Sodium hypochlorite can irritate eyes and can cause chemical skin burns, Blackham said, but no humans were affected or are at risk because the area it leaked into is not publicly accessible. The substance also breaks down with water, heat and sunlight.

The health department does not anticipate any further harm caused by the chemical spill, and they don't believe it reached Farmington Bay.

Following wildfires, Utah County to receive \$10.6 million in watershed restoration funding

By [Kim Bojórquez @kimbojorque](#) Aug 28, 2019, 5:34pm MDT

<https://www.deseret.com/utah/2019/8/28/20835227/wildfires-utah-county-pole-creek-bald-mountain-fire-restoration-funding>

PAYSON — As large wildfires in the West have intensified in recent years, figuring out how to stabilize landscapes after the fire is out is becoming a bigger focus, according to James E. Hubbard, undersecretary for Natural Resources and Environment with the U.S. Department of Agriculture.

“It demands more attention than we were giving it 10 years ago,” he said.

Nearly a year after two wildfires — the Pole Creek Fire and the Bald Mountain Fire — burned more than 120,000 acres in Utah County and caused 6,000 people in the area to evacuate, Rep. John Curtis, R-Utah, announced \$10.6 million had been approved to restore the area’s watersheds on Tuesday at the Payson City Council Chambers.

The 2019 Supplemental Appropriations for Disaster Relief Act will provide nearly \$9.6 million in the Emergency Watershed Protection Program. The USDA Natural Resources Conservation Service will add an additional \$1 million, under the Watershed Protection and Flood Prevention Program, to fund technical assistance to “develop a comprehensive watershed plan.”

“That’s been approved and we can start on the work that all of you have been waiting to jump into,” Curtis told the group, adding that he was grateful to those who worked hard on the funding request.

During a roundtable discussion after the funding announcement, Curtis, Hubbard and representatives of other state agencies shared their insights with city officials from the southern end of the county, which was largely affected by the wildfires.

Earlier in the day, officials toured to the area to observe the fire and watershed damage in the area.

Bronson Smart, USDA Natural Resources Conservation Service program manager, said the tour stopped by Pole Canyon, as well as cities like Payson and Woodland Hills, where there have been debris flows, sandbags on the road and burn scars.

Brian Cottam, director of the Division of Forestry, Fire and State Lands for the Utah Department of Natural Resources, said bottlenecks to restore and repair damage caused by the fires have come from a lack of funding, and the delays have led to frustration.

“This will make a huge difference,” he said, explaining that the recently approved funds will help with reseeded, soil stabilization and cleanup work.

“We’re sad we had to wait a year to get there, but we are here now,” Smart said.

In July, officials from Utah’s Watershed Restoration Initiative, Bureau of Land Management, the Utah Division of Wildlife and the U.S. Forest Service returned to the areas affected by the wildfires to assess the short- and long-term effects of the fires.

Previously, Chris Crockett, regional aquatic program manager with the Division of Wildlife Resources, told the Deseret News that local watersheds like the Nebo Creek and the Diamond Fork River “suffered greatly” as a result of the fires.

“Utah, in terms of actually getting the work done, is ahead of the game,” Hubbard said.

He predicts large wildfires in the west will continue to occur as the risk of fires gets stretched out over longer seasons.

“Post-fire, these days with larger fires are more of a challenge than they used to be,” he said. “The climate has changed enough that we’ve noticed. It doesn’t take much of a decrease in humidity and increase in temperature to make a difference in fire behavior.”

For Hubbard, shared stewardship is vital in dealing with wildfires as “there’s more communities out there than we can protect.” He called Utah a “culture that wants to make a difference.”

“And that’s where we want to invest — where people want to make a difference,” he said.

He said the U.S. Department of Agriculture has ideas about how to provide preventative measures to communities, but not without first comparing those ideas with state and local officials.

After the wildfires occurred, Chad Hudson, Uinta-Wasatch-Cache deputy forest supervisor, said the organization took away three lessons: doing a better job informing the public and local governments of their fire repression strategies, interacting with state and local government earlier and more often, and incorporating more science into their process.

During the right time and the right place, fires can have a positive impact on the forest, according to Hudson.

“These particular two fires ... all the signs indicated it was at the right place and the right time,” Hudson said.

For Brian C. Steed, executive director of the Utah Department of Natural Resources, catastrophic wildfires in the West have prompted a “national awakening” to pursue methods of preventative measures.

However, preventive measures can be costly, and he said it’s important for federal, state and local officials to “identify the places that are best suited for those treatments.”

“We live in the forest, fire does good things, really provides positive things. We just can’t have one in our yard,” said Woodland Hills Mayor Wendy Pray.

Prior to becoming mayor, Elk Ridge Mayor Ty Ellis told the group he used to enjoy thunderstorms. Now, he constantly worries about possible flooding when thunderstorms occur in his city.

Smart said the Spanish Fork watershed, which was largely affected by the wildfires, is beginning to heal but will still be at risk for flooding for the next two to four years.

“It’s exciting to have this funding announcement today, to be able to announce that we’ll be able to provide some financial assistance to the local governments,” he said.

Smart said the emergency funding will go to the most “critical areas,” like debris removal, stream bank protection and other measures to prevent flood flows from happening.

“It’s preventative,” he said. “And it’s so much cheaper to do the preventative work than it is to clean up after a disaster.”

Utah sets new goals to cut water use, but critics say it goes too easy on Washington County

By Brian Maffly · Published: August 29 Updated: August 29, 2019

<https://www.sltrib.com/news/environment/2019/08/29/utah-sets-new-goals-cut/>

Utah's water conservation goals got a big makeover this week with the release of a revised plan for reducing municipal water use, identifying different targets for different parts of the state.

Critics say [the plan, out for public comment](#) through Sept. 25 before final adoption by the Utah Division of Water Resources, goes too easy on the surging St. George metro area, where daily per-capita water use exceeds 300 gallons — a high number some officials say is deceiving.

The plan looks for a 16% reduction averaged across the state by 2030 and up to 20% in much of Utah.

“A regional approach allows the goals to be tailored for nine different regions around the state and takes into account climate, elevation, and each region's characteristics and needs,” said Division of Water Resources Deputy Director Todd Adams. “Given Utah's diverse geography, establishing region-specific goals makes sense.”

The water-use-reduction goal is lower for Kane and Washington counties, which plan to build, with assistance from Utah taxpayers, a \$1.4 billion [pipeline from Lake Powell](#) to augment their supplies. The division proposes those counties cut per-capita use by 14%, to 262 gallons, an amount that is far higher than many Southwestern cities currently use, critics say.

That softer target reflects Washington County's transient population, as well as its severe aridity, which increases outdoor watering needs, according to Rachel Shilton, the division's section chief over river basin planning.

“They have a lot of tourists, and they aren't just visitors in hotels. They are part-time residents in houses, and those people water their lawns throughout the summertime when they're not there,” Shilton said. “St. George doesn't get to count that population in their gallons-per-capita-per-day calculation.”

Utah, the [nation's biggest per capita water guzzler](#), initially established targets for reduced nonagricultural use of water in 2000, when officials set a goal of 25% reduction by 2025. The growing state is on track to meet that goal, but water officials have concluded that reducing per-capita use will not prevent the state from running out of water — without help from large-scale water development.

Zach Frankel, executive director of the Utah Rivers Council, called the plan a “shell game” to help justify big river-disrupting water projects.

“A 14% reduction sounds like a lot, but if you look out to 2065, the goal is a 22% reduction,” Frankel said. “If you do the math in terms of time frame, it’s less than half a percent a year. This is junk.”

Frankel and others believe that the proposed 140-mile Lake Powell pipeline, which would divert 86,000 acre-feet of water, would not be needed if residents aligned their water use with that of their neighbors in southern Nevada.

Homeowners near ‘Gun Range Fire’ scar now may be at risk for flooding

POSTED 5:16 PM, SEPTEMBER 2, 2019, BY HAILEY HIGGINS

BOUNTIFUL, Utah — The last firefighters left the "Gun Range Fire" in Bountiful Monday morning, but officials say homeowners now face risks of another natural disaster.

Firefighters from Lake Tahoe, California were among the last to close up the command center at Tolman Park. The Type One firefighters are considered the best in the country and came to fight the flames.

Skip and Sue Summers’ home, however, was saved by Bountiful’s very own.

“We could never repay them for what they’ve done,” Sue said.

Flames 50 feet high roared toward their home off Northridge Drive Friday morning. The Summers said firefighters were originally dispatched to the “B” on the side of the mountain.

“He looked down our street and [saw] the flames, and they [came] here and hurried and hooked onto the fire hydrants,” Skip said.

Written outside in bold letters is a thank you note for Engine 81, who kept watch all night.

In all, three neighbors lost homes while others received extensive damage.

But danger remains despite the full containment.

State floodplain manager Kathy Holder said every home near the burn scar is at risk of flash flooding for the next ten years.

"The vegetation gets burned off so it doesn’t help to absorb water as well. The earth becomes more hardened,” Holder said.

Utah’s Division of Emergency Management encourages homeowners to sign up with FEMA’s National Flood Insurance Program. That way, they’re not left holding the bag after the next heavy rainstorm.

“It is such a risk, and there is nobody else that is going to take care of them. They have to take care of themselves,” Holder said.

This week, the Division of Emergency Management will send people door to door to evaluate the flood risk.

By purchasing flood insurance within the next 60 days, a 30-day waiting period will be waived if a claim is filed.

Ogden canyon closures, construction planned for September water project

By Graham Dudley, KSL.com | Posted - Sep 2nd, 2019 @ 7:34pm

<https://www.ksl.com/article/46629261/ogden-canyon-closures-construction-planned-for-september-water-project>

OGDEN — Drivers can expect closures, lane restrictions and delays in Ogden Canyon in September as the city embarks on a project to install culinary water vaults along the highway.

Crews are currently setting up construction equipment in the canyon and will begin the project after Labor Day. The delays will be primarily limited to weekend and overnight travel.

On Sept. 3, according to a city flier, crews will restrict SR-39 to one lane from 7 p.m. to noon the following day in front of the Valhalla, Wildwood and Idlewild communities. They will do so again on Sept. 5.

There will be a complete road closure between the Peery Camp area and The Cobbles from Saturday, Sept. 7 at 10 p.m. to Monday, Sept. 9 at 6 a.m. “Access to the Cobbles will be extremely limited during this time,” the city flier says. “Local residents and businesses across and between The Cobbles and Pine View Dam will need to access SR-39 from above (east) at Pine View Dam.”

“Anybody that wants to get to Ogden coming down the canyon will need to use a different route (during the closure),” said Andee DeVore with the city’s public information team. “But people wanting to get to the canyon, up until about The Cobbles community, they’ll still be able to do that.”

The construction will also necessitate a handful of water shutoffs in the canyon, which residents will be informed of in advance. DeVore said the water vault project will allow the city to start metering and tracking the use of culinary water in the canyon.

Additionally, Ogden City announced this week that a portion of the Wheeler Creek Trail will be closed on weekdays from Sept. 9 through Dec. 1. The city will be rebuilding the Wheeler Creek Diversion Structure and adding a new concrete spillway during this time.

The full trail will “typically” be open for use on weekends during construction. The city reminds residents that construction plans and timelines are subject to change.

44 citations issued during Labor Day weekend due to quagga mussels in Lake Powell

By Carter Williams, KSL.com | Posted - Sep 3rd, 2019 @ 9:05pm

<https://www.ksl.com/article/46631668/44-citations-issued-during-labor-day-weekend-due-to-quagga-mussels-in-lake-powell>

LAKE POWELL — Forty-four citations were issued and 98 boats had to be decontaminated due to the threat of spreading quagga mussels in Lake Powell over the holiday weekend, state wildlife officials said.

In all, Utah Division of Wildlife Resources officers inspected more than 2,700 boats at Lake Powell from Friday through Monday, according to DWR Lt. Scott Dalebout.

Quagga mussels are considered an invasive species by the U.S. Department of Agriculture. The species, which was first discovered in the U.S. in 1989, alter food webs in water bodies by removing plankton. They also clog water-intake pipes and other water infrastructure, [according to the department's website](#).

National Park Service officials said quagga mussels were found above and below Glen Canyon Dam. That meant all boaters were required to clean, drain and dry their watercraft after being in the water.

According to Dalebout, Lake Powell is the only waterbody in Utah where quagga mussels are currently located. However, the mussel can easily spread to other bodies of water through boats with mussels on them, which is why DWR officers were assigned to check boats.

“Our teams have worked extremely hard to decrease the chance of invasive mussels spreading to other water bodies,” he said in a statement. “We’ve also kept some of our inspection stations open longer to check boats coming off the lake after dark, which would never have been inspected otherwise.”

Quagga mussels were found on boats headed to Hyrum and Willard Bay state parks [in June 2018](#). Earlier that year, [state officials declared](#) Deer Creek Reservoir in Wasatch County free of quagga mussels after a three-year struggle.

Payson Lakes under algal bloom warning after young girl falls ill

By Ashley Stilson Daily Herald

Sep 4, 2019

https://www.heraldextra.com/news/local/south/payson/payson-lakes-under-algal-bloom-warning-after-young-girl-falls/article_554520ec-bb7f-5b01-85b6-c663f69d66ff.html

The Utah County Health Department issued an algal bloom warning for Payson Lakes on Wednesday after a 12-year-old girl became sick while recreating at the lake this week.

Health officials stated Big East Lake, Box Lake and McClellan Lake are all under advisory warning, and the Division of Water Quality is monitoring the water and collecting follow-up samples, [a press release](#) stated.

Algal blooms can cause gastrointestinal distress, headaches and rashes, and toxins can also be fatal for livestock or pets.

The mother of the girl said she spotted algal on and near the shore of Big East Lake as her daughter played in the lake on Sept. 1 and 2.

“The girl’s symptoms are consistent with dermal exposure and ingestion of cyanobacteria,” the press release reported.

On July 9, the health department issued a warning advisory for McClellan Lake after noticing filamentous algae along the shore and observing the water was murky and had a green hue.

Officials ordered the same warning for Box Lake on Aug. 5 after finding “cyanobacteria resembling grass clippings throughout the water column and concentrated along the northern shore.”

Both warnings remained in place throughout the month as officials continued to monitor the lake and collect samples from each lake in the complex.

“The advisory for Box Lake can be lifted after two consecutive weeks of sampling fall below the recreation health-based threshold,” according to the press release.

Algal blooms occur normally when cyanobacteria in the water multiply quickly and form visible colonies or blooms, according to information from the Utah Department of Environmental Quality.

Most blooms are not toxic, but some types of cyanobacteria can produce nerve or liver toxins. A single bloom can have both toxic and non-toxic strains, and officials said a bloom could test non-toxic one day and become toxic by the following day.

People are encouraged not to swim, water ski, ingest water or let animals ingest water during warnings. Anyone aware of potential algal blooms can contact the 24-Hour Environment Incidents Line at (801) 536-4123.

NRCS Receives \$9.6 Million Grant To Restore Watersheds In Utah County Affected By 2018 Wildfires

By JESSICA SCHOLZ • SEP 4, 2019

<https://www.upr.org/post/nrcs-receives-96-million-grant-restore-watersheds-utah-county-affected-2018-wildfires>

The Natural Resource Conservation Service (NRCS) recently received \$9.6 million for its Emergency Watershed Protection Program (EWPP) to help Utah County restore watersheds affected by the Pole Canyon and Bald Mountain fires.

Last year, the Pole Canyon and Bald Mountain wildfires burned tens of thousands of acres of forest in the Utah County area of the Wasatch Front. However, the devastation of the wildfires did not end when the flames were extinguished.

"Generally after a wildfire, we experience another natural disaster, which is the flooding and debris flows," said Bronson Smart, a state conservation engineer for the NRCS and the watershed program manager.

Debris flows and flooding are major concerns in areas recently burned by wildfires, especially near populated areas such as the Wasatch Front. The ash from burnt vegetation and soil causes the top layer of soil to become hydrophobic, or water-repelling. When the rainwater water is unable to infiltrate the ground, it runs off into rivers, creating high flood-risks downstream.

Additionally, excess debris and sediment entering streams threatens water quality. Smart says that debris flows and heavy sediment can pollute springs used for community water supplies, making it more difficult for these water systems to generate clean water.

The NRCS will use the funds to address these immediate issues associated with flooding and debris flow, Smart said, and they will work closely with Utah County to address the community's concerns.

"These watershed plans are locally led for most communities, and that's important to us here in the state of Utah. It's a great testament to the partnership we have with the state government, the county governments, the local governments--we all work together to protect the life and property of those who are downstream and their communities," Smart said.

The NRCS is also funding \$1 million for Utah County officials to develop a Watershed Management Plan that will address long-term planning for flood control, water supply and recreation challenges associated with future fires.

Utah Lake now under shore-to-shore warning for toxic algal blooms

Lake-wide warning issued Monday by health officials

By Amy Joi O'Donoghue@Amyjoi16 Sep 9, 2019, 6:14pm MDT

<https://www.deseret.com/utah/2019/9/9/20857913/utah-lake-toxic-algal-blooms-warning-cyanobacterial>

SALT LAKE CITY — The shallow waters of Utah Lake are now under a shore-to-shore public health advisory due to outbreaks of harmful algal blooms, with restrictions local health officials say will remain in effect for the entire month.

The public health warning issued Monday comes after cyanobacterial cell counts in three open water sampling locations revealed numbers that surpassed the safe recreation health-based standard, meaning people should avoid contact with the water to avoid exposure.

The cyanobacteria, or blue-green algae, can contain toxins that cause liver damage or nerve damage.

Utah County health officials say due to the variable nature of harmful algal blooms this time of year, the warning will remain in effect for September.

The health department is placing advisory signs at seven permanent locations at the lake, which annually suffers infestations of harmful algal blooms due to a number of reasons, including stagnant weather, hot temperatures and its shallow nature.

Scientists with the Utah Department of Environmental Quality and multiple other entities are engaged in research to combat the algal bloom problem at Utah Lake through efforts fueled by grants and money allocated by the Utah Legislature.

The lake, the third-largest freshwater lake in the United States west of the Mississippi, is a recreation hot spot for many along the Wasatch Front. It is home to the endangered June sucker fish, which exist nowhere else and can live to be 40 years old, according to the Utah Lake Commission.

It is also home to five public boat harbors and/or marinas.

While this year hasn't been as active as some summer seasons for harmful algal blooms, outbreaks have happened in multiple locations, including Ogden Valley's Pineview Reservoir.

The algal blooms, besides being a public health hazard, are harmful to other aquatic life.

The algae problem is not limited to central Utah, as the Bear River Health Department in northern Utah announced Monday that it has closed the North Beach of the Mantua Reservoir just north of the boat deck.

It also issued a warning for the rest of the reservoir after samples collected in the lake showed high cyanobacteria cell-count densities.

Algal bloom watch: Advisory issued for Utah Lake, part of Mantua Reservoir closed

By Lauren Bennett, KSL.com | Posted - Sep 9th, 2019 @ 8:38pm

<https://www.ksl.com/article/46635268/algal-bloom-watch-advisory-issued-for-utah-lake-part-of-mantua-reservoir-closed>

SALT LAKE CITY — For Utahns looking to enjoy the last few warm days of summer with a trip to a lake, they might want to change plans.

Several bodies of water across Utah have harmful algal blooms. Stay up to date with the most recent information below.

Warning advisory issued at Utah Lake for the month

The Utah County Health Department issued a lakeside warning advisory Monday after cyanobacteria cell counts, commonly known as blue-green algae, exceeded the recreation health-based threshold in three open-water samples, according to Utah Department of Environmental Quality.

The warning will remain in place for the rest of September, officials said. A warning advisory means the water poses a moderate health risk for people.

People visiting the lake under a warning advisory shouldn't swim, water ski or ingest water. Additionally, patrons should keep pets and livestock away from the water, clean fish well and throw away guts, and avoid scum areas while boating.

North Beach closed at Mantua Reservoir

Also Monday, the Bear River Health department shut down the North Beach of Mantua Reservoir and issued a warning advisory for the rest of the water.

Samples collected Monday showed high levels of blue-green algae.

Danger advisories

Matt Warner Reservoir and North Beach Shore at Yuba Lake were both closed due to dangerous levels of toxins in the water, according to UDEQ.

The remainder of Yuba Lake was under a warning advisory, according to officials.

To stay up to date with the latest harmful algal blooms across the Beehive State, visit UDEQ's [website](#).

Meadow Creek fire threatening irrigation water used for crops in Millard County

by: **Brittany Johnson**

Posted: Sep 9, 2019 / 09:45 PM GMT-0600 / Updated: Sep 9, 2019 / 10:21 PM GMT-0600

<https://www.abc4.com/news/top-stories/meadow-creek-fire-threatening-irrigation-water-used-for-crops-in-millard-county/>

MILLARD COUNTY, Utah (ABC4 News) – The Meadow Creek Fire is burning rapidly in Millard County and poses a threat to irrigation water.

According to Kourtney Bradshaw, Public Information Officer for the Meadow Creek Fire, the Meadow community is a farming community. The irrigation water is used for their crops if the drainage does not provide the water.

“They are evaluating the effects in that area,” Bradshaw told ABC4 News on Monday night.

Bradshaw also said the culinary water, which comes from spring sources in the fire perimeter, are in operating condition.

The blaze is standing still at 4,154 acres and is 20-percent contained.

“The fire didn’t grow within the perimeter. They just secured the western and northwest lines of the fire. Tomorrow’s activities are to do the same,” Bradshaw explained.

The fire is burning in steep, rocky terrain, with mixed vegetation fueling the blaze.

The Meadow Creek Fire was caused by a lightning strike Sunday morning. It ignited in dry grass on private property and then spread to the BLM land and National Forest land.

“Anything that’s in the grass, fuel type is usually a quick consumption. When it gets into those other fuel types they have a longer duration of burn,” the PIO said.

Bradshaw says 209 firefighters are working on the fire. On Tuesday morning fire officials are expected to transition from a type three team to a type two.

“It just means that this fire has complexities to it,” Bradshaw told ABC4’s Brittany Johnson. “That can be locations to towns, structures and watersheds — there’s just a rating system associated with that.”

A temporary area closure for the Meadow Creek Fire has been issued and is in effect as of September 9, 2019. The closure order will remain in effect until October 1, 2019, or until rescinded.

Fire officials say this order was issued for the protection of public health and safety.

The closure order is from Sand Rock Ridge road south to Meadow Creek.

The fire is currently burning away from homes. There are no evacuations at this time.

Liz Clark: Utah can learn from Israel's innovative water technology

By Liz Clark | Special to The Tribune

• Published: September 9 Updated: September 09, 2019

<https://www.sltrib.com/opinion/commentary/2019/09/09/liz-clark-utah-can-learn/>

In Utah, water touches every sector of the economy and keeps Utah's natural sites vibrant. From agriculture to hi-tech, skiing to hiking the state's many amazing national parks, water affects every part of Utah's economic growth and natural beauty.

Utah runs on water, so what happens when the water runs out?

Utah faces a daunting challenge. It is both one of the driest and fastest growing states in the nation, and it must find ways to provide water for a population that is projected to nearly double by 2060, while also maintaining thriving industry and healthy rivers, lakes, wetlands and aquifers. The current demand for water is not sustainable, and Utah needs to find new approaches that stretch limited water resources and improve water efficiency, technology, infrastructure, and policy.

Through the U.S. Chamber of Commerce's work with the U.S.-Israel Business Initiative, much work has been done to showcase Israel's incredible water story and what the U.S. can learn from it. It's incredible how Israel, one of the driest places in the world, has thrived despite its water challenges. To showcase this innovative technology and best practices and further build U.S.-Israel partnerships, this week officials and water companies from Israel will attend the BusinessH2O Water Innovation Summit in Salt Lake City. This global summit brings Utah and Israel together to address new approaches to water management and support economic growth in some of the driest places in the world.

When Utah looks for lessons in water management and conservation, Israel is at the top of the list. Not only do Utah and Israel share similar desert environments and hyper-saline lakes, they face similar issues of water scarcity. In contrast to Utah, Israel has overcome severe water shortages to become a leader in water management and technology development. By prioritizing water issues and treating water as a national strategic asset, Israel has developed innovative solutions for water conservation and its economy has prospered as its technology has spread around the world.

Israel reclaims 90% of its water compared to 1% in the U.S., and over 80% of its drinking water comes from the Mediterranean Sea. It has pioneered major advances in water technology including water desalination and drip irrigation. In a country that is over 60% desert and where

the population promises to grow 25% by 2024 —which mirror Utah’s own population growth — Israel is a world leader in solutions to challenges created by water scarcity. Utah can apply these lessons to navigate a world of water shortages while still attracting new business, maintaining high standards of living, and finding new opportunities for economic growth.

Israel’s lessons in water have a lot to offer not only Utah but the entire U.S. — the U.S. administration has a great deal of interest in learning from Israel on the technology and policy front, and is already making important movements in water conservation and policy as it looks to Israel for inspiration. Collaboration between the U.S. and Israeli government and companies can be an effective approach to drive solutions to water problems around the world.

This week, the U.S. Environmental Protection Agency (EPA) will be announcing the National Water Reuse Action Plan that was developed with company input, part of a larger effort by the administration to better coordinate and focus resources on the nation’s water resource concerns. Immediately following the announcement, EPA Assistant Administrator for Water Dave Ross will participate in the BusinessH2O conference to discuss the action plan with Israeli actors in the water sector as well as Israel’s experience with its own national water plans.

Clearly, Israel’s water story is a success story. How Israel got to a place to pioneer such technology is a model for places like Utah. While there is a growing awareness in Utah of a dwindling global water supply, there is a long way to go before Utahns consider water to be as precious a resources as oil. Israel can inspire efforts in Utah to move public perception, enact public policy that improves water conservation, and implement technology that saves water. Utah has a tremendous opportunity to build its water conservation efforts while also strengthening its relationship with Israel by collaborating on projects and initiatives with Israel and learning from the world’s water leader.

Liz Clark is manager of the U.S.-Israel Business Initiative at the U.S. Chamber of Commerce in Washington, D.C., and helps coordinate the Chamber’s BusinessH2O Water Initiative. She was born and raised in Salt Lake City, Utah.

Lakewide advisory in place for Utah Lake after discovery of algal bloom

by: Mercy Owusu

Posted: Sep 10, 2019 / 09:00 PM GMT-0600 / Updated: Sep 10, 2019 / 09:13 PM GMT-0600

<https://www.abc4.com/news/local-utah-state-news/lakewide-advisory-in-place-for-utah-lake-after-discovery-of-algae-bloom/>

UTAH COUNTY, Utah (ABC4 News) – The Utah County Health Department has issued a lake-wide advisory for Utah Lake.

The advisory was put in place after the health department is calling cyanobacterial cell counts or algal bloom were found in three open-water sampling locations.

These cells reportedly exceeded the recreation health-based threshold.

- Officials are advising visitors to the lake to:
- Avoid areas of algae scum when boating
- Not swim or ski
- Keep animals away
- Do not ingest water
- clean fish well and discard guts

The health department says exposure to algal blooms can cause GI distress, skin rashes, headaches, and nausea.

Exposure to an algal bloom can also be deadly for pets, according to the health department.

Mantua Reservoir's North Beach closed due to algae bloom

Sep 10, 2019

https://www.hjnews.com/news/accidents_disaster/mantua-reservoir-s-north-beach-closed-due-to-algae-bloom/article_f3bdedb7-53f7-51e0-8398-e48882e0ccc7.html

Health officials have closed the North Beach at Mantua Reservoir due to a harmful algae bloom.

The rest of the reservoir isn't closed but has been under a "warning advisory" since the latter half of last month. on Monday the Bear River Health Department upgraded specifically the North Beach to a "danger advisory."

North Beach is closed and people are warned to stay out of the water. The advisory for the rest of the reservoir warns people not to swim or water ski, not to drink the water and to keep pets and livestock away from the water. Fishing is still allowed outside of the North Beach area, but fishermen are advised to thoroughly clean fish and discard the guts.

Elsewhere in the state, the Utah Department of Environmental Quality issued a warning advisory for Utah Lake on Monday. As with Mantua Reservoir, people are advised not to swim in, water ski in or drink water from the lake. Officials are expected to reevaluate the lake at the end of the month.

Exposure, especially by ingestion, to water from a lake or reservoir undergoing an algae bloom can be harmful because certain types of algae — including cyanobacteria, which has been found in high concentrations in multiple samples from Mantua and Utah Lake this summer — produce toxins.

If you believe a person or animal has been exposed to a harmful algal bloom, the DEQ recommends calling the Utah Poison Control Center at (800)222-1222.

Algae multiplies rapidly when a body of water is high in nutrients and when high sunlight accelerates growth. Excess nutrients like nitrogen and phosphorus get into bodies of water when runoff contains fertilizer from lawns and fields.

For more information and updates, check deq.utah.gov/health-advisory-panel/mantua-reservoir.

Fewer than 3% of Utah kids are tested for lead poisoning

Experts believe thousands may be affected

By Wendy Leonard@wendyleonards Sep 15, 2019, 3:11pm MDT

<https://www.deseret.com/2019/9/15/20860886/fewer-than-3-of-utah-kids-are-tested-for-lead-poisoning>

MURRAY — Fifty-eight percent of the homes in Utah were built before 1978, putting the people who live there — particularly 157,811 Utah children — at risk for lead poisoning.

“Even low levels of lead can cause permanent brain damage in kids,” said Claudia Fruin, founder and director of the Utah Lead Coalition, which aims to increase awareness that lead poisoning remains a serious issue in Utah.

“We need to make doctors do a better job of testing kids,” Fruin said Wednesday at the Lead Free Utah Conference held at Wheeler Farm. She said roughly 3% of Utah children under age 5 were tested for lead in 2017, and more than 2,000 in the Salt Lake Valley alone could have high enough levels of lead in their blood that it could cause lower IQ scores, attention deficit disorder and behavioral problems.

“I think it’s something people should be worried about,” Fruin said, adding that lead can cause kidney problems and heart problems, as well.

Lead at certain levels can damage a developing brain and has been tied to poor performance in school, which has the potential to land kids in trouble with the juvenile justice system and more.

“It is destroying futures,” said Mary Jean Brown, former chief of the Centers for Disease Control and Prevention’s Healthy Homes and Lead Poisoning Prevention program and a leading national expert on childhood lead poisoning.

In recent years, the CDC decreased the acceptable range of blood lead levels to 5 micrograms per deciliter from 10, though “no safe blood lead level in children has been identified,” it states. The agency pushes prevention as its main public health strategy, as lead poisoning “is entirely preventable,” Brown said.

“After immunizations are done, there aren’t many things where you know you can completely get rid of the risk like you can with lead,” she said.

Removing or mitigating lead exposure in a home, Brown said, can impact multiple generations.

“It’s not just removing old windows and lead-based paint,” said Randal Jepperson, Salt Lake County housing manager. “Proper diet and cleaning are just as important in making the home as lead-safe as possible.”

Salt Lake County’s Lead Safe Housing program aims to help low- to moderate-income families decrease lead exposure in their homes. Homes built prior to 1940, Jepperson said, have at least a 90 percent chance of containing potentially harmful lead.

Additionally, homes built before 1978 are also at risk, as lead was used in paint to make it more durable and pigmented.

Homes that old, Brown said, also aren’t always maintained well, which increases risk of exposure to lead.

To determine the risk, Danielle Lenz, an environmental scientist with the Utah Department of Environmental Quality, said experts can be brought in or samples of paint, dust, soil and water can be tested. Complete removal of any lead can be expensive and requires full containment to properly dispose of it. Another option, she said, is mitigation, as lead is only dangerous if it is exposed.

So, if the paint is in good condition, that should do, Lenz said, adding that window sills can be covered with a plastic shield, if necessary.

“It takes only a small amount ... you can’t even see it,” Brown said.

Young children are particularly at risk because they tend to put everything in their mouths and “lead tastes sweet to them,” Lenz said. And iron and calcium deficiencies can cause the body to absorb more of the lead a person is exposed to.

Brown said the federal Consumer Products Safety Division is testing and destroying toys and other products containing lead at the U.S. border, but “they can’t test everything.”

Even with the removal of lead-based products and tighter regulations, she said, a lot of lead remains in the system, being repurposed and sold as different items. It is also in the air, and in dust following renovation jobs at old sites.

“We have to be vigilant about this stuff,” Brown said. “We know what to do. We know where it needs to be done. We know what children will be affected. We should be about it.”

This Winter's Snowfall Will Not Be As Intense As Last Year's

By KAMILA KUDELSKA • SEP 17, 2019

<https://www.kuer.org/post/winters-snowfall-will-not-be-intense-last-years#stream/0>

Originally published on September 16, 2019 10:28 am

Much of the Mountain West saw record breaking snowfall last year which was great news for the mountain resort industry. This year's snowfall may be less intense.

That's because the region won't be seeing El Niño and La Niña conditions this season. Colorado State climatologist Russ Schumacher said during La Niña conditions, it's more wet and cool while in El Niño, it's warmer and dryer. This year will likely be neutral.

"When we're in neutral conditions, which is what is expected as the most likely scenario, we do tend to have [...] below normal snow years compared to above normal," he said.

Schumacher said last season was extreme.

"Lots of places in mountains saw near record to record snowpack and extremes are rare by definition," he said. "Just by probability it's not that likely that we will see another year like that."

El Niño and La Niña are patterns in the temperatures of the Pacific Ocean near the Equator. At times they can reflect global temperature trends. Schumacher said when conditions are neutral like this anything could happen.

Face it, you need to pay more for water

By [Jay Evensen](#), Columnist Sep 18, 2019, 9:00am MDT

<https://www.deseret.com/utah/2019/9/18/20871194/face-it-you-need-to-pay-more-for-water>

SALT LAKE CITY — Remember all that snow last winter? Remember how rainy it seemed to be in the spring, right on through June?

Well, that was before bone-dry August.

The Escalante River may be as good an illustration as any of how fickle the weather can be in the interior West. According to the [Natural Resources Conservation Service](#), the river still stands at 124% of normal precipitation for the entire water year, but only 19% so far in September.

In Utah, you're either dying of thirst, metaphorically, or you're drowning. But mostly, you're dying of thirst.

All of which means you should be paying more for the water you use. Probably a lot more.

[The Utah Foundation](#), an independent, nonprofit research group, is in the middle of a three-part series of reports on water costs and conservation in the state. The latest one contains this bit of wisdom, which ought to be self-evident:

“Utah ranks among both the driest and fastest-growing states in the nation. It is therefore essential that Utah’s water is well-managed to ensure the sufficiency of affordable quality of water into the future.”

That means we need to use less of it.

Governments have two options to make this happen. They can begin charging people more to use it. As the report says: “It is a well-established economic principle that the more an individual pays for a product, the less that individual will tend to use it.”

Or they can institute a public shaming program. California did this awhile back when a drought there became severe. Utah has a similar version in place. You can go to the [“fame or shame”](#) website and either rat someone out or offer praise.

Typically, governments prefer the shaming route. It’s easier than fielding complaints from people whose water bills suddenly jumped an octave or two.

Some reports say California had some limited success with this, but with unintended consequences. Back in 2014, [L.A. Times editorial writer](#) Kerry Cavanaugh called this the “Hatfields and McCoys problem.”

“By encouraging people to rat out their neighbors, water agencies might be creating or fueling neighborhood feuds,” she wrote.

The New York Times, she said, found evidence that “in Santa Cruz, some complainers appeared to be using the anonymous reporting system to indulge old grudges.” Don’t like your neighbor? Report every little drop you see spilling onto their concrete driveway.

Economic incentives are so much easier.

The Utah Foundation report suggests a steeply tiered system — in which homeowners are charged a small amount up to a certain point, then much more after that — would result in long-term conservation success.

Water today is kind of like oil was in the early 1970s, the report said. When the oil embargo hit, it put a lot of folks in a bind. People used oil to heat their homes and fuel their cars. Initially they adjusted thermostats or cut back on summer road trips. Eventually, however, builders made houses that were better insulated and that were heated with something other than oil. Cars became more fuel-efficient.

As water becomes more expensive, people would turn to more water-efficient appliances, bathroom fixtures and sprinklers. Average usage would decline considerably over time.

Sure, water districts in Utah already have tiered pricing structures, but the report references much more dramatic tiers, with bigger penalties for excessive use. It also discusses what might happen if water districts, and especially water providers, were not so reliant on property taxes.

Answers there become complicated and, if you’ll pardon the pun, a little dry.

It’s hard to get a real handle on how well Utah already does with conservation. As the [Utah Geological Survey’s website](#) says, it all depends on how you measure it, and the accuracy of measurements changes from state to state.

For example, when it comes to the overall number of gallons consumed per person, per day, the state finishes 12th. But even that isn’t clear cut, because Utah uses some water to help generate electricity it sells to California. California, in turn, uses water to grow crops it sells to Utah.

If you look at only domestic water use, Utah finishes second to Idaho in the amount consumed per person.

Regardless, you don’t need the IQ of a genius to understand that water is precious in a fast-growing arid desert where rain is less reliable than a politician’s promises. If we all want to keep using, we’re going to need to pay more for what we use.

Smart controllers shave water use at Latter-day Saint meetinghouses

Church saves nearly 42 million gallons of water with technology

By Amy Joi O'Donoghue@Amyjoi16 Sep 28, 2019, 2:38pm MDT

<https://www.deseret.com/utah/2019/9/28/20883596/latter-day-saint-mormon-smart-water-controllers>

SALT LAKE CITY — The bulk purchase and installation of more than 180 smart water controllers saved water use at area ward meetinghouses and seminary buildings owned by The Church of Jesus Christ of Latter-day Saints in a program officials predict will pay for itself later this year.

David Wright, the church's landscape architect in the meetinghouse facilities department, said water consumption at the 182 locations where the smart controllers were installed dropped by as much as 27%, saving nearly 42 million gallons of water in a year's time.

The controllers apply outdoor water based on multiple indicators that include humidity, wind speed and the amount of sunlight at any given time.

"They adjust the volume of water based on the weather evaluation and need," Wright said.

He added the savings was anywhere between 14% and 23%, and when accounting for the heat last year, jumped as high as 27%.

That water savings looking at year-over-year water use in 2017 and last year — the controllers' first year of operation — could be duplicated this year, Wright said.

"If things are as good this year as last year, if we stick with that 20% number, the controllers will pay for themselves this year."

The church participated in a water conservation program offered to institutions and commercial entities by the Central Utah Water Conservancy District.

Under the program, the district will cover up to \$1,500 of the costs of an individual controller, which can run around \$3,000 apiece.

The church negotiated a bulk purchase price with a supplier, similar to a move last year by the University of Utah in which new smart water controllers were projected to save 90 million gallons of water a year.

Rick Maloy, the district's water conservation manager, said the self-funded program draws between 300 and 500 participating entities each year and is popular among property managers in charge of apartment complexes and large institutions eyeing a way to be more conscious of water conservation.

The city of Sandy, for example, is looking to install the smart controllers in its parks.

"The water savings we see through commercial programs are a lot higher than residential," he said.

Wright, who has oversight of landscape plans at church facilities across the United States and Canada, said he is encouraged by the results so far, and where possible hopes to have them installed in new construction.

"I personally have been pretty happy with the smart controllers," he said. "If you can get a willing contractor involved, you can be very successful with them."

Water main break repaired in Tooele

POSTED 5:07 PM, SEPTEMBER 29, 2019, BY SPENCER BURT AND ADAM HERBETS, *UPDATED AT 07:03AM, SEPTEMBER 30, 2019*

<https://fox13now.com/2019/09/29/tooele-residents-without-water-after-main-break/>

TOOELE, Utah — A large water main break left some Tooele residents without water, the city announced Sunday.

Just before midnight late Sunday, city officials announced the line had been repaired and the water was back on.

Thank you to our crews for working all day and night. Thank you to our residents on 700 South for their patience," a Facebook post from Tooele City said.

Residents affected by the water main break can run water through their bathtubs until it runs clear, then run water through each faucet to clear up any sediments that may have been stirred up.

The break occurred at 633 W 700 South, and affected residents from Coleman to 780 W.

Bottled water was made available at the dig site.

Utah governor rescinds 2018 drought emergency declaration

A strong water year prompted Gov. Gary Herbert to rescind a 2018 executive order declaring a statewide emergency due to drought.

By Dennis Romboy@dennisromboy Sep 30, 2019, 3:45pm MDT

<https://www.deseret.com/utah/2019/9/30/20892123/utah-governor-rescind-2018-drought-emergency-declaration>

SALT LAKE CITY — A strong water year prompted Gov. Gary Herbert to rescind a 2018 executive order declaring a statewide emergency due to drought.

Precipitation has been well above normal statewide this year, with regional averages between 110% to 200% of normal, according to the Colorado Basin River Forecast Center, the agency that reports precipitation for Utah. Heavy snowfall and rainfall significantly reduced drought conditions in the state.

“What a difference a year makes,” Herbert said in a statement Monday.

No area of the state is currently experiencing severe drought conditions, according to the U.S. Drought Monitor, comprised of a group at the University of Nebraska and federal agencies.

About 15% of Utah — mostly in San Juan, Kane and Washington counties — is experiencing moderate drought. When the governor declared the drought emergency, 99% of the state was in a moderate drought, with over 88% of Utah experiencing at least severe drought conditions.

Utah experienced unprecedented drought conditions last year, which harmed the livelihood of many families and strained agriculture, industry, wildlife and recreation, the governor said. Reservoir levels across the state were depleted in the face of a historically dry summer and below average snowpack.

Citing the conditions in all of Utah’s 29 counties and low reservoir levels, Herbert declared a state of emergency last October based on recommendations of the Utah Drought Review and Reporting Committee. Herbert’s drought declaration follows disaster declarations already made in Box Elder, Carbon, Emery, Grand, San Juan and Wayne counties.

The declaration allowed communities, farmers and others to access state or federal resources.

Even in a normal year, water in Utah is a scarce natural resource, Herbert said. Utahns, he said, should appreciate and continue to conserve water as communities, industries, neighborhoods and families.

Environmentalists Push For Removing Dam Along Colorado River

By ASSOCIATED PRESS • OCT 3, 2019

https://upr.drupal.publicbroadcasting.net/post/environmentalists-push-removing-dam-along-colorado-river?_ga=2.173861473.352694651.1570009130-1506846984.1569403934

Environmental groups that have long pushed to bring down a huge dam along the Colorado River are suing the federal government, alleging it ignored climate science when approving a 20-year operating plan for the dam near the Arizona-Utah border.

Glen Canyon Dam holds back Lake Powell, one of the largest man-made reservoirs in the United States. It and Lake Mead, which straddles the Arizona-Nevada line, are key to ensuring Colorado River water gets to the 40 million people and the more than 7,000 square miles (18,000 square kilometers) of farmland that depend on it.

Drought and climate change already have reduced the river's flow, forcing seven Western states to adopt a plan earlier this year to ensure the lake elevations don't dip too low.

The environmental groups _ Save the Colorado, the Center for Biological Diversity and Living Rivers _ say climate change will lead to such scarcity of river water that Glen Canyon could become inoperable.

They sued the Bureau of Reclamation in U.S. District Court on Tuesday. Aside from wanting the dam's 2016 operating plan to be revised, they want to force a discussion on draining Lake Powell and removing the dam.

"We need something new. It's not working," John Weisheit, co-founder of Living Rivers, said Wednesday. "It's not true river restoration. We're not getting sustainability for people or agriculture. We need long-term, visionary thinking and discussion, and this lawsuit will help create that."

Bureau of Reclamation spokesman Marlon Duke declined to comment on the lawsuit.

The agency has disputed that it ignored climate science and said using Lake Mead as the primary or only reservoir on the Colorado River fell outside the scope of its study on Glen Canyon's operating plan.

The plan allows for experimental releases of water to maintain hydropower and to mimic the river's natural flow. High-flow experiments are meant to build sandbars through the Grand Canyon to benefit native fish like the humpback chub, create beaches for river rafters and protect archaeological sites.

Glen Canyon Dam sits at the edge of Page, Arizona. Completed in 1964, it's the second-tallest concrete-arch dam in the United States, behind Hoover Dam near Las Vegas. While Hoover Dam is anchored in solid volcano-baked basalt, Glen Canyon Dam spans a gorge lined with sandstone.

Anne Castle was assistant secretary for water and science at the U.S. Interior Department when work began to revise Glen Canyon Dam's operating plan. She said the initial environmental review included a "fairly extensive" discussion of climate effects and questioned why environmentalists would want it revised under an administration often criticized for rolling back regulations.

Castle said it's unlikely Glen Canyon Dam would be built today but decommissioning it would have "really significant, adverse consequences for big sectors of the economy, and I don't think that would be undertaken lightly."

Jack Schmidt, director of the Center for Colorado River Studies at Utah State University, said the conversations that environmentalists are seeking already are happening about managing the entire Colorado River system.

The Glen Canyon Dam plan was an incremental decision about how best to operate the dam under existing and old paradigms, he said.

When negotiations start on what will guide the river beyond 2026 when current guidelines expire, he said "everything is back on the table."

Clean-up underway in Sandy after broken water line break floods streets, houses

POSTED 4:25 PM, OCTOBER 7, 2019, BY ELLE THOMAS, *UPDATED AT 09:33PM, OCTOBER 7, 2019*

<https://fox13now.com/2019/10/07/broken-water-line-causes-flooding-in-sandy/>

SANDY, Utah – A 12-inch water-main caused a big mess in Sandy Sunday after a break sent thousands of gallons of water and hundreds of pounds of mud into nearby streets and homes.

Crews have been working around the clock to mitigate damage caused by a water-main break on Intermountain Healthcare’s Alta View Hospital campus Sunday afternoon.

ServPro of West Valley City received a call for flooding in the area of 9600 South and 1100 East, below the hospital campus, around 12:30 Monday morning.

“You could see the rain gutters just overflowing with mud and silt right away,” said Marcus Eoff, a manager with ServPro West Valley City. “We had about 24 inches of mud throughout the street itself.”

Crews quickly realized the flooding had extended to two nearby homes, dumping thousands of gallons of water and hundreds of pounds of mud and silt into the basements.

“Let me just go look really quick,” one homeowner can be heard saying in a video she recorded while water was flowing into their home.

“It’s leaking around the tub and on the tiles, I mean I don’t really know for sure what damage there is,” she continued as she walked around the downstairs of her home. Towels, blankets and pillows could be seen shoved against the windows and openings to try and slow the flow of water coming in.

Crews had classified the water as ‘Category three’ or ‘risk for full contamination.’

“[The water] comes across such a large area that we don’t know what’s in the dirt, what’s in the sidewalk and everything that it came across,” Eoff explained. “So, with stuff like that, we’ve got to play it safe, any materials that it touched we’ve got to remove.”

Eoff said they worked throughout the night to remove the contaminated water and gut each basement -- work continued well into Monday evening.

“We’re just trying to keep as much stress off of the homeowners as we can,” Eoff said.

“Ultimately, this was not their fault so for them to try to deal with this, we’re here to try to take some of that heartache off.”

In a statement to Fox 13, Intermountain Healthcare said they take full responsibility for what happened, and they have been working closely with the families since they found out.

'Intermountain Healthcare is taking responsibility for it, working with family to take care of them and cover clean up and restoration costs,' -Jess Gomez, Spokesperson Intermountain Healthcare

While progress has been made, crews believe the initial clean-up phase will take three to five days. As of now, there is no word on what caused the break.

Provo starts developing 40-year water plan

By Genelle Pugmire Daily Herald

Oct 8, 2019

https://www.heraldextra.com/news/local/central/provo/provo-starts-developing--year-water-plan/article_2a8ff012-5c8b-534a-9902-447ad7e096b8.html

If Provo is to have enough water in the distant future, the planning for that must happen now.

On Tuesday, the City Council heard of a proposed 40-year plan that will be brought at a future date for approval by the council.

Each city is required by state code to submit 40-year plans to make sure cities are using surface water water rights.

Before the city adopts a 40-year plan, there must be a supply and demand master plan developed, according to Keith Larson, water consultant with Bowen Collins.

“You never want to design exactly what water needs are,” Larson said.

Larson said the three water suppliers for Provo are from springs, wells and surface water. Water from springs go up and down over the years. In 2018, it was down.

Wells are trending downward, so surface water is an important component to conserves, Larson said.

“More water is being taken out of the aquifers than is going in,” Larson said. “There is a significant draw down.”

While that all sounds rather ominous, Larson said Provo is in pretty good shape, but could potentially run into trouble.

There is concern if future water would be available during long-term drought, natural disasters, contamination mechanical failure and climate change, which would include demand going up.

Currently, Provo’s population is about 123,336. In 40 years, population is projected to be 197,136.

Surface water needs to be stored underground until such time that it is needed. There is enough ground surface water to help.

“We must also continue developing wells,” Larson said. “Aquifer storage recovery will be significant for the future.”

In the coming two months, the city will start pilot programs to monitor where water is going.

“It takes years for (surface) water to travel,” Larson said.

After that information is collected it will be brought back to the council for approval.

“it will take some money to move forward with long term plans,” said Dave Decker, director of public works.

Larson said even though Provo is using less than its ground water rights, Provo staff is concerned the aquifer may not be capable of supporting significant additional withdrawals.

The good news is Provo has significant additional surface water rights available to meet future demands.

Larson recommends the city take advantage of available surface water rights and use the aquifer storage recovery and Jordanelle Reservoir storage.

Driven by Flint water crisis, EPA issues new rule to tackle lead in drinking water

BY

STEPHANIE EBBS

Oct 10, 2019, 9:29 AM ET

<https://abcnews.go.com/Politics/inspired-flint-water-crisis-epa-issues-rule-tackle/story?id=66161310>

Partially inspired by the [Flint, Michigan, water crisis](#), the Environmental Protection Agency announced a new rule to reduce exposure to lead from drinking water around the country on Thursday.

"The action that we're taking tomorrow is targeting probably the largest source of lead in people's lives today -- and particularly children -- and that's in the drinking water system," EPA chief Andrew Wheeler told ABC News in an exclusive interview Wednesday.

Wheeler said the new rule will help remove the most corrosive pipes with the highest risk of releasing lead first.

According to the Centers for Disease Control and Prevention, there's no safe level of lead in children's blood and says that amounts as low as 5 parts per billion require medical intervention. Exposure to lead can cause developmental delays and learning difficulties in children, as well as symptoms including weight loss, irritability or even seizures.

Lead exposure has drastically decreased since rules were put in place such as banning lead pipes in 1986, but an estimated 6.5 to 10 million homes still use lead water lines and millions of buildings, including schools, also have older infrastructure that could include lead pipes, [according to EPA](#).

Lead pipes that carry water from local treatment facilities to residents' homes and other buildings can be treated to prevent exposure to lead. But in some cases water, like in Flint, improperly treated water can corrode the pipes and lead can [leach into drinking water](#). Experts and groups like the American Waterworks Association have said that given the high risks from lead exposure, cities and states should take steps to completely remove lead pipes to eliminate the risk of exposure completely and that only partially removing lead service lines actually risks releasing more lead.

This is the first overhaul of the Lead and Copper Rule in more than 20 years, according to the EPA, and would require drinking water systems around the country to be more proactive in

identifying lead water lines in the city, replacing those service lines and treating water to prevent residents from being exposed.

When he first came into office, Wheeler said he was concerned a requirement to remove lead service lines could take 20 to 30 years and that poorer communities would lag behind affluent communities that might be able to replace their lines immediately.

"What we're doing is requiring water systems to update their publicly available inventory of where the lead service lines are and we're requiring the water systems to find and fix the sources of lead, particularly when a sample in a home exceeds the 15 parts per billion," he said.

The rule also requires that schools and day care facilities be tested after the agency's internal watchdog found that less than half of school districts check drinking water for lead.

The new rule would also require all water systems to use the same procedures to test tap water for lead and notify customers within 24 hours if the level exceeds 15 parts per billion.

"On the campaign trail President Trump said he wants to make sure that there were no more Flint, Michigans, and that has been a guiding principal that he directed us to," Wheeler told ABC News. "One of the reasons why we're requiring notification if lead is found in the water within 24 hours -- he was very disturbed with what happened in Flint. It was a failure of communication by both the local, state and the EPA during the Flint crisis. So this was a huge priority for him -- it's been a huge priority for us at the agency."

Cities still have to replace the portion of a lead service line managed by the water system if a customer decides to replace the portion on their private property, under the new rule. Cities will also have to implement a plan to replace at least 3% of lead service lines every year if the water tests above 15 parts per billion of lead. Systems with more than 10 ppb -- but less than 15 -- will have to work with the state to set an annual goal to replace those service lines.

Under the current rule, systems that tested above 15 ppb were required to replace 7% of lead service lines each year, but an EPA official said they didn't think that was happening because partial replacements or new test results could count as part of that benchmark.

"We encourage all lines to be replaced and we say that there is no safe level for lead, but you have to prioritize the cleanup and we have to make sure that with 15 parts per billion or above that those are cleaned up and immediately replaced and we lowered the trigger to 10 parts per billion. Ultimately our goal is to replace all the lead service lines around the country," Wheeler said.

Erik Olson, senior director of health at the Natural Resources Defense Council, said the 3% requirement is still a huge change from 7% and could take much longer for all lead service lines to be replaced.

"We thought they should do full replacement within 10 years. The problem is -- if you wait 33 years -- that at least one generation and maybe two of kids that are going to be exposed to lead," he said.

Olson said he's also concerned that piecemeal replacements of lead service lines are inefficient and that the best approach is to go into an area or neighborhood and replace all the lines at once regardless of if homeowners have taken the same step.

Wheeler acknowledged that the customer-driven approach could mean partial service line replacements in some areas, which EPA itself says can increase short-term lead exposure, but would still be beneficial.

"This is to make sure that when homeowners replace the lead pipes that they have, in the past if they replaced it there's no guarantee they would get lead-free water because the service line going up to their house may have been corroding lead. So this is to make sure that if a homeowner is going to take on the additional financial burden of replacing their line early that they will be guaranteed lead-free drinking water by requiring the water service provider to replace their side of the pipes as well," he said.

But that will be an expensive undertaking.

A 2016 EPA document found it could cost from \$2,500 to \$8,000 to replace a single line, estimating it would cost between \$16 billion to \$80 billion to immediately replace all the lead lines in the country. EPA provides billions of dollars in grants to improve drinking water infrastructure every year but cost will still likely be a concern for homeowners with lead service lines or smaller communities.

An EPA official said they expect the new rule to cost water systems and states \$131 million to \$270 million a year.

Wheeler acknowledged the process won't be cheap but said the agency believes the benefit of reducing lead exposure outweighs the cost.

The new Lead and Copper Rule will be posted to the Federal Register on Thursday and will be open for 60 days of public comment before it moves forward.

For the first time in decades, EPA is overhauling how communities must test for lead in water

“It’s a national embarrassment,” one expert says of the current rule, which has been in place since 1991.

By

Brady Dennis

Oct. 10, 2019 at 5:10 p.m. MDT

<https://www.washingtonpost.com/climate-environment/2019/10/10/first-time-decades-epa-is-overhauling-how-communities-must-test-lead-water/>

The Environmental Protection Agency on Thursday issued a long-awaited proposal aimed at improving how communities around the nation test for lead in drinking water and forcing quicker action when problems arise.

The overhaul comes nearly three decades after the federal government last updated its lead and copper rule — a regulation that has been criticized as complicated, poorly enforced and not tough enough when it comes to protecting Americans from a toxic metal that scientists say is unsafe at any level.

The EPA’s revamped rule, which has been in the works since 2010, is meant to provide what the agency called a “proactive and holistic approach” to more reliably identify elevated lead levels across 68,000 public water systems and to force utilities to tackle problems faster.

EPA Administrator Andrew Wheeler called the proposal “a major milestone” in a news conference Thursday afternoon in Wisconsin.

“President Trump is committed to ensuring that all Americans, regardless of their Zip code, have access to clean drinking water,” Wheeler said. “Today’s action goes a long way toward fulfilling that promise.”

However, while Thursday’s sprawling proposal seeks significant changes to the status quo, environmental advocates said the agency’s overhaul fails to take the most important step: requiring the steady removal of the estimated 6 million or more lead service lines that remain underground throughout the nation.

“Everything else is small potatoes,” said Erik Olson, a senior director for the Natural Resources Defense Council. “From a public health standpoint, that’s absolutely critical. There are going to be problems with lead contamination as long as you leave lead pipes in the ground.”

The new proposal does appear to address some of the widely acknowledged problems with the current rule.

Local utilities will be required for the first time to test for lead in child-care facilities and schools. The EPA also said it will require utilities to create an inventory of lead service lines and to make those findings public. It also will require that all test samples be taken at homes with lead service lines, compared with only half under the current rule. When a water utility finds elevated lead levels, it now will have to notify homeowners within 24 hours.

In an effort to close loopholes that critics say have long allowed communities to avoid reporting troubling test results, the EPA also plans to strengthen existing testing protocols. The agency no longer will allow practices such as removing aerators from faucets before testing, giving residents small-necked bottles and instructions to fill them slowly or “pre-flushing” water from lines before taking samples. Each of those tactics can temporarily lower lead levels and mask potential violations.

The EPA also wants to create a new “trigger level” of 10 parts per billion of lead in the water, a standard more stringent than the existing “action level” of 15 parts per billion. If a utility detects lead exceeding 10 parts per billion in enough taps, it could be forced to reevaluate the chemicals it uses to treat the water and must work with state officials on a plan to replace outdated pipes. (Smaller systems serving fewer than 10,000 people will have more flexibility in how to respond to elevated lead levels.)

In addition, water utilities would be required to replace their portion of a lead service line anytime a resident decides to replace the lead pipe leading to his or her home. In communities that exceed the 15 parts per billion federal action level, officials would be required to replace a minimum of 3 percent of lead service lines annually.

That’s a more lenient standard than the current minimum requirement of 7 percent — and one unlikely to sit well with some public health advocates.

“That’s just staggering to me,” said Olson, noting that the amended requirement could more than double the time takes to rid a community of its lead pipes. “It’s exactly the opposite of what we should be doing. That’s exactly the wrong direction.”

Asked about that change Thursday, Wheeler disagreed, saying the current rule has “offramps” that allow a utility to come back into compliance and avoid continual replacements. He argued the new rule will actually lead to steadier removal of lead pipes in troubled communities. “Once you hit that trigger, you can’t stop the replacement. It’s a permanent 3 percent per year,” he said.

Although lead exposures have fallen since Congress banned the use of lead pipes in 1986, the toxic metal remains in plumbing fixtures around the country, as well as in millions of underground pipes. Replacing all those pipes could cost as much as \$80 billion, according to one EPA estimate, an expense that could fall largely on homeowners and cash-strapped cities.

The EPA was already years into revamping the much criticized lead and copper rule when the water crisis in Flint first gained national attention in 2015. The episode exposed thousands of young children in the city to alarming levels of lead, which can cause irreversible cognitive damage and other health problems, and it put a public spotlight on officials at every level who had failed to prevent the catastrophe.

“It clearly needs to be strengthened,” then-EPA Administrator Gina McCarthy said during a 2016 hearing, even as she insisted that the Flint debacle stemmed from Michigan’s failure to enforce the existing law.

Environmental activists have long argued that the federal rules are too easy to evade and too seldom enforced, and that such shortcomings have contributed to water crises in the District, Flint and, more recently, in Newark. Some state and local officials in charge of implementing the rules have called the requirements too complex and unwieldy. The water industry and individual communities have fretted over the associated costs. And residents have felt misled and lied to about the safety of the water in their taps.

“It’s a national embarrassment,” said Marc Edwards, the Virginia Tech professor who helped to spotlight the lead crisis in Flint, Mich., of the existing rule, which has remained largely untouched since 1991.

The new proposal does not set one enforceable standard for lead, known as a “maximum contaminant level.” Nor does it require that estimated 6 million lead service lines that remain underground around the country be replaced in the near term, as environmental activists had wanted.

The new rule, which will be open for comment for 60 days, also does not lower the agency’s lead “action level,” which remains more lenient than new regulations put in place by Michigan in 2018. There, lawmakers plan to reduce the threshold to 12 parts per billion and require that all lead service lines in the state be replaced by 2040, unless a utility can demonstrate that it needs longer to implement the rule.

Edwards, who has seen water crisis after water crisis erode residents’ trust in government, said none of the EPA’s proposed changes will matter unless public officials do what they haven’t always done in the past.

“Enforcement,” he said, “is everything.”