Drinking Water Board Packet

January 14, 2020

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 MEETING

January 14, 2020 1:00 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. Public Comment Period

4. Approval of the November 5, 2019 Minutes

5. Financial Assistance Committee Report
   - A. Status Report – Michael Grange
   - B. Project Priority List – Michael Grange
   - C. SRF Applications
     - i) STATE - No State Projects
     - ii) FEDERAL
       - a) Hyde Park City - Heather Pattee
     - iii) DEAUTHORIZATIONS
       - a) Bluffdale City - Heather Pattee
       - b) Kanab City - Heather Pattee
   - D. Potential Impact of Interest Rates on the SRF Program - Michael Grange

6. Title 19 Changes - Bret Randall

7. Water Use Data - Nathan Lunstad

8. Rural Water Association Report – Dale Pierson

9. Directors Report – Marie Owens

   A. Enforcement Report
   B. Upcoming Bills for 2020 Legislative Session
   C. Other

10. Open Board Discussion -- Roger Fridal

11. Other

12. Next Board Meeting

    Date: February 27, 2020
    Time: 2:00 PM
    Place: Dixie Convention Center
    1835 S Convention Center Dr
    St. George, Utah 84790

13. Adjourn

Agenda Item 4

State of Utah

GARY R. HERBERT
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Department of
Environmental Quality

L. Scott Baird
Executive Director

DIVISION OF DRINKING WATER
Marie E. Owens, P.E.
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DRINKING WATER BOARD MEETING
November 5, 2019 12:30 PM
Department of Environmental Quality
Multi Agency State Office Building
DEQ Board Room
195 N 1950 W
Salt Lake City, Utah 84116

DRAFT

- **A Board member ethics training meeting was conducted at 12:30 PM, prior to the 1:30 PM Board Meeting. Neither discussion of any agenda item nor any Board actions were conducted during this time.**

1. Call to Order

Roger Fridal, Acting Chairman, called the training meeting to order at 12:35 PM.

2. Roll Call

Board Members present: Roger Fridal, Kristi Bell, Jeff Coombs, Scott Morrison, Barbara Gardner, David Pitcher, Eric Franson, Scott Baird. Blake Tullis joined the training via teleconference, but lost connection mid-way through.

Division staff present: Marie Owens, Rachael Cassady, Michael Grange, Heather Pattee, Allyson Spevak, Ryan Dearing.

Craig Anderson with the Attorney General's Office conducted the training.

- **The Board Meeting followed the training meeting at 1:30 PM.**

1. Call to Order

Roger Fridal, Acting Chairman, called the Board meeting to order at 1:32 PM.

2. Roll Call

Board Members present: Roger Fridal, Kristi Bell, Jeff Coombs, Scott Morrison, Barbara Gardner, David Pitcher, Scott Baird, Blake Tullis, Eric Franson.

Division Staff present: Marie Owens, Rachael Cassady, Michael Grange, Heather Pattee, Allyson Spevak, Ryan Dearing.

3. Drinking Water Board Elections – Marie Owens

A. Board Chair & Co-Chair

- Eric Franson moved to elect Roger Fridal as Chair. The motion was carried unanimously by the Board. Roger accepted the nomination.
- Roger Fridal moved to elect Kristi Bell as Co-Chair. The motion was carried unanimously by the Board. Kristi accepted the nomination.

B. Financial Assistance Committee

Roger Fridal, Scott Morrison, Jeff Coombs and Eric Franson volunteered to be on the Financial Assistance Committee.

4. 2020 Drinking Water Board Meeting Schedule

Marie asked the Board if they wanted to hold a meeting at the RWAU annual conference in St George on February 27, 2020. Marie also asked if the Board wanted to hold a meeting at the fall RWAU conference on August 26th 2020 in Layton.

- Eric Franson moved to move the February meeting to the RWAU conference in St. George on February 27, 2020. Kristi Bell seconded. The motion was carried unanimously by the Board.
- Eric Franson moved to move the August meeting to the RWAU conference in Layton on August 26, 2020. Jeff Coombs seconded. The motion was carried unanimously by the Board.
- Eric Franson moved to accept the adjusted schedule. Kristi Bell seconded. The motion was carried unanimously by the Board.

5. Approval of the August 27, 2019 Minutes

- David Pitcher moved to approve the August 27, 2019 minutes. Scott Morrison seconded. The motion was carried by the Board. Eric Franson abstained from voting.

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 Central Utah Water Conservancy District (CUWCD) request (Item 6Cii(a)) as he is employed by Central Utah Water Conservancy District.

- Eric Franson moved that David Pitcher not be allowed to participate in the discussion or voting for the CUWCD item. Scott Morrison seconded. The motion was carried unanimously by the Board.

Roger has a conflict with the Bear River Water Conservancy District request (Item 6(C)(i)(a)) as he is a chairman of the BRWCD.

- Eric Franson moved that Roger Fridal not be allowed to participate in the discussion or voting for the BRWCD item. Kristi Bell 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 that as of September 30, 2019 there is a balance of roughly $5.7 million in the State SRF fund. Over the course of the next year, the Division is expecting an additional $4.6 million to come into the fund, for a total of approximately $10.4 million for project allocation.

The Board was provided with a list of water systems that DDW staff is currently working with to close State SRF loans, such as Mountain Regional's project.

Eric inquired about Genola's State project. Michael explained that Genola and Virgin Town have moved from Federal to State projects.

Michael then reported that as of September 30, 2019 there is a balance of $233,000 in the Federal SRF fund. Over the course of the next 12 months, the Division is expecting approximately $20.9 million to come into the fund for a total of $21.2 million by September 30, 2020.

While not on today's agenda, DDW staff recently received information that the Bluffdale application and the Kanab City application are being withdrawn, which adds $13.2 million to the $233,000 Federal SRF fund balance.

The Board was provided with a list of water systems that DDW staff is currently working with to close Federal SRF loans.

B. Project Priority List

Michael reported that one new project is recommended to be added to the Project Priority List: Central Utah Water Conservancy District with 22.5 points. Theirs is a programmatic financing application to fund multiple capital facilities projects. The Financial Assistance Committee recommends the Board approve the updated Project Priority List as presented, with the addition of this one project.

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

C. SRF Applications

i. STATE:

a) Bear River WCD – Heather Pattee

Representing Bear River WCD is general manager Carl Mackley.

Heather Pattee informed the board that Bear River Water Conservancy District (BRWCD) is requesting financial assistance in the amount of $100,000. BRWCD previously submitted two applications for two separate projects that came before the Board at the August 27, 2019 meeting. Now they're submitting a single application for the project presented today. The project consists of a test well in the Collinston area of the district and the total project cost is $237,500, with the district contributing $137,500. The local MAGI for the Collinston area is 98% of the State MAGI. However, the after-project water bill would be $76.96 which is 2.06% of their local MAGI, so they do qualify for additional subsidy. Included in the Board packet is a table with the base rate as well a 0% interest loan and 50/50 split of loan versus grant. As of this morning they have -9 IPS point which is a 10-point credit for a current emergency response program and one point for an RTCR monitoring violation.

The Financial Assistance Committee recommendation is that the Drinking Water Board authorize a loan of $50,000 and a grant of $50,000 at 0% interest for 20 years.

Carl informed the Board that in 2015 they installed 7 miles of pipeline in the Collinston area, two 500,000-gallon water storage tanks, two booster stations, and a metering blending station. BRWCD received SRF funding for this project. Their existing water source is a surplus water agreement to purchase water from Deweyville Town. They're now ready to develop their own source of water and are in the process of drilling a well.

Marie asked that if the Board proceeds with the 50/50 option, how would the savings from the grant be passed onto the residents of Collinston as the project is for a test well? Carl answered that in drilling the well they anticipate going down 1,100 feet and while it's currently a test well, it's being constructed in such a manner that it could become an 8" diameter production well. If it did become a production well it would pass a lot of savings onto the Collinston residents and the entire county. Carl explained that the application represents supplying water to the existing customers, Yukon Water Company, and the existing Collinston customers and would allow them increase the number of connections.

- Scott Morrison moved that the Drinking Water Board authorize a loan of $50,000 and a grant of $50,000 at 0% interest for 20 years to Bear River Water Conservancy District. Jeff Coombs seconded. The motion was carried unanimously by the Board. Roger Fridal abstained from voting.

ii. FEDERAL:

a) Central Utah WCD – Michael Grange

Representing Central Utah Water Conservancy District (CUWCD) was Gerard Yates, Cort Lambson, and Shawn Lambert

Michael Grange informed the Board that CUWCD is requesting $10 million in financial assistance to fund to multiple capital improvement projects at the Duchesne Aqueduct, the Duchesne Valley Water Treatment Plant, the Ashely Valley Water Treatment Plant, and the Don A. Christiansen Regional Water Treatment Plant. CUWCD is a large water wholesaler to multiple public water systems and therefore an affordability calculation was not completed for this application.

For the newer members of the Board; some time ago CUWCD approached the Board for financial assistance for their Duchesne Valley Treatment Plant. The water quality in Starvation Reservoir was being impacted by algae and algal blooms and they were looking at installing an algae strainer before it reached the filtration part of their plant because the algae would plug off the filters. During the time that project was authorized and getting a loan closing, the Dollar Ridge Fire happened which severely impacted the water quality of Starvation Reservoir and it was determined the algae strainer would no longer provide sufficient pre-treatment.

In August the Board authorized $18 million for the upgrades to the water treatment plant at Starvation Reservoir with the understanding that the district would then return to the Board for an additional $10 million for this programmatic financing option. At the time, deauthorizing the algae strainer funding was discussed but the Board took no action; that deauthorization is on the today's agenda (Item 6(C)(ii)(d)). This $10 million request is the second phase of their programmatic financing.

Michael explained the programmatic financing to the new board members. With a municipal bond on the public market, the water systems who receive these bonds are able to use the money for a series of projects within their master plans. Historically the SRF program has funded projects on a project by project basis which requires the water systems to come before Board to receive the money and then they are forced to re-bond and bonding costs increase. By using the programmatic or portfolio financing option the SRF program is able to provide a larger dollar amounts to the water system and the system can then use that money for any number of projects that are on the list approved by the Board. For CUWCD that is about 10-11 projects, which makes their request the third programmatic financing project that has come before the Board. Previously the Board has authorized funding for Granger-Hunter Improvement District at $21 million and to Kearns Improvement District at $20 million. Programmatic financing allows the SRF program to more closely mirror a municipal bond by allowing the water system to use the money on any number of projects on the approved list.

The Financial Assistance Committee recommendation is that the Drinking Water Board authorize $10 million at 1.25% hardship grant assessment fee in lieu of interest for 20

years to Central Utah Water Conservancy District to fund multiple capital improvements projects which are listed in the Board packet.

- Jeff Coombs moved that the Drinking Water Board authorize a loan of $10 million at 1.25% hardship grant assessment fee for 20 years to Central Utah Water Conservancy District to fund multiple capital improvement projects. Eric Franson seconded. The motion was carried unanimously by the Board. David Pitcher abstained from voting.

Eric inquired about increasing that interest rate from 1.25%. Michael explained that the fund graph shows a balance of $90 million in the second-round bank account at the beginning of 2019. That money is now down to about $20 million. The other aspect of the programmatic financing that has been implemented, which is different from a typical SRF program project, is that under the SRF program the water system has one year to 18 months after the project is complete to start loan repayment. With the programmatic financing, since the numbers are so large and the projects could go on for 5-6 years, the SRF staff has arranged for the water districts to start loan repayment within one year of loan closing. It would now be appropriate for the Board and staff to consider increasing that 1.25% interest rate. There were a few reasons that the Board approved this lower interest rate; 1) to move the money and 2) the water systems must comply with a number of federal requirements. The interest rate discussion will be added to the January agenda and staff will present recommendations and information at that time.

b) Marysvale De-authorization – Heather Pattee

Heather Pattee informed the Board that Marysvale Town was authorized financial assistance in the amount of $3,665,000 on April 9, 2019. Since then staff has received an email from the town indicating that they do not want to move forward with the project at this time. The Financial Assistance Committee recommendation is that the Drinking Water Board deauthorize a loan of $3,665,000 at 0% interest for 30 years with $733,000 in principal forgiveness to Marysvale Town. The public was not on board with the project, so the town is not moving forward.

Marie pointed out that the system still has several significant deficiencies on their record and this project was going to resolve those. Marie stated it will continue to get worse for this system from an enforcement standpoint if they choose to not take care of these deficiencies. Marie explained that as a community water system they can have upwards of 150 IPS points and they're currently at 107 points, but under IPS 2020, continuing to fail to fix significant deficiencies increases their points and they'll likely go unapproved by March 2020.

- Kristi Bell moved that the Drinking Water Board deauthorize a loan of $3,665,000 at 0% interest for 30 years with $733,000 in principal forgiveness to Marysvale Town. Scott Morrison seconded. The motion was carried unanimously by the Board.

c) Cole Canyon De-authorization – Heather Pattee

Heather Pattee informed the Board that Cole Canyon Water Company was authorized emergency financial assistance in the amount of $125,000 for an emergency connection to Liberty Pipeline. Staff received an email from Cole Canyon stating that they decided to go with private funding for the project and have declined the funding from the Drinking Water Board. The Financial Assistance Committee recommendation is that the Drinking Water Board deauthorize a loan of $125,000 at 3.2% interest for 20 years.

- Eric Franson moved that the Drinking Water Board deauthorize a loan of $125,000 at 3.2% interest for 20 years. Jeff Coombs seconded. The motion was carried unanimously by the Board.

d) Central Utah WCD De-authorization – Michale Grange

Michael Grange informed the Board that Central Utah Water Conservancy District was authorized financial assistance of $3.1 million on August 28, 2018 to construct an algal strain facility at their Duchesne Valley Water Treatment Plant. That project has now been supplanted by a general improvement project and upgrade of the entire plant. The staff is recommending that the Drinking Water Board deauthorize a $3.1 million loan at 30 years with 1.5% hardship grant assessment fee to the Central Utah Water Conservancy District.

- Kristi Bell moved that the Drinking Water Board deauthorize a loan of $3.1 million for 30 years at 1.5% hardship grant assessment fee to Central Utah Water Conservancy District. Blake Tullis seconded. The motion was carried unanimously by the Board.

7. Rulemaking Activities

A. R309-400 Rule – Final Adoption (Board Action Needed) – Rachael Cassady

Rachael Cassady proposed that the Board move forward with the final adoption of the changes to R309-400, which staff refers to as the Improvement Priority System, or the IPS rule. It is the water system rating criteria which came about in 1996 and is a tool for systems and the Division to track compliance with significant deficiencies and violations and provide the systems a priority list of fixes that need to be made in order to protect public health. Since the inception of the rule some minor changes have been made but the purpose of revising the rule now is to do a major overhaul and emphasize the importance of fixing significant deficiencies and better aligning with the EPA priority list.

At the August 2019 meeting, the Board authorized Division staff to initiate the rule-making process for revising R309-400. Because of the changes staff was able to get the IPS program document approved. That document is the spreadsheet included in the packet which lists violations and deficiencies with the associated points and rule references.

The final rule-making for R309-400 was opened at the August meeting and the public comment period was open from September 15 to October 15 2019. The Division received one comment (found in the packet) from Colby Goodliffe with American Water which manages the Hill Air Force Base water system. The comment was mostly in support of the changes and also discussed enforcement. The Division responded as to the separate part of

their enforcement program in R309-100-8 and then also how the changes to R309-400 are to allow the Division to better align with EPA and get the priority list to the water systems.

Rachael recommends that the Board adopt R309-400 Rule and authorize the Division of Drinking Water staff to make the new rule effective. The staff anticipates making the repeal and re-enactment effective on November 15, 2019. The implementation start date is embedded in the rule which is January 1, 2020.

There is no cost anticipated with implementation of this rule for the Division or public drinking water systems; it's just a re-prioritization and implementation better aligned with protecting public health.

Rachael explained that the Division started notifying water systems of this rule-making change in February 2019, sent along with a copy of their current IPS report and their future report based on the changes. The Division also met with water systems at the RWAU conference in late February 2019. Post cards, an IPS specific email address and a website were created to further the effort to notify systems of these upcoming changes. On the website systems could post informal comments or use the email address to send comments directly to Division staff. In summer 2019 the Division with the help of RWAU staff went throughout the state to conduct four IPS 2020 trainings; the first half of the training covered the proposed changes to the rule and the second half was one on one sessions with the water operators to determine how to get issues fixed prior to the rule change. During these trainings staff received a lot of helpful input from water systems and incorporated that into the rule revision. In addition, a mailing was sent out in October to water systems which are in jeopardy of going to a not approved rating upon final adoption of the rule.

Jeff inquired if training has been done with local health departments (LHDs) and RWAU on sanitary surveys using this the new rule. Rachael replied that the Division has tried to incorporate the habit amongst the staff, LHDs and RWAU that while checking the current IPS report to also check the IPS 2020. To accommodate that effort the Division has made a portal inside the waterlink.utah.gov database that allows approved users to access the IPS 2020 report. The report has been kept private for water system managers, for their specific systems. In the portal there is a user role for LHDs and RWAU to assist water systems to pull up their IPS report and work through any issues.

- Jeff Coombs moved that the Board adopt R309-400 Rule and to authorize the Division of Drinking Water to make the new rule effective November 15, 2019 with an implementation start date of January 1, 2020. Eric Franson seconded. <u>The motion was carried unanimously by the Board.</u>

8. Emergency Response Updates – Ryan Dearing

Ryan Dearing is the Division's emergency response coordinator and his cell phone, 801-560-8456, is the 24-hour emergency response contact number. R309-105-18 is the rule for emergency response and basically states that anytime there is an incident that could or has caused contamination in a water system, the system must call and report it to the Division. Examples of drinking water emergencies are chemical contamination, boil orders, natural

events, and infrastructure failures. Also, a drinking water emergency is anything else that causes a public health risk such as tank intrusions, E. coli positive samples, overfeeds, wildfires, and floods.

Over the past two years the Division has dealt with emergencies involving cross connection, tank intrusions, MCL violations (a system that exceeds nitrate or arsenic), customer complaints received directly by the Division, and natural events such as fires and floods. Most of the emergency calls the Division receives are for E. coli positive samples. Of these emergencies, 65 have required some form of public notice such as a Do Not Drink Order or a Boil Order.

In emergency response the Division works with partners such as RWAU, who act as first responders to the water systems, LHDs, and DEQ district engineers. The water systems can also take advantage of private sector help from supply houses, laboratories, water wholesalers and, police and fire departments. During an emergency the Division provides engineering support, coordination between the various agencies, regulatory guidance, public notification, and technical assistance. As part of DEQ, the Division of Drinking Water (DDW) works closely with two other DEQ divisions; Division of Environmental Response and Remediation (DERR) and Division of Water Quality (DWQ). Water Quality looks out for all the rivers and lakes—the water in the landscape—and Drinking Water is over the water once it's inside the pipe of a drinking water system. DEQ has a 24-hour spill hotline and from that DERR sends out a spills report which DDW monitors for impacts to drinking water and then responds accordingly. DDW also works with the State Division of Emergency Management (DEM) regarding wildfires by monitoring daily DEM infrastructure maps to look for potential impact to water infrastructure and then passes the information onto the water system(s).

An upcoming change to the American Water Infrastructure Act (AWIA) will require any community water system with a population over 3,300 to perform a risk assessment on their system, evaluating and prioritizing those risks, and then creating an emergency response plan. The deadline to implement this is March 21, 2020 for water systems serving over 100,000 population and later deadlines for smaller systems. The Division is trying to get the word out to water systems that these deadlines are upcoming, the system has to certify to EPA that they've performed their risk assessments, and submit their emergency response plan. One reason for this change is the impact a large earthquake would have on a community's drinking water.

Ryan says the two immediate actions a water system must take in an emergency are to sample the water to determine the scope of the problem and provide public notice.

9. Rural Water Association Report – Dale Pierson, Executive Director

Dale Pierson handed out a pamphlet to the Board outlining what RWAU does. RWAU's main purpose is to provide training and assistance to water systems, and aid DDW to provide clean drinking water to the State of Utah. Dale introduced some of his staff; Brian Pattee, compliance circuit rider; Terry Smith, management technician; and Curt Ludvigson, development specialist. RWAU has also been working on the AWIA changes and ensuring that water systems will comply with the new requirements.

Dale mentioned that the RWAU report is in the Board packet, which contains a report from each of the three aforementioned staff, Brian, Terry and Curt.

10. Open Board Discussion – Roger Fridal

This item will be moved to the beginning of the agenda starting with the January meeting.

11. Directors Reports

A. Enforcement Report

In the packet is an enforcement report of the water systems that are currently under enforcement with the Division. Marie said one thing to know about the report is that the Division has increased how many systems are under formal enforcement through an administrative order or corrective action, which the system participates in. The Division has been working hard over the last few years to decrease the number of not approved systems on the list and they're now down to 30 not approved water systems from 60.

With IPS 2020 upcoming, there are several systems that are poised to become not approved in January 2020, when the new rule is implemented. The Division has been working throughout the year with these systems to keep them from going not approved; but the Board should anticipate that at the January meeting the enforcement report will be longer.

Marie explained that being not approved means the system must provide public notification to all customers of their unapproved status and also must submit to the Division within 90 days a plan detailing how the system will get themselves back to approved. If the system fails to do these things then enforcement can escalate to formal enforcement, fines and court actions.

The Division has recently been receiving the lead and copper test results from water systems, which are on a three-year sampling rotation. A handful of systems have exceeded the 90th percentile for the lead and copper rule. In light of this the Division will be requiring additional action and if the systems don't fulfill the actions in the given timelines they will also find themselves on the enforcement report.

Scott Morrison asked if the LHDs help the Division with the enforcement process. Marie said the Division notifies the LHDs as the water system moves through the process. The Division relies on the LHDs to confirm if public notification has occurred. The LHDs are helpful with the non-community and non-transient systems because often those are businesses and if they're not approved than some LHDs are willingly to rescind business permits such as a food handling permit.

David asked whether LHDs can prohibit further connections for not approved community water systems. Marie said yes, some LHDs have done that for water systems that were not approved for a long time and stopped issuing building permits.

B. Customer Complaint Policy

Presented to the Board was a draft policy for handling water related customer complaints. At the last meeting when the Board approved the table of violations to be used for the IPS rule, they noticed that there was a violation called M016. M016 is a deficiency if a system is unresponsive to their customers regarding customer complaints. The Board asked the Division to put together an internal policy detailing how we would implement that deficiency. Marie clarified that the policy can be changed at any time. The policy is how the Division has handled customer complaints all along; the deficiency is new.

Barbara inquired if there were guidelines for a timely response and Marie replied that it depends on the complaint. For example, if a system receives a complaint of someone that is ill, the Division expects the system to respond within hours. The Division hopes the water system keeps track of where the complaints are coming from so the system can start to see a possible pattern and further determine an issue. Marie clarified for Jeff that this deficiency will occur when the Division learns that a water system is not being responsive to its customers and will not become a part of the sanitary survey.

C. Other

Marie presented to the Board an update on the Sandy City fluoride overfeed event and the secondary event of high lead and copper in the system that occurred in February 2019. The Division has recently learned that Sandy City had a commonplace fluoride feed wherein they received a bulk delivery and put it into a bulk tank, then there is a transfer pump from the bulk tank to the day tank. The feed pump then pumps from the day tank into the distribution system. The day tank for the Paradise Valley Well in Sandy City contained, at the time, about 33 gallons of fluoride. The Division requires this design specifically to protect against overfeed events so if that feed pump malfunctions or is set too high, it can only feed out what is in the day tank.

What happened in Sandy City was that this particular well site was offline and it was winter, so there was low flow going through the system and no flow going through the well site. The control pump failed. The Division learned that particular pump had four lock out controls; 1) it would not start if there was a leak detected, 2) if the well was not on and no flow going through, 3) if the emergency shower switch was activated, or 4) if there's a SCADA alarm. At the time of the event, at no point was a leak detected, so that lock out control was deactivated. Next their 'hand off' auto switch was switched to 'hand' in December 2018 and that overrode the fact that the well was off. Then on the day of the event the shower switch, which had been stuck closed for an undetermined amount of time, for an unknown reason cleared which overrode the shower switch from keeping the pump on. Finally, there was a SCADA alarm that was keeping the pump off. On February 6, 2019 there was a comm failure at the site and

the operator came in that morning and cleared all comm failures which cleared the SCADA alarm. That was the last thing holding the pump off and so the pump started at that point. The pump turning on was not associated with a power outage nor the snow storm.

Sandy City has contracted with Hansen Allen and Luce to do a modeling of the event. Marie gave an overview of their graphic detailing the time, peak and concentration of fluoride entering particular residences. Sandy City still owes the Division a final report and a corrosion control study.

12. Public Comment Period

No public comments were made. Roger would like to move the public comment period to the beginning of the agenda, which will happen at the January meeting.

13. Other

Upon Marie inquiring, the Board would like to keep Current News a part of the Board packet.

14. Next Board Meeting:

Date: Tuesday January 14, 2019
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

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

The meeting adjourned at 3:17 PM.

Agenda Item 5(A)

DIVISION OF DRINKING WATER

STATE LOAN FUNDS

AS OF November 30, 2019

	SUMMARY		
	Total State Fund:	$13,211,136	
	Total State Hardship Fund:	$2,324,216	
	Subtotal:	$15,535,352	
LESS AUTHORIZED	Less:		
	Authorized Loans & Closed loans in construction:	$12,006,000	*(see Page 2 for details)*
	Authorized Hardship:	$2,130,790	
	Subtotal:	$14,136,790	
	Total available after Authorized deducted	**$1,398,562**	
PROPOSED	**Proposed Loan Project(s):**	**$0**	*(see Page 2 for details)*
	Proposed Hardship Project(s):	**$0**	
	Subtotal:	**$0**	
AS OF:			
November 30, 2019	**TOTAL REMAINING STATE LOAN FUNDS:**	**$1,205,136**	
	TOTAL REMAINING STATE HARDSHIP FUNDS:	**$193,426**	

Total Balance of ALL Funds: **$1,398,562**

Projected Receipts Next Twelve Months:		
and Sales Tax Revenue		
Annual Maximum Sales Tax Projection	**$3,587,500**	
Less State Match for 2020 Federal Grant	($2,300,000)	
Less State Match for 2019 Federal Grant	$0	
	$0	
Less Appropriation to DDW/Board	($1,010,800)	
SUBTOTAL Sales Tax Revenue including adjustments:		$276,700
Payment:		
Interest on Investments (Both Loan and Hardship Accounts)		$360,000
Principal payments		$3,113,654
Interest payments		$786,064
Total Projections:		$4,536,418

Total Estimated State SRF Funds Available through 11-30-2020	**$5,934,980**

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF November 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
Paunsaugunt Cliffs	3S1728	20,740	Aug-19			20,740	20,740
Virgin Town (trans to state loan fr. 2nd)	3S1702	1,200,000	Jan-19		400,000	400,000	800,000
Genola City	3S1732	2,849,400	Aug-19		2,273,000	576,400	2,849,400
Bear River WCD- Collinston	3S1740	100,000	Nov-19		50,000	50,000	100,000
							0
Subtotal Loans and Grants Authorized					9,456,000	1,788,140	11,244,140
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
							0
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
Pleasant Grove 2% int, 20 yrs	3S255	2,300,000	May-18	Jan-19	1,950,000		1,950,000
							0
							0
Subtotal Closed Loans Partially Disbursed					2,510,000	117,150	2,627,150
TOTAL AUTHORIZED/PLANNING/OR CLOSED BUT NOT YET FUNDED					$12,006,000	$2,130,790	$14,136,790
PROPOSED PROJECTS FOR NOV 2019							
							0
							0
							0
							0
							0
Total Proposed Projects					0	0	0

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

	5235 Loan Funds	5240 Interest (use for Grants)	Total
Cash:	$13,211,136	$2,324,216	$15,535,352
Less:			
Loans & Grants authorized but not yet closed (schedule attached)	(9,496,000)	(2,013,640)	(11,509,640)
Loans & Grants closed but not fully disbursed (schedule attached)	(2,510,000)	(117,150)	(2,627,150)
Proposed loans & grants	0	0	0
Administrative quarterly charge for entire year	(1,010,800)		(1,010,800)
Appropriation to DDW	0		0
FY 2020 Federal SRF 20% match	(2,300,000)		(2,300,000)
FY 2019 Federal SRF 20% match	0		0
	(2,105,664)	**193,426**	**(1,912,238)**
Projected repayments during the next twelve months			
Thru 11-30-2020			
Principal	3,113,654		3,113,654
Interest		786,064	786,064
Projected annual investment earnings on invested cash balance		360,000	360,000
Sales Tax allocation thru Nov-30-2020	3,587,500		3,587,500
Total	**$4,595,489**	**$1,339,490**	**$5,934,980**
* All interest is added to the Hardship Fee account.			

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

FIRST ROUND FUND	
1997 thru 2019 SRF Grants	
Net Federal SRF Grants:	$179,244,401
Total State Matches:	$41,251,100
Closed Loans:	-$210,194,701
Total Grant Dollars:	**$10,300,800**

FEDERAL SECOND ROUND FUND	
Principal Repayments	
Principal (P):	$64,131,860
Interest (I):	$18,595,595
Total P & I:	**$82,727,456**

Earnings on Invested Cash Balance	
Total:	**$1,215,850**

Hardship Fund	
Total:	**$1,366,785**

SUMMARY	
Total Federal State Revolving Fund:	$94,244,106
Total Federal Hardship Fund:	$1,366,785
Subtotal:	$95,610,891

LESS AUTHORIZED & PARTIALLY DISBURSED			
Less:			
	Authorized & Partially Disbursed Closed Loans:	$90,020,936	*(see Page 2 for details)*
	Authorized Federal Hardship:	$383,660	
	Subtotal:	$90,404,596	

PROPOSED			
	Proposed Federal Project(s):	**-$8,227,000**	*(see Page 2 for details)*
	Proposed Federal Hardship Project(s):	**$0**	
	Subtotal:	**-$8,227,000**	

AS OF:	**November 30, 2019**		
		TOTAL REMAINING LOAN FUNDS:	**$12,450,170**
		TOTAL REMAINING HARDSHIP FUNDS:	**$983,125**

Total Balance of ALL Funds after deducting proposed actions: $13,433,295

Projected Receipts thru November 30, 2020		
2020 Fed SRF Grant	$8,100,000	
2020 State Match	$2,200,800	
Interest on Investments	$2,016,000	
Principal Payments	$7,053,203	**Receive 60% in January**
Interest	$1,251,538	
Hardship & Technical Assistance fees	$249,958	
Fund 5215 principal payments	$95,800	
Total:	$20,967,299	

Total Estimated Federal SRF Funds Available through: 11/30/2020 **$34,400,594**

DIVISION OF DRINKING WATER
FEDERAL STATE REVOVING FUND

PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF November 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	
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	
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	
Central Utah WCD-Duchesne Valley WTP	18,000,000	1.25% hgf, 30 yrs	3F1731	Aug-19	Jan-20	18,000,000		18,000,000	
Central Utah WCD	10,000,000	1.25% int/fee, 20 yrs (portfolio)	3F1741	Nov-19		10,000,000		10,000,000	
								0	
					TOTAL CONSTRUCTION AUTHORIZED:	$ 70,214,000	$ 1,691,000	$ 71,905,000	$ -
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	78,520
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
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	$383,660
					TOTAL CONSTRUCTION & PLANNING:			$90,020,936	$383,660
					AVAILABLE PROJECT FUNDS:				$4,223,170
					AVAILABLE HARDSHIP FUNDS:				$983,125
PROPOSED PROJECTS FOR JAN 2020:									
Hyde Park City	5,994,000		3F1744	Jan-20		5,000,000		5,000,000	
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)	
					TOTAL PROPOSED PROJECTS FOR THIS MEETING:	-$8,227,000	$0	-$8,227,000	$0
*RWAU hardship grant is being disbursed monthly									
					TOTAL FUNDS AFTER PROPOSED PROJECTS ARE FUNDED:				$12,450,170
					TOTAL FUNDS AFTER PROPOSED HS PROJECTS ARE FUNDED:				$983,125
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 November 30, 2019

	Loan Funds 1st Round	Loan Payments 2nd Round Principal	Loan Payments 2nd Round Interest	Loan Payments Hardship Fund	TOTAL
Federal Capitalization Grants and State 20% match thru 2015	$220,495,501				
Earnings on Invested 1st Round Funds			1,215,850		
Repayments (including interest earnings on 2nd round receipts)		64,131,860	18,595,595	1,366,785	305,805,592
Less:					
Closed loans and grants	-210,194,701				-210,194,701
SUBTOTAL of Funds Available	**$10,300,800**	**$64,131,860**	**$19,811,445**	**$1,366,785**	**$95,610,891**
Loans & Grants authorized but not yet closed or fully disbursed	-69,125,000	-20,726,100	-169,836	-383,660	-90,404,596
SUBTOTAL of Funds Available less Authorized	**-$58,824,200**	**$43,405,760**	**$19,641,609**	**$983,125**	**$5,206,295**
Future Estimates:					
Proposed Loans/Grants for current board package	8,227,000			0	8,227,000
SUBTOTAL of Funds Available less Proposed Loans & Grants	**-$50,597,200**	**$43,405,760**	**$19,641,609**	**$983,125**	**$13,433,295**
PROJECTIONS THRU November-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		7,149,003	1,251,538	249,958	8,650,499
Projected annual investment earnings on invested cash balance		1,620,000	360,000	36,000	2,016,000
TOTAL	**-$40,296,400**	**$52,174,763**	**$21,253,147**	**$1,269,083**	**$34,400,594**

Agenda Item 5(B)

Project Priority List
Presented to the Drinking Water Board
January 14 2020

DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST

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

Hyde Park City is being added to the Project Priority List with 4.7 points. Their project consists of a 2MG tank, transmission line, distribution line and booster pump stations.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board approve the updated Project Priority List.

December 17, 2019

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$665,122,301** **Total Needs, incl. Recent funding** **$584,537,434** **Authorized** **$364,335,491**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
N				4.7	Hyde Park City	Cache		2 MG tank, trans & dist line, booster pump	$5,994,000	$5,000,000	
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	$18,000,000	$18,000,000
A				25	Greenwich	Piute	67	Chlorination building	$130,000	$130,000	$130,000
A				24.3	West Corrine	Box Elder	1,275	Spring redevelopment and transmission line replacement	$533,075	$479,767	$500,000
A				22.5	Central Utah WCD	Utah		Programmatic financing	$10,000,000	$10,000,000	$10,000,000
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				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	$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**

EMERGENCY FUNDING

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

Hyde Park City
Presented to the Drinking Water Board
January 14, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Hyde Park City is requesting $5,000,000 in financial assistance to fund numerous system improvements from their Master Plan including a 2 MG tank, a transmission line, distribution line, dedicated pumping line and 2 booster pump stations. Hyde Park City scored 4.7 points on the project priority list.

STAFF COMMENTS:

The local MAGI for Hyde Park City is approximately $64,398 (140% of the state MAGI), their after project water bill is 0.76% of the local MAGI. Therefore they do not qualify as a hardship community to receive additional subsidy.
Hyde Park City is also contributing $994,000 towards the project for a project total of $5,994,000. Hyde Park City does qualify for a slight reduction in interest rate based on the financial needs points which include a rate structure to encourage conservation and the amount of local contribution to the project.
Based on the financial evaluation, Hyde Park City is collecting $31.33 monthly water rate per connection and will need to increase the water bill to fund this project.

Option #	Description	Repayable Loan Amount	HGA Fee	Term	Principal Forgiveness	Monthly Water Rate	% Local MAGI
1	Full Loan	$ 5,000,000	2.91%	20 yrs	0	$40.89	0.76%

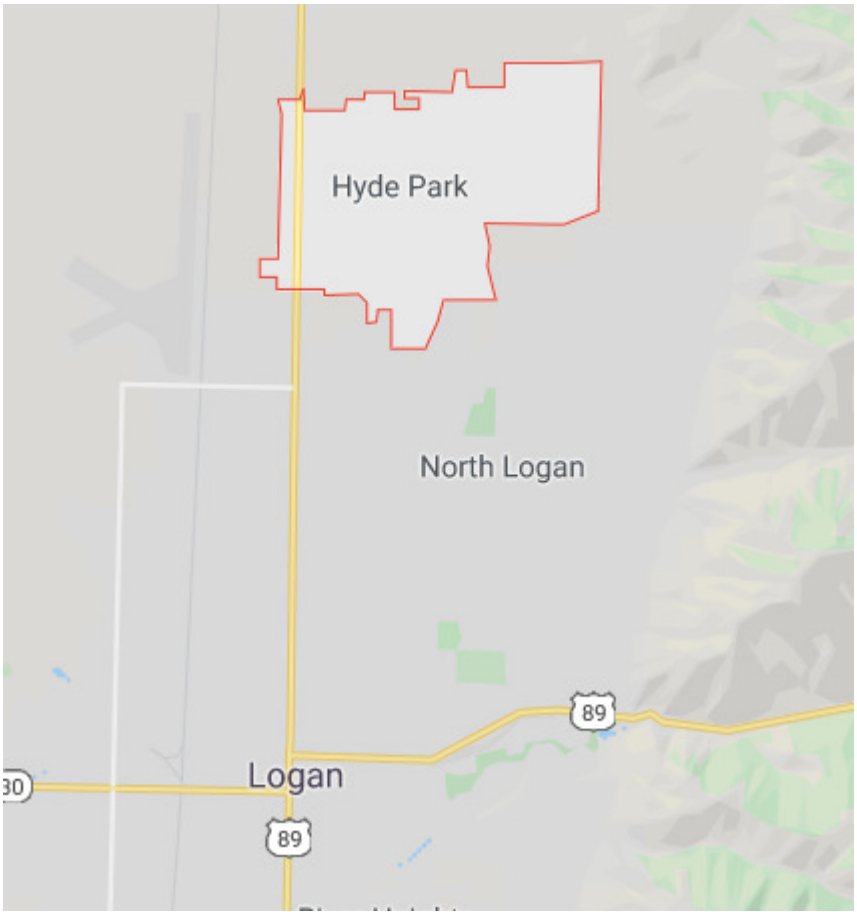
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of $5,000,000 to Hyde Park City at 2.91% Hardship Grant Assessment Fee, in lieu of interest, for 20 years.

APPLICANT'S LOCATION:

Hyde Park City is located in Cache County approximately 5 miles North of Logan.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

A 2 MG storage tank, 10,000 ft of 12" transmission line, 7,000 ft of 16" distribution line, 2,900 ft of 6" dedicated pumping line and 2 booster pump stations.

POPULATION GROWTH:

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

Year	Population	Connections
2020	4,600	1,594
2025	4,824	1,672
2030	5,654	1,959
2035	6,121	2,121
2040	6,627	2,296

COST ALLOCATION:

The cost allocation proposed for the project is shown below:

Funding Source	Cost Sharing	Percent of Project
DWB Loan	$5,000,000	83%
System contribution	$994,000	17%
Total:	$5,994,000	100%

IPS SUMMARY:

Code	Description	Physical Facilities	Quality & Monitoring	Significant Deficiency Violations
M001	Current Emergency Response Program	-10		
	Total = -10	**-10**	**0**	**0**

CONTACT INFORMATION:

APPLICANT:	Hyde Park City 113 East Center Street PO Box 489 Hyde Park, UT 84318 435-563-6507
PRESIDING OFFICIAL & CONTACT PERSON:	Bret Randall City Council Member 113 East Center Street PO Box 489 Hyde Park, UT 84318 435-994-1709 bretrandall@gmail.com
CONSULTING ENGINEER:	Scott Archibald Sunrise Engineering 26 South Main Street Smithfield, Utah 84335 435-563-3734 sarchibald@sunrise-eng.com
BOND ATTORNEY:	Eric Johnson Blaisdell, Church and Johnson LLC 5995 South Redwood Road Taylorsville, Utah 84123 801-200-5910 eric@bcjlaw.net
RECORDER:	Donja Wright 435-563-6507 x 11 donja.w@hydeparkcity.org

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Hyde Park
COUNTY: Cache
PROJECT DESCRIPTION: 2MG tank, trans line

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	4,600	NO. OF CONNECTIONS:	1835 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$31.33 *			PROJECT TOTAL:	$5,994,000
CURRENT % OF AGI:	0.58%	FINANCIAL PTS:	27	LOAN AMOUNT:	$5,000,000
ESTIMATED MEDIAN AGI:	$64,398			PRINC. FORGIVE.:	$0
STATE AGI:	$45,895			TOTAL REQUEST:	$5,000,000
SYSTEM % OF STATE AGI:	140%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.58%		2.91%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.58%		2.91%
REQUIRED DEBT SERVICE:	$250,000.00	$354,356.82		$333,288.27
*PARTIAL COVERAGE (15%):	$37,500.00	$53,153.52		$49,993.24
*ADD. COVERAGE AND RESERVE (10%):	$25,000.00	$35,435.68		$33,328.83
ANNUAL NEW DEBT PER CONNECTION:	$170.30	$241.39		$227.04
O & M + FUNDED DEPRECIATION:	$483,784.00	$483,784.00		$483,784.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$263.64	$263.64		$263.64
TOTAL SYSTEM EXPENSES	$796,284.00	$926,730.03		$900,394.34
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$36.16	$42.09		$40.89
% OF ADJUSTED GROSS INCOME:	0.67%	0.78%		0.76%

* Equivalent Residential Connections

Agenda Item 5(C)(iii)(a)

City of Bluffdale
Presented to the Drinking Water Board
January 14, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE

APPLICANT'S REQUEST:

The City of Bluffdale was authorized $6,000,000 in financial assistance on June 11, 2019 to fund the construction of a new 4 million gallon storage tank and installation of 7,000-linear feet of transmission line.

STAFF COMMENTS:

Staff has received an e-mail from Bluffdale City declining funding from the Drinking Water Board.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board de-authorize a loan of $6,000,000 at 2.00% hardship grant assessment fee for 20 years to the City of Bluffdale.

Heather Pattee <hbobb@utah.gov>

Bluffdale

1 message

Bruce Kartchner <bkartchner@bluffdale.com> Mon, Nov 4, 2019 at 3:27 PM
To: Heather Pattee <hbobb@utah.gov>

Heather,

Mark asked me to reach out to you regarding the Division of Drinking water loan for Bluffdale. We have decided to not use the loan for this project. We appreciate the Board's support for our City and our water projects. We likely will reach out again for funding options for future projects.

Thank you for all of your help.

Sincerely,

Bruce M. Kartchner, CPA

Administrative Services Director

BLUFFDALE
EST. 1848

Phone: 801-254-2200 Ext 405

Agenda Item 5(C)(iii)(b)

City of Kanab
Presented to the Drinking Water Board
December 11, 2019

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE

APPLICANT'S REQUEST:
The City of Kanab was authorized funding in the amount of $7,227,000 to fund the construction of two new 2MG storage tanks to replace two existing tanks that are in deteriorating and failing condition. The City also intends to replace some existing water line.

STAFF COMMENTS:

Staff received an e-mail from Cody Howick of Civil Science Engineering informing staff that Kanab City has decided to pursue funding with USDA Rural Development and wish to decline the funding from the Drinking Water Board.

STAFF RECOMMENDATION:

The Drinking Water Board de-authorize a loan of **$7,227,000 at 2.5% hardship grant assessment fee for thirty (30) years** to the City of Kanab.

Heather Pattee <hbobb@utah.gov>

RE: Kanab City

1 message

Cody Howick <chowick@civilscience.com> Wed, Oct 23, 2019 at 1:57 PM
To: Heather Pattee <hbobb@utah.gov>
Cc: "Joe Decker (jdecker@kanab.utah.gov)" <jdecker@kanab.utah.gov>

Heather,

As we discussed previously on the phone, the City has been exploring several different funding options for these water system improvements. Just recently, the City has decided to take a USDA RD Loan/Grant for the project. We appreciate the time and effort of the board and the staff, but at this time we will politely decline the loan from the Division of Drinking Water, but look forward to working with you in the future. If you need an official notice of some sort, please let me know.

Thanks,

Cody

CivilScience
Engineers | Surveyors | Solutions
1453 S Dixie Drive, Ste 150
St. George, UT 84770
435 986 0100 x308 w

Cody Howick, P.E.
Sr. Project Manager
435 773 3120 c

Agenda Item 8

DRINKING WATER BOARD PACKET
Rural Water Association Report

Table of Contents

Rural Water Association of Utah

Drinking Water Board Report, Activities Overview

Employee/Position: Terry Smith - Management Technician

Report Date Range: October - December, 2019

October -

Onsite:

7th; Met with owners of Mosida Farms to go over compliance issues planning in regards to becoming a public water system.

22nd; Turn About Ranch. Quick overview of water math, then proctored water certification test to address lack of certified operator significant deficiency.

28th; Brian Head. Met with Public Works Director to look over the sources/distribution system in regards to chlorine treatment installation planning.

30th; Kaysville City. Met with administration staff to discuss capital facilities and water rate revision evaluation.

Offsite:

- Hidden Lake Association (22029), sustainability planning.
- Randolph Town, sustainability planning and rate revision.

November -

Onsite:

19th, presenting at Cross Connection Administrator CEU training - St. George.

21st, proctor certification test - Hurricane City

26th, proctor three operator certification tests - Washing Co. WCD.

Offsite:

- Valle Del Padres (07061), compliance and sustainability planning. Explanation on how to address deficiencies.
- Church Wells, sustainability, budget and rates planning.
- Wanship Mutual Water, assistance in addressing deficiencies related to the IPS 2020 system.
- Kaysville City - capital facilities and rates planning.
- Randolph Town, sustainability planning and rate revision project continued.
- Contacting and advising, water systems over the compliance limit on the new IPS 2020 scoring system.

December -

Onsite:

10th,Grand Water had asked if we would conduct an in-depth training on control valve O&M. I setup and assisted other staff members in conducting this training for systems in the area (Moab, Grand, Green River, Thompson Water).

16th, Escalante Valley Housing - compliance assistance in resolving deficiencies related to IPS.

19th, Tooele City - presenting at a cross connection program administration training. Attendees earned CEU's in order to renew their certification

Offsite:

- Contacting and advising, water systems over the compliance limit on the new IPS 2020 scoring system.
- Contacting and advising, water systems over the compliance limit on the new IPS 2020 scoring system.
- Willow Creek Water Company - provided advice and support in locating an attorney to transition from the developer to\form an HOA.
- Revising and updating our control valve presentation and preparing valves for the hands-on portion of the training.

Rural Water Association of Utah

Drinking Water Board Report - Activities Overview

Employee/Position: BRIAN PATTEE, Compliance Circuit Rider/Training Supervisor
Report Date Range: October 18th 2019—December 20th 2019

October 18th thru October 31st 2019

Onsite:

- Cottonwood Coves – IPS compliance, Cross Connection control
- Angel Springs - IPS , Cross Connection Control
- Bear Paw Lakeview Resort- Tank Hatch Assessment
- Quality Inn at Bryce – MRDLs & Tank Hatch Issues
- Hinkley – Cross Connection Hazard Assessment

Offsite or Direct Contact w/ Operator:

- Angel Springs - IPS , Cross Connection Control
- Ruby,s Inn – Cross Connection Program Assistance
- Tropic – Cross Connection Program Assistance
- Cottonwood Coves – IPS compliance, Cross Connection control
- Summit Chateau at Brian Head – IPS compliance, Assistance
- Canaan Springs – IPS Spoke with Operator

DDW- IPS 2020 Coordination

DDW- Cross Connection Control Commission Meeting

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

Attended Utah Water Users Forum

November 1st thru November 30th 2019

Onsite:

- Eagle Mtn. City – Cross Connection Program, Hazard Assessment of WasteWater Treatment Facility.
- Summit Vista – WTTC meeting , All regulatory Requirements
- Saint George, Washington,- Cross Connection Control Program Training

Offsite or Direct Contact w/ Operator:

- Canaan Springs- IPS Review, Violations Review.
  - Croyden – Source Protection Issues
  - Bear Paw – Violation assistance
  - Lewiston – CCC Program review
  - Wanship- IPS violation review
  - Pineview Homeowners- IPS violation assistance
  - Bryce Canyon Pines- Violation Resolution Submission

- Quality Inn at Bryce- Violation Resolution Submission
- Wasatch Mtn. State Park – IPS Issue Notification
- UDOT Reststops (Shingle Creek) L 2 and Misc. DBI Inc.

Instructed Cross Connection Control Workshop Saint George – 20 Systems
ACS meeting – Attend and Participate
Operator Certification Program Course Restructuring.
Cross Connection RWAU Training Committee Planning
Emergency Response Workgroup – Attend & Participate
RWAU/DDW – Managers Meeting

Brian Pattee

December 1st thru December 20th 2019
Onsite:

- Summit Vista – Sampling Instruction & WTTC Check List
- Erda Acres - Bac T , Chlorination , System Contamination Issues
- Price City – Cross Connection Control Program Training

Offsite: or direct Contact with Operator:

- Cottonwood Coves – sampling questions
- Hinkley – CCC Regional Administrator
- Moab – CCC Training scheduling
- Scofield - IPS Issues
- Madsen Bay – IPS Issues

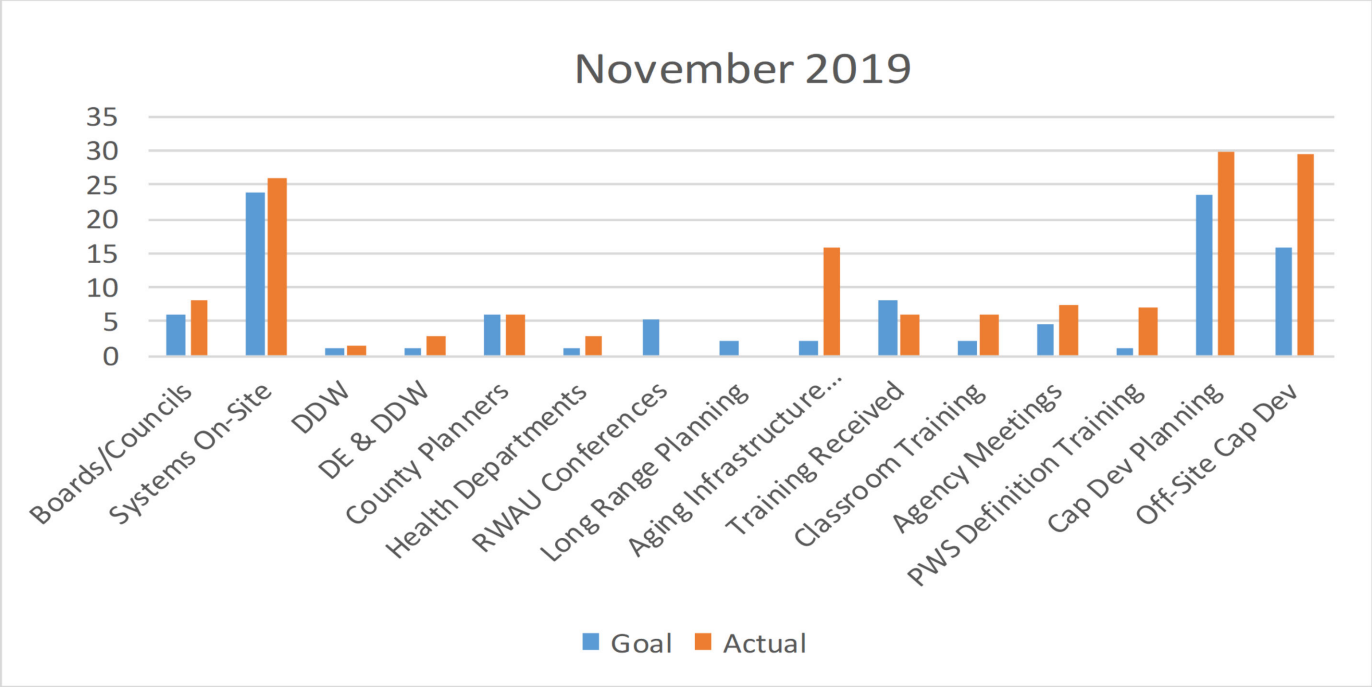
Price City Cross Connection Control Program Workshop, 20 Systems
Tooele Cross Connection Control Workshop 30 plus Systems

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	8
Systems On-Site	24	26
DDW	1	1.5
DE & DDW	1	3
County Planners	6	6
Health Departments	1	3
RWAU Conferences	5.33	0
Long Range Planning	2	0
Aging Infrastructure Planning	2	16
Training Received	8	6
Classroom Training	2	6
Agency Meetings	4.5	7.5
PWS Definition Training	1	7
Cap Dev Planning	23.5	30
Off-Site Cap Dev	16	29.5
Total	**103.33**	**149.5**

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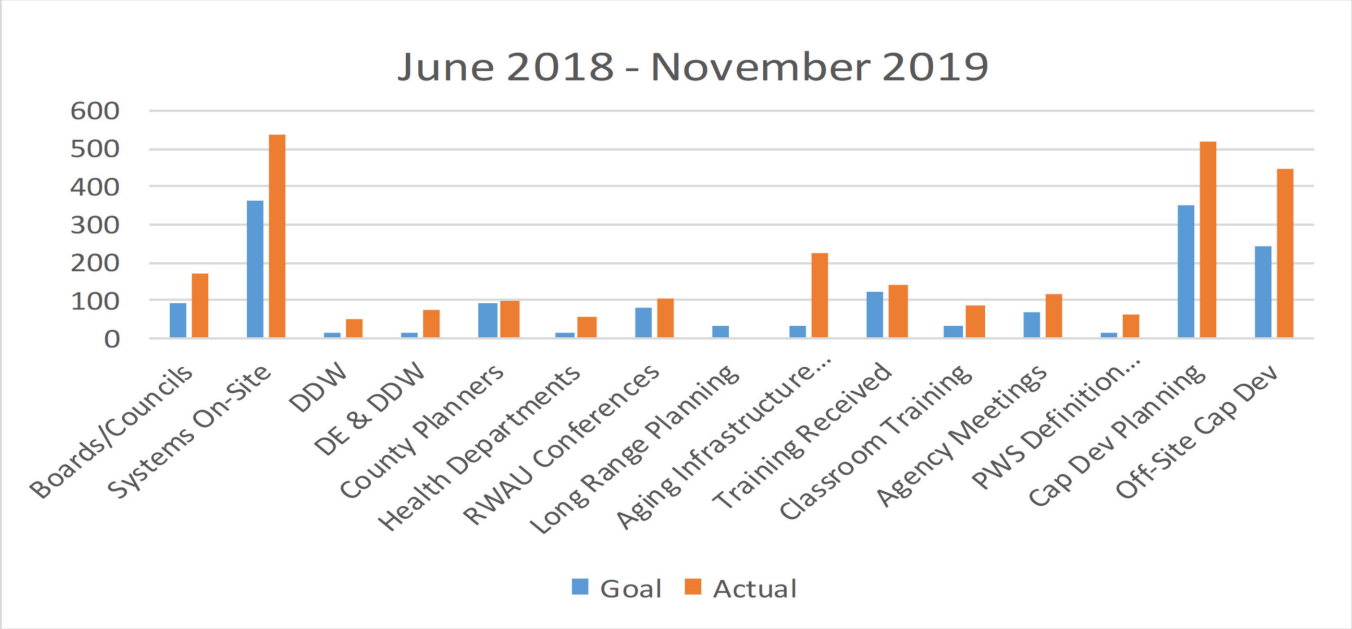

Work Performed	Goal	Actual
Boards/Councils	102	168
Systems On-Site	408	538.25
DDW	17	53.5
DE & DDW	17	76.5
County Planners	102	100.75
Health Departments	17	57.25
RWAU Conferences	90.61	104
Long Range Planning	34	0
Aging Infrastructure Planning	34	222
Training Received	136	143.5
Classroom Training	34	87.5
Agency Meetings	76.5	116.75
PWS Definition Training	17	65
Cap Dev Planning	399.5	521.25
Off-Site Cap Dev	272	446.75
Total	**1756.61**	**2701**

RURAL WATER ASSOCIATION OF UTAH
76 Red Pine Drive • Alpine, UT 84004 • Phone: 801-756-5123 • Fax: 801-756

On-Site Assistance & Work Performed

Duchesne	Training on Aging Infrastructure and system needs
Jensen	Working on Budget and Rates analysis
Johnson Water	Training on Aging Infrastructure and system expansion
Wellington	Explanation of funding possibilities for needed projects
Castle Valley SSD	Safety Training
Price	Investigating training facilities that we could use
Cottonwood Mutual Water	Training on rate structuring for residential vs commercial users
Elwood	Continued work on resolving IPS issues
Deweyville	Working on IPS issues to resolve
Loa	Working on applications for financial assistaance for upcoming project
Bicknell	Assisting with issues of one customer using very large quanities of water
Uintah	Work on Water Rates Analysis
Axtell SSD	Tour of the Spring areas and discussion of funding needs, planning needs and engineering
Alton	Assisting with resolving IPS issues
Hatch	Training on Aging Infrastructure and funding availability for water projects
Koosharem	Discussion and training on Aging Infrastructure and funding options
Mayfield	Assisted with drafting a contract for the town and a maintenance contractor
Paragonah	Discussion on Aging Infrastructure and system needs, engineering, funding availability and qualifications for grants
Minersville	Discussed a project they are anticipating and the MAGI requirements
Leeds	Meeting and discussion on rate structuring to meet funding requirements
Summit County Service Area #3	Working on Commercial Rates analysis

Agency & Other Meetings

Entity	Hours
Rural Development	3.0
DDW	1.5
Division of Water Resources	1.5
Division of Water Rights	1.5

Agenda Item 9(A)

Enforcement Report As Of December 12, 2019						
PWS ID	PWS Name	PWS Type	Pop Served	IPS Pts	Rating	Rating Date
Finalized AO						
UTAH09034	BEAR PAW LAKEVIEW RESORT	Non-Community	80	36	Not Approved	03/31/2016
UTAH11043	OLD MEADOWS	Community	48	110	Not Approved	04/18/2017
UTAH10033	SORREL RIVER RANCH	NTNC	260	-5	Not Approved	07/26/2017
UTAH18028	SANDY CITY	Community	99750	2	Approved	03/11/1980
UTAH25124	ALPINE COVE	Community	230	105	Not Approved	3/4/2019
UTAH09069	PARADISE PARK	Non-Community	120	31	Not Approved	6/14/2018
UTAH25035	WILDWOOD SUBDIVISION	Non-Community	162	158	Not Approved	3/15/2018
UTAH22019	WANSHIP COTTAGES	Community	79	190	Not Approved	4/11/2019
UTAH25023	BRICKERHAVEN	Non-Community	150	113	Not Approved	9/5/2019
Corrective Action Systems						
UTAH25013	GOSHEN TOWN WATER SYSTEM	Community	925	161	Corrective Action	3/8/2016
UTAH25077	RIVERBEND GROVE, INC.	Non-Community	25	513	Corrective Action	12/13/2016
UTAH15038	TAGGARTS GRILL	Non-Community	60	135	Corrective Action	2/6/2018
UTAH09077	BRISTLECONE	Non-Community	180	37	Corrective Action	1/1/2019
UTAH26049	SWISS ALPINE	Community	300	75	Corrective Action	4/14/2016
UTAH23028	DELLE AUTO TRUCK STOP	Non-Community	138	94	Corrective Action	5/30/2019
UTAH22009	WEBER MEADOWVIEW	Non-Community	65	170	Corrective Action	5/30/2019
UTAH27077	MOUNTAIN SPRINGS WATER	Community	660	-10	Corrective Action	6/18/2019
UTAH26026	BRYANTS FORK SUMMER HOMES	Non-Community	50	-10	Corrective Action	6/11/2019
UTAH02078	M & J TRAILER HOME COMMUNITY	Community	27	10	Not Approved	8/20/2018
UTAH07067	SOUTH DUCHESNE	Community	128	70	Not Approved	4/24/2019
UTAH25133	JEHOVAHS WITNESS CHURCH	Non-Community	100	126	Corrective Action	9/16/2019
UTAH03006	COVE WATERWORKS	Community	52	80	Corrective Action	9/17/2019
UTAH22001	CLUFFWARD PIPELINE	Community	188	60	Corrective Action	9/30/2019
UTAH07061	VALLE DEL PADRES SUBDIV	Non-Transient	98	585	Not Approved	6/10/1999
Failure to Comply						
UTAH26073	DIAMOND HILLS ASSOCIATION	Non-Community	125	246	Not Approved	1/14/2010
Not Approved Systems						
UTAH09084	JNB MARINE	Non-Community	36	66	Not Approved	9/17/2002
UTAH11091	SUMMIT CHATEAU IN BRIAN HEAD	Community	80	121	Not Approved	3/1/2008
UTAH02069	SUNSET PARK WATER CO.	Community	44	70	Not Approved	5/29/2013
UTAH26074	SOAPSTONE SUMMER HOMES	Non-Community	110	100	Not Approved	4/3/2014
UTAH15001	CROYDON PIPELINE CORPORATION	Community	92	0	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	9	Not Approved	4/18/2017
UTAH26042	LITTLE DEER CREEK CAMP	Non-Community	60	40	Not Approved	11/1/2017
UTAH26061	CAMP ROGER YMCA	Non-Community	210	70	Not Approved	3/15/2018
UTAH09074	LAKE FRONT ESTATES	Non-Community	25	65	Not Approved	3/15/2018
UTAH18172	COTTON WOOD COVES	Community	250	-10	Not Approved	9/27/2018
UTAH03005	CORNISH TOWN WATER SYSTEM	Community	270	29	Not Approved	9/27/2018

UTAH22072	ECHO RESORT	Non-Community	915	37	Not Approved	9/27/2018
UTAH19037	WIND WHISTLE CAMPGROUND	Non-Community	39	-10	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	30	Not Approved	3/18/2019
UTAH12028	HOUWELINGS TOMATOES	Non-Transient	150	395	Not Approved	5/29/2019
UTAH09016	BLUE SPRUCE CG	Non-Community	30	11	Not Approved	8/19/2019
UTAH29086	PINE VIEW HOMEOWNERS	Community	105	151	Not Approved	9/17/2019
UTAH26050	BACK FORTY RANCH HOUSE	Non-Community	70	151	Not Approved	8/19/2019
UTAH25179	RIGTRUP EGG FARM	Non-Transient	35	319	Not Approved	10/2/2019
UTAH23069	ERDA WARD	Non-Community	600	40	Not Approved	10/2/2019
UTAH27093	CANAAN SPRINGS	Community	48	195	Not Approved	11/12/2019

Current News

Current News
Presented to the Drinking Water Board
January 14, 2020

DRINKING WATER BOARD PACKET
Current News

Table of Contents

122 Days: St. George Sets New Record For Longest Dry Spell In City History

By DAVID FUCHS • OCT 17, 2019

https://www.kuer.org/post/122-days-st-george-sets-new-record-longest-dry-spell-city-history#stream/0

It has been a year of extreme weather in St. George.

On the heels of the wettest winter and spring on record, the city has now gone 122 consecutive days without one hundredth of an inch of rain. It's the longest stretch without any measurable precipitation since the National Weather Service began keeping records for the city in 1893. The previous record of 121 days was set in 1929.

The city's dryness is part of pattern of abnormally dry weather across the southwestern United States brought on by the absence of the region's typical summer monsoons — an aberration that experts say is the direct result of climate change.

"What you see are these enhanced weather patterns: more extreme heat, more extreme drought," said Brian McInerney, hydrologist and climate expert with the National Weather Service. "And then when the wet periods do get there, much more intense rainfall. But those periods are becoming father and few between."

McInerney says extreme weather will only become more common in Utah as climate change intensifies, adding that the temperature is predicted to increase by 10 degrees fahrenheit statewide by the year 2100.

Despite the dry weather, Washington County's water supplies are still in good shape because of heavy rain and snowfall earlier this year, says Zach Renstrom, deputy general manager at the Washington County Water Conservancy District.

"At this point, we're still at a good level," he said. "But every day that goes by without any rain or precipitation is a little bit more sleep I lose at night."

Renstrom says that the county's soil is now extremely dry, which will make it difficult to capture any water that comes next winter.

> **Correction 1:45 p.m. 10/17/19:** A previous version of this article misspelled Zach Renstrom's last name.

Utah zip line operators win their land-use battle with Salt Lake water district

By Brian Maffly · Published: October 19 Updated: October 19, 2019

https://www.sltrib.com/news/environment/2019/10/19/utah-zip-line-operators/

When Steve and Connie Ault erected a milelong network of zip lines on their Provo Canyon property in 2012, they failed to get permission from the operators of a major water pipeline crossing the land, triggering a lawsuit from the Metropolitan Water District of Salt Lake and Sandy.

Providing water to some 400,000 Salt Lake County residents, the district has long held an easement along the entire 42-mile length of the Salt Lake Aqueduct from Deer Creek Reservoir to the mouth of Parleys Canyon.

The district's ensuing six-year legal battle with the Aults over the commercial zip line operation suffered a serious setback this week, when the Utah Supreme Court reduced the scope of the easement, concluding it does not give the district regulatory authority over land it does not own.

The ruling reverses a lower court's conclusion that the easement is 200 feet wide and enabled the district to block most development in the aqueduct corridor.

Contacted by phone Friday, Connie Ault said the decision came as a relief because it would protect her family's $500,000 investment in the property.

"It's absolutely ridiculous," she said of the legal action by water district officials. "They were taking away our property rights."

The five zip lines are the central amenity at Provo Canyon Adventures, which the Aults operate a few miles below Deer Creek Dam. The family bills the park as a "treetop canopy zip line tour."

"You'll experience breathtaking mountain scenery, wildlife, beautiful riverfront landscapes and mountain fresh air," states Prove Canyon Adventures' website. "Soar across the treetops and fly with the birds as you take in beautiful mountain vistas, stunning views of Mount Timpanogos and the Provo River."

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Daybreak residents worried about contaminated water, South Jordan officials say it's safe

By Tania Dean, KSL TV | Posted - Oct 21st, 2019 @ 8:55pm

https://www.ksl.com/article/46659632/daybreak-residents-worried-about-contaminated-water-south-jordan-officials-say-its-safe

SOUTH JORDAN — Dozens of Daybreak residents said they believe contaminated water is to blame for rashes, itchy skin and even severe burning.

Several of them tested their water with at-home test strips and said those tests came back positive for levels of chromium-6, which is a chemical that can cause cancer.

However, officials with the city of South Jordan conducted their own testing and said the water is safe.

Melissa Wagner lives in the Creekside area of Daybreak. She said she's concerned about rashes that developed on her 3-year-old son and 6-month-old baby.

"Oh my gosh, it's so much worse," Wagner said, pointing to her son's rash. "It is so much more inflamed than it was just recently and you can actually feel with your finger that it's all over."

Wagner believes the water is to blame for the rashes on both of her sons, and she's not alone.

"Everyone is very alarmed and there's a lot of people who have way more severe reactions," Wagner said. "It's very concerning to me to think about how bad the water must be if you're getting burn-like rashes from it."

Dozens of people commented on a Daybreak Facebook post, complaining of burning and itchy skin.

Several people, like Wagner, have even tested the water. They said it's coming back positive for chromium-6, which can cause skin irritation and even cancer. It's also a chemical brought to light by the movie Erin Brockovich.

"I mean I'm shocked. This is not a movie. This is real life. This is my real baby, this is my real son," Wagner said. "We bathe in it. We wash our clothes in it. We drink it."

South Jordan City officials tested the water as well. They checked three locations; the water source and two residences. But they say the tests came back negative for chromium-6.

“Our residents’ safety is our top priority and from the first concern that came out, we answered and got test results within 24 hours,” said city spokesperson Rachael Van Cleave. “The water in South Jordan City is safe. We are not concerned about it at all. Everybody can be happy with the water that we have here in the city.”

Folks like Wagner were happy to hear that but still want to figure out what is causing issues for so many people.

“I feel like obviously, it’s going to need some further testing but I really hope that it stays in the public eye and that all of this stays transparent and it doesn’t get swept under the rug,” Wagner said.

Van Cleave said sometimes at-home test strips are not very accurate but if anyone is still concerned about their water, they should notify the city.

Some of the residents who believe their water is contaminated said they will be hiring a professional company to do further independent testing.

Salt Lake City breaks ground on new $528 million water reclamation plant project

By Clara Hatcher · Published: October 22 Updated: October 23, 2019

https://www.sltrib.com/news/politics/2019/10/22/salt-lake-city-breaks/

Salt Lake City Mayor Jackie Biskupski clambered aboard an excavator in drying bed No. 7 of North Salt Lake's Water Reclamation Facility on Tuesday and ceremoniously deposited the first load of broken-up concrete into a readied dump truck.

The event marked the official beginning of construction on the largest public utilities project in Salt Lake City history outside the airport: a $528 million wastewater treatment facility.

"Most of us take for granted the vast amount of technical know-how and infrastructure that is required to treat and process our waste," Biskupski said. "We flush and, 'poof,' it's gone and we think nothing more about it."

But city leaders and staff have to pay attention to the system and know that the 55-year-old treatment plant now in use is growing more and more obsolete and, said Biskupski, "it's truly time to say goodbye."

The future treatment plant is designed to comply with updated water quality requirements that must be met by January 2025, and to construct a modern, sustainable facility.

This project will take an estimated six years to complete, during which current operations will remain in use.

"We're replacing the water treatment plant to continue to be good stewards of the Great Salt Lake, where our treated wastewater is discharged," said Laura Briefer, director of public utilities for the city.

Ahead of the groundbreaking, the federal Environmental Protection Agency invited Salt Lake City to apply for funding. Briefer said that if granted, a loan of up to $355 million from the Water Infrastructure Finance and Innovation Act (WIFIA), would help cover a good share of the cost.

"After looking at the financial strategy, we couldn't not apply," Briefer said later.

Salt Lake City's is one of 38 projects the EPA has invited for application.

If the loan is granted, the deal would ensure the project improves water quality and meets new standards for nutrient removal, which are a culprit for many water quality issues. Nutrients such as nitrogen and phosphorus can act like fertilizer when too many are added to bodies of water.

This spawns an excessive growth of algae and creates issues for water bodies — in this case, the Great Salt Lake.

Along with meeting the updated requirements, the new plant will adhere to seismic codes, something the existing plant does not do, said Jamey West, city water reclamation facility manager. It also would feature sustainable technology and a decreased footprint from 75 to 45 acres.

The updated facility will also improve the quality of life for the nearby Rose Park community by eliminating odor associated with the drying beds in use at the current plant. The switch will be to a mechanical, contained dewatering mechanism.

“We do understand that a new facility brings new challenges,” West said. “There will be new technologies and new equipment that some of us have never seen before and, much less, operated in the past.”

West says that staff will undergo training to ensure confidence in beginning operation at the new facility, but that’s a few years away. The initial challenge is to secure operations of the current, aging facility while the future plant is built onsite.

“Right now, we treat 30- to 33 million gallons on average every single day. Water doesn’t stop coming in. It’s truly critical that we treat it,” West said, adding that employees of the facility work 24/7 to make sure the operation keeps running smoothly.

“We want to incorporate new engagement with the public,” West said. “And, we want to emphasize the educational component. We do tours now, but we want to have elements that help educate where we get our water from.”

SLC breaks ground on new wastewater facility, a half-billion-dollar project that may increase rates

POSTED 5:03 PM, OCTOBER 22, 2019, BY ERIN COX

https://fox13now.com/2019/10/22/slc-breaks-ground-on-new-wastewater-facility-a-half-billion-dollar-project-that-may-increase-rates/

SALT LAKE CITY — Sitting in an excavator, Mayor Jackie Biskupski dropped the first pile of land into a dumpster, signifying the beginning of a new construction project.

Then taking a pickaxe, a line of public utility employees and the facility employees hit the ground with Mayor Biskupski — the groundbreaking ceremony for the new water reclamation facility.

Laura Briefer, the Salt Lake City Department of Public Utilities director, said the current facility is 55 years old and no longer up to code with its aging infrastructure.

“It doesn’t meet current seismic standards,” Briefer said.

The facility also doesn’t meet the water quality requirements and, Briefer said, it would almost cost more to try and fix the place up than build a new facility.

“Energy efficiency is one of those things that will be built into it,” she said. “Water efficiency and conservation will be built into this facility.”

The proposed plan moves the pump station closer to the facility and repurposes some of the buildings already on the land, not expanding beyond the already existing property lines.

“What you will see is this footprint will nearly shrink in half,” Biskupski said. “I think that in of itself is how much more efficient we’ll be and the odor will be much more contained than it is today.”

Along with applying for a federal grant, Briefer said they are budgeting $528 million dollars for the project by increasing rates.

Currently, the proposed rate changes would increase 18 percent for wastewater, 5 percent for water and 10 percent for stormwater.

“I think everyone would understand that if we waited until a disaster that would be hugely problematic,” Biskupski said. “It’s time. We know it’s time, and we’re going to take care of it.”

The half-billion-dollar construction project is the largest non-airport public works facility in the city.

The Salt Lake City Department of Public Utilities is the oldest retail water provider in the West.

South Jordan's water is safe to drink and use, new tests show

By Taylor Stevens ・Published: October 23 Updated: October 24, 2019

https://www.sltrib.com/news/politics/2019/10/24/second-round-tests-deems/

A second round of tests conducted by an independent laboratory on the water supply in South Jordan City came up clean, according to results released Wednesday afternoon.

After drawing samples from more than 20 sites and inspecting them for more than 30 different elements, including contamination by chromium-6, a metallic element that in excessive amounts can cause skin burns and more serious diseases, the city has determined its supply is not the cause of the skin problems some residents have complained about in recent days.

"We feel good about eliminating our water system as a source for these health concerns residents are experiencing," said Raymond Garrison, associate public works director for South Jordan City, in a video update posted to the city's website Wednesday afternoon.

That means the water is "safe to drink" and "safe to use," said Rachael Van Cleave, a spokeswoman with the southwest Salt Lake County city.

The water inspections began after several residents — two of them in Daybreak, one just outside and one in another area of the city — filed formal complaints to the city, while others raised concerns and questions on Facebook.

One of the Daybreak residents tested the water with a consumer test strip on Sunday and saw results indicating the presence of chromium-6. That resident also said family members had experienced skin irritation.

An initial test of the water gave early signs the water wasn't contaminated, but Van Cleave said the city wanted to "make sure we left no stone unturned with our testing."

The city initially reported an estimated cost for the tests at $6,000, but with rush fees and when all testing was completed, the cost ended up being more than $11,000, according to a news release from the city.

The city has invited the Jordan Valley Water Conservancy District to do its own independent testing, which Van Cleave told The Salt Lake Tribune is expected to be completed sometime Thursday.

The water in nearby Sandy was contaminated early this year after a fluoridation pump malfunctioned because of a power outage at one of the city's wells. The response to that incident

was much slower, with several residents expressing frustration that they were allowed to drink possibly tainted water for a week before they heard about problems with the water supply.

South Jordan's water testing has ruled out the possibility of over-fluoridation and also tested for chlorine, full metals and other chemicals.

While the source of residents' skin irritation remains unclear, the city is encouraging anyone experiencing symptoms to fill out a survey providing more information. The city plans to share those details with the Salt Lake County Health Department, which will be looking for trends "or anything they can pinpoint that's going on," Van Cleave said in the video.

Residents can do that at sjc.utah.gov/water-update.

Test results confirm South Jordan water is safe to drink following reports of health concerns

POSTED 8:03 PM, OCTOBER 23, 2019, BY FOX 13 NEWS, *UPDATED AT 08:04PM, OCTOBER 23, 2019*

https://fox13now.com/2019/10/23/test-results-confirm-south-jordan-water-is-safe-to-drink/

SOUTH JORDAN, Utah —After several tests from samples from multiple sites, the city South Jordan has confirmed their water is safe to drink and use.

Over two days of testing, 30 different elements at 20 different sites were tested and the results eliminated South Jordan water as a health concern for residents.

“Our water in South Jordan is safe to use and to drink,” said Rachael Van Cleave, public information officer for the City. “Our residents can feel comfortable with the quality of water we have in our City.”

The tests come after residents sent in health concerns to the Salt Lake County Health Department.

Some test results are still being processed but the city fully expects to have similar results.

South Jordan Residents can report any symptoms or concerns they may have. Residents can do that at http://sjc.utah.gov/water-update and click the “Report Symptoms,” button.

City water safe: South Jordan confirms second water test results

by: **Hailey Hendricks**

Posted: Oct 23, 2019 / 05:51 PM MDT / Updated: Oct 23, 2019 / 05:57 PM MDT

https://www.abc4.com/news/local-news/city-water-safe-south-jordan-confirms-second-water-test-results/

SOUTH JORDAN, Utah (ABC4 News) – Some residents living in the Daybreak community say they believe their city water is contaminated with chromium six after self-test water kits tested positive. The city has conducted two independent water tests, and both came back negative.

The first results were announced earlier in the week after concerns began surfacing on social media about water possibly causing rashes, itchy skin, and even severe burning.

The second results were confirmed to ABC4 News as soon as the city received word.

Rachael Van Cleave with South Jordan City said while results are coming back negative, she said they have taken action, as their residents' safety is top priority.

"We want to make sure we leave no stone unturned," Van Cleave said. "We want to make sure our residents feel safe and secure in their water supply, but also, we want to get to the bottom of the issue."

Garrett Macklin has been living in Daybreak since 2017 and said his wife has had a rash on her legs and mid-section. However, she is the only one in his family experiencing symptoms.

"My wife she's taken showers, she's taken baths and she's developed a little bit of a rash," Macklin said.

He said after the recent discussion of these symptoms began surfacing on a Facebook page about other residents experiencing similar issues, his wife, like many others, use a self-test water kit.

"She tested both stripes and both stripes came up with a little bit of chromium six and you know, it's kinda concerning," Macklin said.

While the Macklin's home test tested positive, other residents say they haven't had any issues with their water affecting their skin.

"We haven't experienced any changes in our water, we've been showering just fine," said another Daybreak resident Chad Williams. "You know, I've got pretty sensitive skin and so something like this definitely would have an impact."

Williams said he's aware of the symptoms some residents are experiencing, however, he's not concerned as he feels the city is properly treating concerns.

While both of South Jordan City's test results have come back negative, Van Cleave said the city is working with the Salt Lake County Health Department and are asking residents to self-report any symptoms they're experiencing by clicking here.

UDOT agrees to overhaul its stormwater practices to settle suit filed by feds

By Brian Maffly

・Published: October 25
Updated: October 25, 2019

https://www.sltrib.com/news/environment/2019/10/25/udot-agrees-overhaul-its/

As part of a deal to settle a major lawsuit brought by federal environmental regulators, the Utah Department of Transportation is agreeing to clean up the way it manages and monitors stormwater runoff from road construction sites and salt storage facilities.

The U.S. Environmental Protection Agency documented various violations of UDOT's wastewater discharge permit and the Clean Water Act dating back to 2013, according to a suit filed Sept. 23 in U.S. District Court in Salt Lake City. Before that legal step, the feds arranged a settlement with UDOT in the form of a proposed consent decree filed at the same time.

In the proposed settlement, signed by UDOT Executive Director Carlos Braceras back in May and still subject to court approval, the state agency does not acknowledge fault, but it does agree to a $325,000 fine and to take various corrective measures to remain in compliance with its permits and other legal obligations going forward.

The decree is out for public comment through Oct. 31. The feds may withdraw the settlement if submitted comments show the accord is inappropriate.

"UDOT considers safety a top priority and this includes environmental safety," agency spokesman Zach Whitney wrote in an email Friday. "For years, we have had a robust and responsive stormwater maintenance program. In 2015, as part of a scheduled audit by the Environmental Protection Agency, we became aware of some areas of improvement that were needed to comply with federal stormwater standards. UDOT began immediately to work with the EPA and the US Department of Justice to make those improvements."

The feds' 29-page complaint alleges widespread failure to minimize the discharge of pollutants from roads into municipal sewer systems and to monitor the presence of harmful contaminants in various waterways. As a result, avoidable pollution allegedly was washed into the Weber, Logan, Jordan and Santa Clara rivers and other "navigable" waters, including the Great Salt Lake.

The suit seeks an injunction requiring UDOT to "achieve permanent and consistent compliance with" the Clean Water Act, stormwater regulations and its permit issued by the Utah Department of Environmental Quality.

The transportation agency oversees 6,000 miles of roads in Utah and hundreds of more miles under construction or repair by private contractors.

A 2013 inspection documented that stormwater washed salt and other pollutants from UDOT storage yards into gutters and drains. At the time, the agency had mapped less than a third of its stormwater outfalls in urban areas.

"By failing to map the locations of all outfalls, and by allowing salt and other pollutants from its facilities to flow into various drains, curbs, gutters and/or retention ponds, UDOT failed to implement a program to detect and eliminate illicit discharges and improper disposal into its [stormwater runoff]," the suit alleges.

Nor did UDOT properly educate and oversee many of the private firms it hired to construct roads, court papers said.

There was "no documented plan for enforcing requirements for construction site operators to reduce stormwater discharges, no system for tracking violations or enforcement and no consistent documentation of corrections performed in response to UDOT's inspection findings," the suit said. "A number of UDOT construction sites had no record of inspections performed by either the construction site operator or by UDOT."

In some instances, regulators said, the agency located monitoring stations in spots where they would not pick up a representative sample, thus making it likely violations of pollution limits went undetected. One such monitoring site was on the Jordan River, where it cross Interstate 215 at the Murray Parkway Golf Course. Because of excessive groundwater infiltration there, the water being monitored was heavily diluted, providing an inaccurate picture of the water quality.

The settlement requires UDOT to post annual reports on its progress implementing the terms of the settlement and describing any instances of noncompliance.

On Friday, the agency outlined the following measures it initiated in response to the EPA audit, stating it has:

• Implemented a strict stormwater compliance training program for all UDOT employees.

• Hired an environmental compliance coordinator and four stormwater program coordinators.

• Developed a complete storm sewer map and revised its plan for controlling "'illicit" discharges.

"We are confident these changes will not only bring us into better compliance with federal standards," Whitney said, "but ensure we are doing our part to protect Utah's natural resources and the people of Utah."

Bureau of Reclamation takes up review of Lake Powell Pipeline

By Amy Joi O'Donoghue@Amyjoi16 Oct 29, 2019, 11:43am MDT

https://www.deseret.com/utah/2019/10/29/20938420/bureau-of-reclamation-takes-up-review-of-lake-powell-pipeline

SALT LAKE CITY — The elimination of the major hydropower components of the proposed Lake Powell Pipeline means a new federal agency will review the project and determine if it is environmentally sound to move forward.

“The division looks forward to working with reclamation on updating the timeline and cost estimate for the project and completing the environmental impact statement,” Eric Millis, director of the Utah Division of Water Resources, announced Tuesday

The Federal Energy Regulatory Commission had been the reviewing agency. After a September decision by the Utah Board of Water Resources to eliminate two reservoirs for the generation of electricity during peak demand, that entity was no longer the appropriate reviewing agency.

The 140-mile pipeline, estimated to cost $1.43 billion, will deliver 86,249 acre-feet of water to Washington and Kane counties. An acre-foot of water is enough to cover one football field at a depth of one foot.

It will begin near Glen Canyon Dam at Lake Powell and end at the Sand Hollow Reservoir in Washington County.

An August legislative audit raised questions about the terms of the pipeline’s cost repayment, including interest, on the state-sponsored project and said clarification of that process would deliver more certainty for taxpayers.

Critics have slammed the project as a financial boondoggle that will strap all the state’s taxpayers, not just users of the water, but the audit found that the Lake Powell Pipeline’s funding structure should be sufficient to cover costs.

Project proponents say the pipeline is necessary to meet the needs of a growing population and to diversify water supply resources. Most of southern Utah residents rely on a single and volatile source of water — the Virgin River — which has been challenged by drought conditions.

Construction of the pipeline won’t begin until 70% of the water is under contract.

Karry Rathje, with the Washington County Water Conservancy District, said the shift to another federal agency to review the project should not result in any delays.

State seeks $28.5 million upgrade for Starvation water treatment plant

John Thompson jthompson@ubmedia.biz Oct 29, 2019 1:00 AM

https://ubmedia.biz/news/1318/state-seeks-285-million-upgrade-for-starvation-water-treatment-plant/

State officials are planning an upgrade to the culinary water treatment plant at Starvation Reservoir. The project was necessitated by a fire that burned several drainages along the Strawberry River in 2018.

Gerard Yates, water quality director for the Central Utah Water Conservancy District (CUWCD), said for the past 30 years sedimentation basins at the Duchesne Valley Water Treatment Plant were not needed because the water in the reservoir didn't carry enough dirt to create a problem.

However, since the Dollar Ridge fire burned 70,000 acres along the Strawberry River in west Duchesne County in July 2018, repeated rainstorms flushed ash, dirt and other forest debris down the river and compromised the drinking water supply for over 30,000 Uinta Basin residents.

Yates said he heard reports that the drinking water in some parts of Duchesne County smelled like a burning couch.

Starvation Dam was built in 1970. At full pool the reservoir covers 689 surface acres. It supplies water to most of Duchesne County.

After the fire, a federal Burn Area Response Team evaluated the Strawberry River corridor, said Yates, while speaking during a special meeting of the Duchesne County Commission on Monday evening. "They said the burn-scarred area is too steep and not a lot can be done to control erosion. You are going to have to live with it for a long time," Yates said.

In addition, about 20 people who own cabins in the Timber Canyon area were told Monday there is nothing that can be done at the present time to help them access their cabins. One Timber Canyon cabin owner said there's been theft and vandalism to some of the cabins and the owners can't get in to winterize. The condition of septic tanks and culinary wells is unknown.

Duchesne County Commission Chairman Gregory Todd said the county received a $6.6 million federal grant in late September. Duchesne County has $1.9 million in matching funds and the $8.5 million total plan to mitigate the river corridor from Camelot Resort to Timber Canyon is underway.

However, the county is uncertain when or if a new a road will be constructed. Todd explained that the county's situation is tenuous. Engineering on the project will tell a lot but at present, they know at least 30 steep drainages are unstable with few plants to help hold soil in place. More flooding and muddy, ash-laden debris flows are expected. The work performed must be carefully calculated in order to prevent it being washed out by future storm events.

Regarding the water treatment plant project, Yates said aside from the sediment problem, Starvation now carries a significant nutrient load, that for the first time caused dangerous blue-green algae blooms over the last several months. Algae blooms increase water treatment costs, he said.

The organic content of Starvation water has more than doubled since the fire and turbidity measurements have gone from 4 or 5 to 5,000 Nephelometric Turbidity Units (NTU), Yates added.

To fund the new plant, Yates said the Utah Permanent Community Impact Fund Board has $3.5 million to put toward the project and they are hoping for a $4 million grant from the Federal Emergency Management Administration (FEMA). Yates expects the new plant to be operational by Fall of 2021.

"It's a public health issue so we're going to do what we have to do and we're on an accelerated schedule," Yates said. "But this project wasn't part of our long-term plans so we are trying to figure out the financing."

Several other county, state and federal officials reported to about 50 concerned residents during Monday's meeting. Utah Division of Wildlife Resources Biologist Randall Thacker said aerial seeding of the burn scar last fall was successful.

Eric Major with Jones and DeMille Engineering, said rock that washed down the river channel might work for rip rap in the mitigation project.

Bronson Smart with the Natural Resources Conservation Service, commended Duchesne County for being nimble. They signed the federal Emergency Watershed Protection (EWP) grant agreement on September 29, the day before the federal fiscal year ended. Wasatch County did not apply for an EWP grant. The cabins in the Timber Canyon area are in Wasatch County.

Tracking Water Quality, Researchers Use National Database On Drinking Water Violations

By RIANA GAYLE • NOV 1, 2019

https://www.upr.org/post/tracking-water-quality-researchers-use-national-database-drinking-water-violations

To find a comprehensive list of nationwide drinking water violations, you don't have to go digging through dusty archives, the list dating back to 1993 is available online.

"So SDWIS, which it's colloquially called, or Safe Drinking Water Information Systems, is publicly available through the Environmental Protection Agency, or EPA," said Dr. Nicole Jones, an assistant professor at the University of Florida.

She uses the SDWIS database to study how county-level drinking water violations interact with sociodemographic factors, like age and race. The database, she says, can also search violations at the city and state level.

"So you could look up the one here in Logan or where I'm from in Gainesville [Florida] and actually see as to whether they have any kind of drinking violation, whether it's health based as well as other factors."

Other violations include monitoring and reporting, which can indicate samples were not collected in a timely matter. These differ from health-based violations like coliform bacteria, which Jones sees at a higher rate.

"So typically coliform, which is just bacteria in water, is harmless," she said. "However, some coliform such as *E.coli* if there are large quantities of it in your drinking water it can cause gastrointestinal issues."

While drinking water is generally safe unless an alert has been issued, preliminary findings from the study suggest smaller communities, like rural areas, as well as minority communities, have higher counts of drinking water violations. For this, Jones suggests staying informed and aware of developments in your region.

To locate your unique water system ID and any drinking water violations in your area, visit the SDWIS website here and learn about water sampling in your area by visiting the Utah Division of Drinking Water here. A note, according to Utah's Division of Water Quality, surface waters

are tested for E.Coli regularly from May to October. Currently, three advisories remain issued and only one site, Midas Creek, is observed in exceedance.

#IamUtahDEQ: 2019 Harmful Algal Bloom Update

By Dr. Kate Fickas

https://deq.utah.gov/communication/news/iamutahdeq-2019-harmful-algal-bloom-update

In a fitting end, the final week of the Utah Division of Water Quality's 2019 recreational monitoring season was marked with below-freezing temperatures and storms that sprinkled our hills and mountains with snow and ice. For the past five months, DWQ's Harmful Algal Bloom (HAB) Program has visited and analyzed data from 800 sites across 65 different water bodies to help the State's Local Health Departments ensure recreators are safe when enjoying Utah's waters. With the help of the public, health departments, and other partners, we detected HABs at 38 different water bodies this year; nearly 60 percent more than any other year of this program.

This year also marked a statewide shift in awareness about HABs. Over the summer, we received daily phone calls from concerned citizens and recreators as HABs became a top news story across the country for their role in the death and illness of pets and people. Closer to home, a well researched article by Sofia Jeremias for the Deseret News helped summarized the problem in Utah and around the country. Traffic to DEQ's HABs website increased as Utahns checked to see if their favorite lake or reservoir was on advisory before heading out on a weekend trip.

Three questions consistently come up when discussing HABs: "Has this always been a problem?," "Why is this happening?," and "Is the problem getting worse?." These are hard questions to answer with complicated and nuanced implications for management and safety. To start, HABs are not actually comprised of algae, they are formed from toxic cyanobacteria. With fossil records back to 3.5 billion years ago, the scientific community finds that cyanobacteria were one of the first forms of life on this planet and are partly responsible for our DNA structure, our diurnal sleep pattern, and the oxygen in Earth's atmosphere. Not all cyanobacteria are toxic, but there are very few, if any, lake systems around the globe that do not have some form of cyanobacteria present.

This year, several peer-reviewed scientific studies were published to inform on these questions in Utah and across the globe. In her Ph.D. research at the University of Utah, Dr. Carly Hansen used satellite imagery to extend the period of investigatory record to the 1980s to estimate potential HAB presence across lake systems in Utah. In her article published in the *Journal of Lake and Reservoir Management*, she finds that, as detected through remote sensing, HABs have been present in Utah Lake for the past four decades. To get at 'why?', she notes that 'the long-term remotely sensed record supports the suggestion that high winter/spring precipitation, high temperatures, and high runoff contribute to algal blooms in Utah Lake'. Exploring the question of a worsening phenomenon, Hansen found that the remotely sensed record shows peak HAB

concentrations happening around 3 days earlier each year; expand that out for 35 years and you get a much earlier start to the HAB season. These findings have the potential to significantly impact water quality management, recreation, and safety across the state.

In her M.S. research at Brigham Young University, Shanae Tate also used remote sensing imagery back to 1984 to evaluate if there are consistent 'hot spots' for HABs on Utah Lake. In her study titled "Landsat Collections Reveal Long-Term Algal Bloom Hot Spots of Shallow, Eutrophic Utah Lake," she found that some areas of the lake, such as Provo Bay, are intensifying and enduring hot spots for HABs. This finding and research has great potential to help inform managers and scientists towards targeting monitoring and potential remediation.

On a global scale, researchers from Stanford University and NASA also used satellite imagery to examine the spatial distribution of HABs across the planet over the past three decades. In an article published in *Nature*, researchers cite a widespread global increase in HABs, but they did not find a 'silver bullet' for the reason behind an increase in blooms globally. They did find, however, that lakes that did not warm as intensely over the past 35 years were less likely to see an increase in bloom intensity over time. This should help inform managers about the imperative need to account for shifting hydrologic conditions under global climate change.

While the recreation season is over and advisories will be lifted, we continue to see HABs in lakes and reservoirs across the state. Cyanobacteria are ancient organisms and have billions of years of adaptation mechanisms to shift towards surviving in extreme environments, including snow and ice. We ask that those of you who continue to recreate in waters between now and next summer keep an eye out for signs of HABs in order to keep yourself, your family, and your pets safe. Our partners in Utah's Division of Drinking Water will continue to monitor finished drinking water for cyanotoxins.

In the off-season, we plan on expanding our outreach to public schools as well as developing a more efficient communication strategy with our cooperating agencies and stakeholders. We also continue to work closely with other states in the region and country affected by HABs to gain insight into new ways to monitor and protect. DWQ would like to thank all of our partners for their dedication to public safety and thank the public for their role as citizen scientists, helping us detect HABs in many new recreational lakes. Until next year, stay safe and enjoy Utah.

As Utah and the rest of the country continue to deal with algal blooms, accurate and precise data are key to safeguarding our water quality, protecting human health and supporting the state and local agencies addressing HABs.

Lead shows up in Emigration Canyon drinking water

By Brian Maffly · Published: November 8 Updated: November 09, 2019

https://www.sltrib.com/news/environment/2019/11/08/lead-shows-up-emigration/

Elevated levels of lead have been recorded in the tap water of some Emigration Canyon homes, prompting the area's water provider to alert its customers and explore the cause and extent of the contamination.

The problem, which is not considered an emergency, was discovered last month when tests results were returned on samples taken from 10 homes in the tony mountain neighborhood east of Salt Lake City, according to Marie Owens, director of the Utah Division of Drinking Water. Three of the samples taken Sept. 23 showed lead levels at or above the federal standard of 15 parts per billion, triggering a mandatory course of action that includes notification to all customers served by the Emigration Improvement District, or EID.

"If more than 10% of the samples you take from customer taps are above 15 [parts per billion for lead] you need to take action and look at corrosivity of the water," Owens said. "The first thing we required them to do was let everyone know."

She emphasized that there is no safe level for lead, a heavy metal that causes severe neurological problems and accumulates in tissues in the body. Children are particularly vulnerable. Accordingly, the 15 ppb limit is not a health-based standard but rather a threshold that triggers mandatory actions if it is breached. In the aftermath of the Flint, Mich., lead crisis, the U.S. Environmental Protection Agency is now poised to tighten standard to 10 ppb and strengthen requirements for mitigating lead hazards.

As a result of its high lead readings, the EID must increase the frequency of testing from every three years to six months, and double the sample size from 10 to 20 homes, in addition to specific steps to pinpoint the source of the lead and mitigate it if necessary.

Almost none of that information appears in the Oct. 25 notification district officials sent to its water customers disclosing the elevated lead. Since then, however, two of the three homes that tested high were retested, while the third is awaiting retesting, according to the EID general manager Eric Hawkes. The two came back under the 15 ppb threshold.

"We have tested the water sources, and they have come back nondetect for lead," Hawkes said. "It is really a homeowner issue where they had plumbing in their homes that contains lead."

The district provides water to 306 homes, more than half the canyon's residences. The rest are on private water systems.

The Oct. 25 letter was actually a template provided by state regulators, providing little more than boilerplate information on lead and copper contamination and the steps water users everywhere should take to minimize exposure to these metals in their drinking water.

“I hesitated sending the letter out before we had all the information," Hawkes said, “but that is the protocol.”

The tap water sampling was conducted by the homeowners themselves. Samples were supposed to be pulled from taps that get regular use, but had not been used for the six hours before the sample being taken. Hawkes suspects the high readings came from samples that were not properly collected.

“If a tap hasn’t been used, it will have higher levels because it hasn’t been flushed,” Hawkes said. “It gives a false positive.”

The district’s testing program targeted canyon homes built in the 1980s, an era when lead was commonly used in pipe solder, according to Hawkes. Steve Denkers’ 33-year-old home in Emigration Oaks was among those whose first sample came back high. He acknowledged that he mistakenly selected a bathroom tap that hadn’t been used in a few weeks. His resample came back at 8 ppb for lead, nearly half the previous reading.

Every year, a few Utah water providers get in trouble with the lead standard, usually because of contamination that occurs inside pipes, according to Owens. Ironically, the purity of many communities' water can lead to contamination. Water devoid of suspended elements tend to draw metals from whatever is around it.

“Typically, the cleaner the water, the more corrosive it is,” Owens said. “In Utah, we are good at collecting snowmelt and making it drinking water. That snowmelt has not had enough time to pick up minerals. Sometimes there are consequences to the extremely pristine water we have in our state.”

To lower your risk of lead exposure, drink and cook with water from the cold tap only; let the water run for 30 seconds, longer if the tap hasn’t been used for an extended period, before using it; install a filter; frequently clean the aerator screens on taps; use lead-free materials and piping in remodels.

Utah’s water czar: 1 of the most powerful men you likely never heard of

By Amy Joi O'Donoghue@Amyjoi16 Nov 11, 2019, 6:41pm MST

https://www.deseret.com/utah/2019/11/11/20951876/utahs-water-czar-1-of-the-most-powerful-men-you-likely-never-heard-of

SALT LAKE CITY — In his decade as the state engineer, Kent Jones was inarguably one of the most powerful yet anonymous men in Utah government.

His decisions even reached beyond the confines of the geographical boundaries of Utah, the tendrils of his influence touching the resources of the West’s winding Colorado River and Bear Lake’s aquamarine water the state shares with Idaho.

Jones decided who had a lawful right to water, who had lawful right to change its point of diversion, and who was using the water or had forfeited that right because it hadn’t been put to practical use.

He retired last week after 39 years with the Utah Division of Water Rights and said he enjoyed every minute of his controversial, complicated career that often landed him in a courtroom defending his decisions, and at one point, the recipient of death threats over the diversion of water for a proposed nuclear power plant.

“It’s been the best 39 years ever,” he said, a wide-open, sparkling smile overtaking his entire being. “I’ve really enjoyed it.”

You can tell he’s sincere.

Jones is a quiet, serious, straight-forward type of man and he tends to listen for a long while before he speaks.

On this day, however, on his last day in his office before he leaves for a Mexico vacation, he openly plunges into the details of a career that has had a profound impact on Utah’s water world.

He figures since he’s held the state-appointed position, there have been 90 changes to Utah’s water law in 11 legislative sessions.

It’s a complicated and controversial role he’s handled, balancing the demands of lawmakers, court rulings, irrigation companies, farmers, residents and multimillion-dollar water districts who all have a stake in one of the most precious natural resources — water.

“The biggest challenge is helping people understand this is a shared resource,” Jones said. “You can only use what you are allowed. Even if it is on your property, it is not your water.”

Water is a “public” resource in Utah, with “rights” to use it handed down in some cases generation after generation and traded with a handshake. Water rights in Utah existed before there was even formal statehood.

Jones, as state engineer, decides the lawfulness of those rights, exercising an authority granted to him under Utah law that often left him in uncomfortable, controversial and angry situations.

“There are angry people all over this state,” he said. “I am probably the most sued state employee in Utah, but we prevailed in court 95% of the time.”

If he has made enemies along the way, he’s not saying.

“I really like to listen to people’s concerns, both positive and negative. You can’t be quickly reactive. It is important to let people speak their minds.”

Jones began his career with the division in 1981. While with the division, he served in various roles, including assistant regional engineer for Utah Lake/Jordan River, regional engineer for the Weber River and West Desert before his appointment to state engineer in 2009 by Gov. Jon Huntsman Jr.

He was a hearing officer for the division for 21 years and most recently, in his role as state engineer, was the technical adviser for the Utah Water Task Force and on Gov. Gary Herbert’s water strategy team.

When he approved a water diversion for a planned nuclear power plant in Green River, Jones had to defend his decision in a lengthy trial and received death threats.

His application of Utah law was ultimately upheld in the courts and the controversial project that stoked so much opposition is now in limbo.

Matt Pacenza, former executive director of HEAL Utah, challenged Jones over that decision on the nuclear power plant water and battled him in court.

“He was very polite and informed,” he said. “With that said, it never made a lick of sense to give a nuclear power plant all that water, but he was very professional.”

Over the years, Jones defended his office’s groundwater pumping moratoriums and helped craft plans to get communities back on track so they can use the water.

In a state that averages 88 days of rainfall per year and is ranked the second driest in the nation, when Jones says a property owner can’t pump water from a well or siphon water from an adjacent stream for a parched field of crops, there’s going to be trouble.

But Warren Peterson, a member of the Utah Water Task Force and vice president of Farmland Reserve, said Jones had a calming influence in those tough situations.

“He is a master at de-escalating conflict,” said Peterson, one of the state’s most experienced water attorneys. “Kent did have to make some unpopular decisions, such as the Green River nuclear plant change application. He had the ability, however, to make the decisions by following the law rather than getting caught up in the public clamor. “

The office also came under criticism at some point over access, and who had the ear and attention of the state engineer, Peterson said.

“Kent had a clear rule about who he would talk to: anyone who asked,” Peterson said.

Under Jones’ tenure, the office was engaged in the process of determining the validity of water rights across the Jordan River/Utah Lake region. With slim staff and limited resources, Jones told the governor the laborious process would take 150 years to complete — it’s that complicated.

Herbert, with the support of Utah Legislature, kicked in additional money and more staffing and streamlined what’s called the adjudication process.

Jones now figures it can be done within 20 years, which means it will be sooner, rather than later, to actually determine how much water is where, who owns it and who is using it.

That function of the state engineer and the Utah Division of Water Rights is critical as Utah’s population is expected to nearly double by 2050, and everyone will want a sip at the tap.

Jones said there are far more rights to water than the water that actually exists, meaning the state’s water resources are over-appropriated.

It is a reckoning that Utah’s political leaders will someday have to face, and while his job as state engineer is behind him, Jones’ worries over water resources are far from retired.

“There is a real need to keep water going to the Great Salt Lake,” he said. “Most all of that water is appropriated. What farmer are you going to tell to stop farming? What city are going to do away with?”

There’s a reason there is a saying in the West that “whiskey is for drinking and water is for fighting,” and Jones has been in and seen his share of fights in Utah and elsewhere.

Peterson said Jones never flinched.

“Kent is the quintessential public servant. He humbly and gently performed his duties, but with a firmness and honesty that held everyone to a high standard.”

Jones’ decisions over water have dashed the dreams of many, to be sure, and prompted plentiful lawsuits.

He said he doesn’t look at it from the glass half empty perspective, however, because the law is behind him, and the law demands equity in the complicated world of water.

“I think we are making a lot of people happy. They have dreams of the things they want to do and we fulfill those dreams by approving their water rights. We are making sure no one is impacting anyone else’s dreams by taking their water supply.”

His recommendation for his successor, however?

“I think someone in this position needs to be mild-mannered.”

A search for that successor is ongoing.

Water fight continues in eastern Nevada, western Utah with church-owned ranch in the middle

By Amy Joi O'Donoghue@Amyjoi16 Nov 13, 2019, 4:59pm MST

https://www.deseret.com/utah/2019/11/13/20961307/water-fight-continues-in-eastern-nevada-western-utah-with-church-owned-ranch-in-the-middle

SALT LAKE CITY — Attorneys for The Church of Jesus Christ of Latter-day Saints and Millard and Juab counties were in a Nevada court Tuesday and Wednesday arguing that a monitoring plan for a proposed groundwater pumping project is insufficient to protect water resources in eastern Nevada and western Utah.

The plan by the Southern Nevada Water Authority is also opposed by the Great Basin Water Network and the Goshute, Duckwater and Ely tribes.

According to the network, the project's first phase aims to siphon at least 58 billion gallons of water annually away from the Great Basin via a 300-mile pipeline to Las Vegas.

At one point, groundwater pumping was being pursued in Snake Valley, which straddles the Nevada-Utah border, but the water authority is now focused on adjacent valleys that include Spring Valley where The Church of Jesus Christ of Latter-day Saints operates Cleveland Ranch.

In a filing before Nevada's 7th Judicial District Court in Ely, church attorneys argued the ruling issued in 2018 by the Nevada Division Water Resources approving the Southern Nevada Water Authority's management plan enables groundwater pumping that will cause "drastic" groundwater drawdowns and annihilate existing water rights.

"... undisputed evidence shows that (the Southern Nevada Water Authority's) proposed system would mine millions of acre-feet of water from permanent storage without ever reaching" balance, the attorneys wrote.

Attorneys for the church said it is the water authority, and the water authority alone, that makes the determination of what triggers mitigation, and how that mitigation is carried out.

"In most cases, there are no deadlines. There is no substantial evidence that any or all of the proposed mitigation techniques will actually work," they wrote, adding that the plan invokes "unilateral nonpublic evaluation" in an assessment process that lacks objectivity.

Kyle Roerink, executive director of the Great Basin Water Network, said a number of natural resources would be in peril if the groundwater pumping project becomes a reality.

“The (water authority) is asking for an exemption from the laws of Nevada, the laws of nature, the laws of economics, and the laws of morality,” Roerink said. “This project is a mirage where a few powerful interests will see some short-term gains while the rest of Nevada — rural and urban — suffers in the long run.”

The water authority is seeking to overturn the denial of water right applications following a 2013 court ruling so it can proceed with a project to tap what it describes as a “significant amount of unappropriated water in Spring Valley,” that is critical to shoring up its water resources going into the future.

It stresses that it is entitled to the water under the doctrine of prior appropriation and denial of the water right applications was unreasonable and contrary to law.

But opponents say any pumping in Spring Valley will inevitably impact neighboring Snake Valley because the areas are hydrologically connected.

Attorneys for Millard and Juab counties pressed their case in court that the monitoring the water authority plans to do is too limited in scope and does not provide enough protection for water resources in Snake Valley in western Utah.

Tribes argued the pumping plan puts in jeopardy important historical, cultural and sacred sites that include swamp cedar trees and springs vital for traditional and religious customs.

Dollar Ridge Fire aftermath requires significant time, money to keep drinking water safe

by RaeAnn Christensen

Monday, November 18th 2019

https://kutv.com/news/local/more-than-a-year-later-dollar-ridge-fire-affecting-duchesne-county-drinking-water

DUCHESNE COUNTY, Utah (KUTV) — More than a year later, the Dollar Ridge fire is affecting Duchesne County drinking water, significantly increasing its costs between extra chemicals and overtime at a Duchesne County water treatment plant.

That's because they must remove contamination, from fire debris.

Chuck Hale is the plant manager for the Duchesne Valley Water Treatment Plant — he also Duchesne, Utah, home.

"I drink this water every day, my family does," Hale said.

He’s the go-to person when it comes to drinking water for the 30,000 residents in the Uinta Basin, making sure it’s clean.

"There are about three processes the water goes through, it’s kind of a maze," he said.

But since the Dollar Ridge Fire in 2018 he said everything has changed. The fire was a destructive one, it destroyed 70 homes and burned nearly 70,000 acres.

“When the fire happened, all the sediment came into the reservoir."

Every rain storm sends down ash, dirt, fire debris, into starvation reservoir. That means, they need big upgrades to the plant, to remove the contamination.

“We are now having to mimic what the lake used to do here as a process,” Hale said.

“We didn’t have the sedimentation, and now we are going to add a process and make some changes so that we can take care of that here at the treatment plant,” Gerard Yates, Water Quality and Treatment Manager, for the Central Utah Conservancy District said.

Those upgrades, Yates said come at a price tag of $28.5 million. They are borrowing from the state, applying for a FEMA grant, and may issue a bond.

“Residents are going to pay more for their water in the future as a result of this,” Yates said.

In the meantime, it’s up to the staff of four, at the plant to keep the water up to par.

"Water quality hasn’t been sacrificed, just their sleep."

They work a lot of extra overtime to make sure the water is clean, double shifts when a rain event happens.

"I get a lot of phone calls and see people around town, they want to hear it from my mouth." Hale said he’s OK with the extra hours, it’s something he must do for all Duchesne residents and his family.

"They want to see me drinking the water," he said.

Storms to bring rain, snow throughout Utah; St. George dry spell expected to end

By Carter Williams, KSL.com | Posted - Nov 18th, 2019 @ 8:33pm

https://www.ksl.com/article/46676376/storms-to-bring-rain-snow-throughout-utah-st-george-dry-spell-expected-to-end

SALT LAKE CITY — St. George's stretch without measurable precipitation entered its 154th day Monday; however, a slow-moving storm that's forecast to bring rain and snow throughout the state this week could bring the record dry spell to an end.

Precipitation and a temperature drop Utahns will see this week are a result of two systems expected to move into Utah beginning late Tuesday, KSL meteorologist Grant Weyman said. The two patterns will enter through the northwest and southwest corners of the state, with most of the precipitation coming in the system coming from the south; the northern system will bring cooler air into the state.

The majority of the precipitation is expected Wednesday, with temperatures dropping from highs in the low 60s Monday and Tuesday to highs in the mid-to-upper 40s across the Wasatch Front. Highs are expected to drop from the 70s to 50s in St. George by midweek.

"Think of it as a lot of the rain sweeping up from the south first, and then colder air coming in from the north on Thursday," Weyman said.

While it will be cooler, Weyman said temperatures will be closer to normal for mid-November in Utah.

The National Weather Service issued a flash flood watch for lower-elevation portions of southwestern Utah, especially slot canyons. A winter storm warning is also in place for the mountain areas in the southwestern part of the state. A winter storm watch was also issued for most of Utah east of I-15, from the Wasatch Front backcountry to Milford.

Rain to snap dry stretch

The National Weather Service forecasts St. George to receive 1.5 to 2 inches of rain from Tuesday through Thursday, which would be the first measurable precipitation in the area since June 17. The agency tweeted St. George will receive more rain from this week's storm than all rain accumulated from May 15 through Monday.

Other places in southern Utah — like Cedar City, Milford, Richfield and Bullfrog — are expected to receive 0.5 to 1 inch of rain during the same time period.

The rain and snow is good news for southern Utah. In its latest report released Thursday, the U.S. Drought Monitor noted that nearly two-thirds of the state — from central to southern Utah — is in a moderate to severe drought. While the storm won't erase the drought, Weyman said it will help in building a snowpack for the winter. A good portion of Utah's water supply comes from melting snowpacks in the spring.

"In terms of what (the storm) really means in snowpack, it's really just going to be a great start to the season for southern Utah if this storm delivers," he said.

While the heavier rain is anticipated in southern Utah, some places across the Wasatch Front could experience .25 inch to .5 inch of rain from the storms with some possible flurries Thursday. Any precipitation would snap a much smaller dry spell in Salt Lake City. The National Weather Service tweeted last Thursday that Utah's capital city hadn't received precipitation for the first 14 days of November, something that hasn't happened since 1967.

Snow in higher elevation areas

A winter weather warning for high-elevation areas of southwestern Utah goes into effect 5 p.m. Tuesday and will last until 4 p.m. Thursday.

Most of the snow is expected for areas in southern Utah above 7,000 feet in elevation. In fact, the National Weather Service projects higher elevation areas to recieve upwards of 2 feet of snow.

A map released by the agency shows the heaviest snow is expected southeast of Cedar City and in areas east of Milford and west of Capitol Reef National Park. However, areas east of Nephi and west of Price could also receive a foot of snow. The Wasatch Front is expected to receive upwards of 6 inches of snow.

Travel could be "difficult" on state Route 12 near Boulder Summit, state Route 14 between Cedar City and U.S. Highway 89, state Route 143 between Beaver and Junction, as well as state Route 148 near Cedar Breaks National Monument, according to the NWS alert.

Forecasts for the rest of the state can be found on the KSL Weather page.

Editor's Note: A previous version of this story listed the incorrect number of days St. George had been without precipitation. The story has been updated to include the correct number.

Moab Residents Will Soon See More Watering Options For Their Property, Including Graywater

By MOLLY MARCELLO • NOV 18, 2019

https://www.upr.org/post/moab-residents-will-soon-see-more-watering-options-their-property-including-graywater

It took years of careful persistence from Moab-based experts and residents, but Utah's Water Quality Board is now changing state rules on graywater. Soon property owners could see more options – and less cost – when it comes to re-using their shower and laundry water for outside landscaping. Molly Marcello from KZMU community radio in Moab tells us more.

It's a bright November morning when staff and board members from Utah's water and environmental quality departments begin gathering in a Moab garden. It's a small space, about 200 square feet, but full of fruit trees and native plants.

"I brought a shovel around if anyone wants to check out how beautifully rich the soil is, they can feel free to do so..." said Dr. Roslynn Brain-McCann, sustainability professor at Utah State-University in Moab.

In an arid climate, the rich soil of her front yard garden is notable. But it's not her garden's soil that's brought state regulators to her front yard, it's how she waters it – with a shower and a load of laundry.

"This system is entirely graywater fed and it's been a fun experiment to see what's working, what to shift, what to tweak," Brian-McCann said.

Back in 2016, at the urging of Brain-McCann and others in Moab, state regulators issued her front yard an experimental permit for a simple, gravity-fed graywater system. Utah health and wastewater experts have now studied her garden for four years as they consider changes to the state's graywater code.

"When the policy doesn't make sense to me, it's not the end of the road to me. It's like, let's change the policy, let's make this happen, and make it right," she said.

Utah's longstanding rule on graywater, is a far leap from the simple system developed in Moab. That rule requires a 250-gallon holding tank, a pumping system, and filter. Health officials say not one Utah property owner has ever taken advantage of it.

In comparison, the simple graywater design uses gravity to lead shower and laundry water to mulch basins that nourish plants under the surface. It requires little more than a $50 valve at the time of home construction. That valve can easily be turned to direct graywater to the garden or to the wastewater treatment plant.

"Right now we're in November and it's been at least – at least – and this is a very conservative estimate, two months since we've had any precip here in Moab," Brian McCann said. "So to have a system where our water that would normally go to a wastewater treatment plant is actually providing the water needs of my landscape, it's to me a no brainer when it comes to climate change."

Climate change concerns in the desert combined with creative problem-solving drove Moab's demand for a more functional state graywater rule. This according to Southeast Utah Environmental Health Director Orion Rogers.

"I think it's just due to the extensive growth that we're seeing as well as the influx of new thought processes and an overall interest in these sort of systems as well as the environment that we live in essentially demanding water conservation," Rogers said.

But even as the state makes big moves to legalize this system, local health departments and districts would not be required to opt-in. Rogers, however, feels confident that Moab can be the example for the rest of the state.

"As we start showing how this works in Moab, I think that other health departments are going to come on board. And as we have developments come along that are using graywater, we can show the world that this works," he said.

The new graywater rule is out now for public comment. In a few months, if the water quality board finds no significant changes to be made, these simple graywater systems will officially become legal in Utah.

"There are a lot of potential graywater systems ready to be turned on as a result of this rule," said Moab City Mayor Emily Niehaus who is also on the Utah Water Quality Board. She says having a better way to reuse water is not just beneficial for Moab's arid desert, but also for the entire state.

"A state where desertification and lack of water, and huge expected growth - we have to be taking these measures. And so while it's important for us in Moab to change the law to help us do what we want to do locally, it's also very exciting to know that other people in other counties, in other parts of Utah are going to benefit from this too," Niehaus said.

Bear River project would deliver water to thirsty Wasatch Front in 2050

Updated study explores 13 reservoir, pipeline alignments

By Amy Joi O'Donoghue@Amyjoi16 Updated Nov 20, 2019, 12:59pm MST

https://www.deseret.com/utah/2019/11/19/20972776/bear-river-project-would-deliver-water-to-thirsty-wasatch-front-in-2050

SALT LAKE CITY — An updated study on how to get 220,000 acre-feet of water to the Wasatch Front in 2050 explores 13 potential ways to do that and what the cost would be.

The feasibility study — released Tuesday by the Utah Division of Water Resources — looks at 13 potential reservoir and pipeline alignments for the Bear River Development Project, estimating it would cost anywhere from $1.5 billion to $2.8 billion. It has drawn the ire of multiple groups, including the Utah Rivers Council and Friends of the Great Salt Lake, that are critical of the project because of its impacts on the watershed.

Initially, the project approved by the Utah Legislature in 1991 anticipated Box Elder, Weber, Davis and Salt Lake counties would need the water by 2015, but it has been delayed.

“Thanks primarily to conservation efforts, new technology and some smaller water development projects, current projections indicate the need for this project has been pushed out between 2045 to 2050,” said Eric Millis, director of the Utah Division of Water Resources.

Although the project would divert 220,000 acre-feet of water on an annual basis from the Bear River, the division said much of that water would be put back in the system through “return flows.” The actual depletion from the watershed is estimated to be 85,600 acre-feet. An acre-foot of water is 326,000 gallons, or enough water to cover an acre at a depth of one foot.

The Bear River Development Project, intended to meet the needs of a state population expected to nearly double by 2065, is not without its controversy.

The division points to modeling that shows the diversion would reduce Great Salt Lake levels by an average of 8.5 inches or as much as 14 inches. Those reductions were projected in an analysis by Utah State University, Salt Lake Community College and the Utah Division of Water Resources.

Recent measurements show the Great Salt Lake is already struggling. During the past 50 years, the lake logged its lowest recorded levels. Those two measurements came within the past three years — in 2016 and again in 2018.

The project is in a planning stage and will have to go through an extensive federal environmental analysis before it is approved. Next steps include additional studies that will look at climate variability and the Great Salt Lake.

Zach Frankel, executive director of the Utah Rivers Council, said the depletion claims from the Utah Division of Water Resources are “nonsense” and widely contested.

In addition, he pointed to a new study by the University of Utah’s Economic Evaluation Unit that shows the Bear River Development Project would require “massive” increases in water rates, impact fees, or property taxes for Wasatch Front residents who would get the water.

The study was commissioned by U.S. Magnesium, a mineral business near the Great Salt Lake concerned about falling lake levels.

The analysis looked at the debt each district would have to take on for the project and compared that debt obligation against current net revenue.

“If the project were financed by rate increases, these increases would be so significant they would likely result in major decreases, which calls into question the need for the Bear River development in the first place,” said Gabriel Lozada, one of the authors of the report.

Lynn de Freitas, executive director of the Friends of the Great Salt Lake, added she considers it irresponsible for the division to continue to pursue the project.

“It is frightening process when you think about where the Great Salt Lake seems to be going right now,” she said.

“I just feel like we are missing the boat. We need to be looking at substantive ways to address our quality of life, address the needs of the Great Salt Lake and address the needs for our regard for our water resources. There is a lot we could do. Our responsibility lies with the lake and to make sure we are doing everything to address the decline of its lake level.”

The feasibility study can be viewed on the division’s website.

Boil order issued for homes served by South Duchesne Culinary Water

By Gretel Kauffman@gretelkauffman Nov 22, 2019, 5:02pm MST

https://www.deseret.com/utah/2019/11/22/20978616/boil-order-issued-for-homes-served-by-south-duchesne-culinary-water

DUCHESNE — A boil order was issued Friday for all homes served by South Duchesne Culinary Water after coliform bacteria was found in the company's drinking water supply.

The order from the Utah Department of Environmental Quality requires the company to notify customers to boil their water before drinking it, preparing food with it, or brushing their teeth.

"We are taking this action to proactively protect the health of the community," said Marie Owens, drinking water director, in a statement. "DDW (the Division of Drinking Water) has identified several potential risks to the drinking water. We will continue to work with the water system to resolve the issues as quickly as possible."

A boil advisory had been in place since Nov. 8 after an illness was reported.

Several water samples taken last week confirmed the presence of total coliform bacteria in the water, but tested negative for E. coli. The Division of Drinking Water conducted an onsite investigation and took additional water samples Friday.

The contamination could be linked to several water line breaks, the department said.

The South Duchesne Culinary Water buys treated and chlorinated water from a local wholesaler, according to the department. The company is unapproved by state regulators and under a compliance agreement and enforcement order with the Division of Drinking Water.

BOIL ORDER Issued by DEQ for South Duchesne Culinary Water

By Kristin Forbis, Nov 22, 2019

https://basinnow.com/article.php?id=4831&title=BOIL+ORDER+Issued+by+DEQ+for+South+Duchesne+Culinary+Water

Following tests detecting coliform bacteria, the Utah Department of Environmental Quality has issued a Boil Order for homes receiving water from South Duchesne Culinary Water. Residents here have been under a Boil Advisory since November 8th after an illness was reported. Friday's Boil Order requires SDCW to notify all customers to boil their water before using it for drinking, preparing food or brushing teeth. "We are taking this action to proactively protect the health of the community," shares DEQ drinking water director Marie Owens. "...We will continue to work with the water system to resolve the issues as quickly as possible." Samples taken last week confirmed the presence of total coliform bacteria though samples were negative for E. coli. An onsite investigation and additional water sampling took place on Friday, November 22nd. Answers to Frequently Asked Questions concerning Boil Orders is available on DEQ.Utah.Gov.

Boil order issued for South Duchesne Culinary Water after tests detected coliform bacteria

BY JENNIFER WEAVER FRIDAY, NOVEMBER 22ND 2019

https://kjzz.com/news/local/boil-order-issued-for-south-duchesne-culinary-water-after-tests-detected-coliform-bacteria

(KUTV) — A boil order has been issued for all homes served by the South Duchesne Culinary Water (SDCW) company.

The Utah Department of Environmental Quality (DEQ) issued the order after multiple tests detected coliform bacteria in the drinking water supply.

The order requires SDCW to notify its customers to boil their water before using it for drinking, preparing food or brushing teeth. Residents have been on a boil advisory since Nov. 8 after a report of illness, DEQ reported in a news release.

DEQ's Division of Drinking Water (DDW) has regularly monitored this system. Several water samples taken last week confirmed the presence of total coliform bacteria. The samples tested negative for E. coli. DDW staff conducted an onsite investigation and took additional water samples on Friday.

Marie Owens, drinking water director, said in a prepared statement:

We are taking this action to proactively protect the health of the community. DDW has identified several potential risks to the drinking water. We will continue to work with the water system to resolve the issues as quickly as possible.

The news release said SDCW purchases treated and chlorinated water from a local wholesaler. Recent contamination to the SDCW system could be linked to several water line breaks or other failures, DEQ reported.

SDCW is unapproved by state regulators and under a compliance agreement and enforcement order with DDW.

For information on what to do during a boil order, visit: https://deq.utah.gov/drinking-water/faq-boil-water-order

DEQ issues second boil order this month on south Duchesne County water

By

Gephardt Daily Staff

-

November 22, 201

https://gephardtdaily.com/local/deq-issues-second-boil-order-this-month-on-south-duchesne-county-water/

DUCHESNE COUNTY, Utah, Nov. 22, 2019 (Gephardt Daily) — A boil order has been ordered for all homes served by the South Duchesne Culinary Water company.

Multiple tests detected coliform bacteria in its drinking water supply, according to information released by the Utah Department of Environmental Quality.

The order requires SDCW to notify its customers to boil their water before using it for drinking, preparing food or brushing teeth.

Residents have been on a boil advisory since Nov. 8 after a report of an illness. It's now a boil order.

"Several water samples taken last week confirmed the presence of total coliform bacteria," the DEQ statement says. The samples tested negative for E. coli.

But Division of Drinking Water staffers conducted an onsite investigation and took additional water samples, which led to the boil order.

"We are taking this action to proactively protect the health of the community," said Marie Owens, drinking water director. "DDW has identified several potential risks to the drinking water. We will continue to work with the water system to resolve the issues as quickly as possible."

Recent contamination to the SDCW system could be linked to several water line breaks or other failures.

South Duchesne Culinary Water company is unapproved by state regulators and under a compliance agreement and enforcement order with DDW.

For information on what to do during a boil order, click here.

Boil order issued after bacteria found in South Duchesne Culinary Water

By Lauren Bennett, KSL.com | Posted - Nov 22nd, 2019 @ 3:04pm

https://www.ksl.com/article/46679237/boil-order-issued-after-bacteria-found-in-south-duchesne-culinary-water

SALT LAKE CITY — A boil order was issued Friday for all homes served by South Duchesne Culinary Water, according to Utah Department of Environmental Quality officials.

After a reported illness, residents were placed under a boil advisory on Nov. 8.

With this new advisory, residents now must boil water before drinking, prepping food, making ice cubes or brushing their teeth, DEQ officials said in a news release.

Water samples tested negative for E. coli, but several samples taken last week tested positive for coliform bacteria.

The water purchased by South Duchesne Culinary Water from a local wholesaler is regularly treated and chlorinated, the news release says.

Several water line breaks or other failures could be linked to recent contamination of the South Duchesne Culinary Water system.

“South Duchesne Culinary Water company is unapproved by state regulators and under a compliance agreement and enforcement order with DDW (DEQ’s Division of Drinking Water),” officials said in the news release.

During a boil order, residents don’t need to boil tap water for showering, laundry or bathing. But when bathing, individuals should avoid swallowing the water, and toddlers and infants should be sponge-bathed, DEQ advises.

“We are taking this action to proactively protect the health of the community,” Marie Owens, drinking water director, said in a news release. “DDW has identified several potential risks to the drinking water. We will continue to work with the water system to resolve the issues as quickly as possible.”

Further details about what to know during a boil order can be found on DEQ’s website.

The Burden Of Proof: Kane County Residents Worry Proposed Frac Sand Mine May Jeopardize Aquifer

By DAVID FUCHS • NOV 25, 2019

https://www.kuer.org/post/burden-proof-kane-county-residents-worry-proposed-frac-sand-mine-may-jeopardize-aquifer#stream/0

KANAB — Kane County's most populous city sits between the Grand Staircase Escalante National Monument and the Arizona Strip. It's a dramatic landscape of red cliffs and canyons crashing into high desert grasslands — the kind of place where, when driving on backroads, clouds of dust might shoot out of the vents if you turn on the air conditioning.

But that kind of thing doesn't bother Kirk Heaton, a former Kane County Justice Court judge. Heaton grew up here, and he and his family have been ranching on this land for five generations.

What does bother him, though, is being irresponsible with water.

This summer, the city of Kanab and the Kane County Water Conservancy District voted to sell water to a controversial frac sand mine that has been proposed for a state-owned site 11 miles north of town. The company behind the project is Southern Red Sands, a start-up mining company backed primarily by Kem C. Gardner.

Kane County is anticipating significant growth and water challenges. A 2013 projected water usage report predicts the city's population will more than triple over the next 40 years. And a 2016 report estimates that the county water conservancy district's "reliable supplies" will be in deficit by 2035.

Some Kane County residents are saying their local representatives haven't done enough to vet the potential impacts of the proposed mine — and feel that the future of the aquifer they depend on is at stake.

Among them is Heaton.

"If you're the proponent of change, you bear the burden of proof," he said. "Someone has to prove to me that this isn't going to impact us."

Will history repeat itself?

Heaton's concern stems from experience. This wouldn't be the first time he's seen an aquifer overdrawn.

His family's ranch has long relied on the water from the four springs at Pipe Springs National Monument.

The aquifer that feeds them neighbors the one that supplies water to the city of Kanab. Heaton told KUER that they used to produce 44 gallons per minute, which local stockmen, the monument and the Kaibab Paiute tribe historically shared in a three-way split.

But that began to change in the late '60s and early '70s, when the tribe and the park service installed new wells to create a reliable source of potable water for future development.

Today, only one spring produces a meaningful flow — and it's a small fraction of what it used to be, Heaton said. A 2007 study commissioned by the National Park Service confirmed that the creation of the wells is responsible for the springs' decline.

Heaton is worried history may repeat itself.

"I'm not convinced that it's not going to happen over there," he said. "And if it's a local aquifer, I think it's going to happen quickly."

The National Park Service Weighs In

Heaton is not alone in his concerns.

Southern Red Sands' water service agreements with both the city and the county water conservancy district require approval from the state engineer's office at the Utah Division of Water Rights.

The county water conservancy district has not yet submitted an application to the state engineer, but the office has received 43 protests and letters of concern regarding the city's application. They've come from local residents, the county's largest employer Best Friends Animal Society and even the National Park Service.

"We monitor a lot of water rights in the area, and it's not very often that we write formal letters of concern," said Cassity Bromley, the chief of resources and research at Zion National Park. "We have to be fairly confident that there is some potential to have an impact."

The park gets its water, in part, from an aquifer adjacent to the one the mine would draw from. And according to Bromley, there's not enough research available to know definitively how potential drawdown from the mine could affect the seeps and springs that feed Zion's water supply.

She said the park is partnering with the United States Geological Survey to answer that question, but it's not certain the study will be complete before the state engineer has to make their decision.

The 'Worst Case Scenario'

Whether enough research has been done is a big question in Kanab, too.

Following the city and the county water conservancy district's decisions to sell water to the mine, Best Friends Animal Society contracted a hydrologist to look into the city's aquifer.

They hired Dr. Kenneth Kolm, a former professor at the Colorado School of Mines whose speciality is modelling hydrogeologic systems. His company recently analyzed all of the water resources for the city of Moab. And when they applied the same techniques to Kanab, they determined that the mine could have a big impact.

Kolm shared his results at an October Kanab Area Chamber of Commerce meeting focused on water concerns. "The city wells and the Best Friends wells could dry up in an as much as ten years," he told the audience, referring to a "worst case scenario" in which Southern Reds Sands would use the full 1,200 acre-feet of water it has purchased.

However, in a previous interview with KUER, the mining company's CEO Chad Staheli indicated that because of the current market, their facility will only use one-third of that amount.

A Differing Opinion

Mike Noel, the executive director of the Kane County Water Conservancy District and former state lawmaker, attended the meeting and has said he sees the issue differently.

He said the water his agency would provide would be diverted from water already being used to irrigate alfalfa, so it won't constitute a new draw on the aquifer.

He also said that using the water in this way will help create jobs in the near-term, even if the community will still need to find other sources of water to support future growth.

"There's enough water to create 180 jobs with 600 acre-feet of water. Is that a good thing? Absolutely," he told KUER. "But is there enough water to create 1,000 jobs? 2,000 jobs? It may not be."

The company has said the mine will create 40 jobs on-site and 100 indirect jobs like trucking.

Noel added that culinary water — the water people drink — always gets top priority in the event of a shortage. So, he said, no one will ever be in danger of going thirsty.

Noel is also one of four members of the Lake Powell Pipeline Management Committee and has been a longtime proponent of the billion-plus dollar project that would divert water from the Colorado River to Southern Utah. He has served as the executive director of the Kane County Water Conservancy district since 1996, just four years after it was created. He said it's his responsibility to be forward-looking.

“If I went to my board and said, ‘Hey, we’re going to run out of water in about 10 years.’ They’d say, ‘Ok, looks like we need a new manager,’ he said. “I’ve got to be looking to the future of where the water’s going to come from.”

But for people like Kirk Heaton, the future of the town’s water is too important to roll the dice.

“I want to see the fields stay watered and green — that’s my passion,” he said. “I’m opposed to what’s happening because I don’t think that those things have been looked at in the depth that they should have been.”

The state engineer will be holding a hearing on the matter sometime next year.

New Report Published About Water Accessibility In The United States

By LESYA FEINSTEIN • NOV 25, 2019

https://www.upr.org/post/new-report-published-about-water-accessibility-united-states

DigDeep, a human rights nonprofit organization, published a new report with the US Water Alliance this month about closing the water access gap in the United States.

“It’s important because there are two million people in the United States, one of the richest and most prosperous democracies on Earth, who wake up every day and don’t know how they’ll find enough water to survive,” said George McGraw, CEO of DigDeep.

DigDeep’s mission is to provide people in the United States, including parts of Utah, with access to clean water for life.

“I think this is a human rights issue,” McGraw said. “It’s a front to human dignity and there’s no reason it should exist in the United States in 2019.”

In 2014, after doing research in sub saharan Africa, McGraw found this issue was prevalent in the American Southwest.

“If you’re black or Latinx, you’re twice as likely as a white household not to have running water or basic plumbing at home; if you’re Native American you’re 19 times more likely,” McGraw said. “Race and equity is really a big factor here. These communities haven’t had access to the same resources that white and more prosperous communities have had access to.”

McGraw sent researchers to look into what was happening to the water in these communities.

“It was really important for us to show not just what this looked like in numbers, but what this looked like in lives,” McGraw said. “We’re all drawn to this work because we love people, and we want them to be healthy and happy. So we inject ourselves into their lives in order to solve injustices, or really to empower them to solve their own injustices.”

Boil Order issued for South Duchesne Culinary Water after tests detected coliform bacteria

Submitted - UDEQ Nov 22, 2019 5:31 PM

https://ubmedia.biz/news/1532/boil-order-issued-for-south-duchesne-culinary-water-after-tests-detected-coliform-bacteria/

The Utah Department of Environmental Quality (DEQ) has issued a boil order for all homes served by the South Duchesne Culinary Water (SDCW) company on Nov. 22. Multiple tests detected coliform bacteria in its drinking water supply.

“We are taking this action to proactively protect the health of the community,” said Marie Owens, drinking water director. “DDW has identified several potential risks to the drinking water. We will continue to work with the water system to resolve the issues as quickly as possible.”

The order requires SDCW to notify its customers to boil their water before using it for drinking, preparing food or brushing teeth. Residents have been on a boil advisory since Nov. 8 after a report of an illness.

DEQ’s Division of Drinking Water (DDW) have regularly monitored this system. Several water samples taken last week confirmed the presence of total coliform bacteria. The samples tested negative for E. coli. DDW staff conducted an onsite investigation and took additional water samples today, November 22, 2019.

South Duchesne Culinary Water company purchases treated and chlorinated water from a local wholesaler. Recent contamination to the SDCW system could be linked to several water line breaks or other failures. South Duchesne Culinary Water company is unapproved by state regulators and under a compliance agreement and enforcement order with DDW.

Local officials said they are disinfecting and flushing the water system. They are uncertain what specifically caused the problem but will send out another press release and post notices on every door when the threat subsides. The South Duchesne Water District serves about 150 homes.

For information on what to do during a boil order, visit: https://deq.utah.gov/drinking-water/faq-boil-water-order

Washington County Water Conservancy District Proposes Property Tax Increase

By DAVID FUCHS • DEC 2, 2019

https://www.kuer.org/post/washington-county-water-conservancy-district-proposes-property-tax-increase#stream/0

ST. GEORGE — For a second year in a row, the Washington County Water Conservancy District has proposed a property tax increase to help pay for capital projects and rising inflation.

It's something that's only happened four times in the nearly 40 years that Ron Thompson has been the district's executive director.

"I think there'll be a slight increase each year over the next 20 years," he said, referring to how Washington County currently charges just over half of its maximum allowable tax rate.

Though Thompson believes higher taxes will become the new normal, the water district only proposes property tax rates. The state tax commission sets them.

Before the water district can send any proposed tax hike to the state, its board must vote on the proposal in a public meeting. That's because of Utah's "Truth In Taxation" law.

Passed in 1985, the law stipulates that local governments must notify the public any time officials want to increase the revenue collected from property taxes. Otherwise, the amount of property tax revenue a county can collect each year is capped.

As a result, property tax rates automatically decrease year after year due to inflation, rising property values and growth. That's why property tax rates must be updated, said Karry Rathje, the district's spokeswoman.

The change the district is proposing this year is less than a hundredth of a percent and is projected to generate $329,000 for infrastructure projects, such as the Lake Powell Pipeline, and to keep up with inflation.

Conserve Southwest Utah, a local environmental and cultural conservation group, says the water district doesn't need to generate more revenue.

"We suspect that the increase would not be required if it were not for the down payment that is necessary to get the state to fund the Lake Powell Pipeline," said Tom Butine, board president of Conserve Southwest Utah.

Instead, he said, the district should increase usage rates rather than property taxes to generate revenue because it creates an incentive for customers to use less water.

Thompson says the difference will amount to about $7 per household next year.

“All I know is that it’s less than if I go to the movies and buy my grandkid popcorn and a drink,” he said. “So, it’s not a lot of money.”

The conservancy district’s board will vote on its proposed tax rate increase at 6 p.m. Wednesday during a public meeting at the district office.

Water conservation goals for Northern Utah finalized with no changes

By MEGAN OLSEN Special to the Daily Herald Dec 4, 2019

https://www.heraldextra.com/news/local/water-conservation-goals-for-northern-utah-finalized-with-no-changes/article_680562f7-e764-5085-a482-586efa2229f0.html

Utah has a new set of water conservation goals.

The Utah Division of Water resources finalized the regional water conservation goals at the end of November, incorporating more than 330 comments from the public comment period from Aug. 27 to Sept. 25. Surveys were also conducted in fall 2018, garnering responses from 1,650 people.

“We appreciate all those who took the time to review the goals and share their opinions,” said Eric Millis, Division of Water Resources director, in a press release. “There were some insightful comments, which were incorporated into the report. There is always value in soliciting public input.”

No changes were made to the goals after the public comment period, but Utah’s water conservation goals report has been clarified and updated, including the addition of all 334 comments and the division’s responses to them, the press release said.

The goals are for municipal and industrial use, the release said. They exclude agriculture, mining and power generation.

While this is far from the first time that that state has made plans to conserve water, it is the first time water conservation goals have been made at a regional level, according to the press release.

The regional goals take into consideration “climate, elevation and each region’s characteristics,” according to a map of the regions on the water goals web page.

Tailored goals were determined for nine regions in the state.

Northern Utah is comprised of two of the nine regions. The Weber River region includes Weber, Davis, Morgan and Summit counties. The Bear River region includes Box Elder, Cache and Rich counties.

Under these new regional goals, the Weber River region will aim to reduce its per capita water use by 20% over a period of 15 years, from 250 gallons per capita per day (gpcd) in 2015 to 200 gpcd by 2030.

The goals go up as time goes on — by 2040, the Weber River region will aim for a 26% reduction, to 184 gpcd. By 2065, the region will aim to limit per capita water use to 175 gallons per day, a reduction of 30%.

The Weber River region has some of the highest goals in the state. It shares its 2030 goal of a 20% reduction in per capita water use with three other regions: Provo River, Sevier River and Upper Colorado River.

The region's 2065 goal is surpassed by only one region, Provo River, which will try for a 32% reduction in water usage by that year. No other region's goal matches Weber River's goal of reducing water use 30% by 2065.

The Bear River region's goals are slightly less aggressive than the Weber River region, and its baseline use is higher. This region will aim to reduce its water use by 18% over 15 years, from 304 gpcd in 2015 to 249 gpcd in 2030.

By 2040, the region will aim to reduce water use by 24% from 2015 levels, from 304 to 232 gpcd. By 2065, the Bear River goal goes up to 28% from 2015, from 304 to 219 gpcd.

These regional goals replace Gov. Gary Herbert's statewide goal of reducing water use 25% by 2025, a modification of former Gov. Mike Leavitt's 2000 goal to reduce statewide water use 25% by 2050, the release said.

‘Forever chemicals’ are everywhere and potentially harmful to you

What states and the feds are doing to gauge impact on health

By Amy Joi O'Donoghue@Amyjoi16 Dec 7, 2019, 3:38pm MST

https://www.deseret.com/utah/2019/12/7/20996775/forever-chemicals-health-dark-waters

SALT LAKE CITY — If you wear any type of clothing that repels water or are using older nonstick cookware and nibble on chips out of a bag, you are exposed to “forever chemicals” — substances that don’t ever break down.

They are even inside of you, in your blood.

The problem is, studies have linked some of these 4,000 manmade chemicals to liver damage, kidney cancer, thyroid disease, decreased fertility and low birth weight.

“There are thousands upon thousands of these,” said Ben Brown, who is heading up a working group at the Utah Department of Environmental Quality to look at the issue and form a monitoring plan. “We all use these compounds in our everyday life.”

Actions to address forever chemicals are taking place on multiple fronts, involving efforts among the U.S. Environmental Protection Agency, states, water providers, the Centers for Disease Control, industry and the agriculture world, to name a few.

“Everybody is concerned about it, but nobody knows what to do,” said Jill Jones, general manager of the Central Davis Sewer District.

Even Hollywood is getting involved.

“Dark Waters,” is playing in select theaters and opened nationwide Friday. It stars Anne Hathaway and Mark Ruffalo, detailing the story of an attorney who took on DuPont, which paid a settlement of $670 million in 2017 stemming from water contamination lawsuits.

The suit alleged DuPont knew a chemical called PFOA — used in Teflon and other products — was toxic, but used it anyway.

The company has since phased out its use in the United States, but PFOA and PFOS abound in products people use everyday. Ruffalo even testified in Congress earlier this year to detail the chemicals’ harmful effects and push passage of pending legislation requiring their regulation.

Jones said the movie will stoke a lot of concern about a voluminous group of chemicals that are just starting to emerge as problematic and remain a topic with limited research.

One of her engineer's family members saw the trailer, and started asking questions. So far, there are few answers.

"There is a lot of uncertainty because we don't have any guidance on this from the federal government," Brown said.

This week, as a result of an action plan the EPA developed to address forever chemicals in a multipronged approach, the federal agency announced it may institute thresholds for those PFOA and PFOS in drinking water. The proposal is under review by the Office of Management and Budget.

In 2013, the EPA ordered all states to test for forever chemicals in public drinking water supplies. Brown, the environmental program manager for the Utah Division of Water Quality, said Utah results showed "non-detect," but it is a high threshold of 70 parts per trillion.

Utah plans to do an array of testing next year, sampling drinking water systems, landfills, and even the tissue of ducks and fish to assess the problem.

Brown said because this is a relatively new issue, the agency will have a tough time knowing what to do after testing.

"It is one thing to go out and sample," he said. "The big question is what are we going to do with that when we get the numbers."

Layton City says not to worry despite strong chlorine smell in tap water

by Ginna Roe

Monday, December 9th 2019

LAYTON, Utah (KUTV) — Layton residents say they're concerned about their tap water, complaining about a strong chlorine smell.

Some going as far as to compare their water to a swimming pool.

But Steve Gardside, Layton City spokeperson, said they have nothing to worry about. He said there's a reason for the strong smell.

"We've switched over from the aquifer water to the Weber Basin water," Gardside said.

The city uses both water sources, but under EPA regulations, water from an aquifer does not need to be treated with chlorine, while the water from Weber Basin does.

"Being surface water or spring water needs to be treated. So, it's a small amount of chlorine, but when you're from zero to even a little bit, it's obviously something you're going to notice right off, but it is safe to drink," Gardside said.

Layton City is currently using more of Weber Basin's water, which is why it may seem more chlorinated. But, Gardside said the water is regulated closely and the levels of chlorine are not dangerous.

"When it leaves Weber Basin water, the maximum it has is .9 parts per million," he said.

To put that in perspective, a public pool has on average 3 to 5 ppm of chlorine. He said he understands the public's concerns. If anyone has any questions, he encourages them to call the city.

Nature's 'Brita Filter' Is Dying And Nobody Knows Why

Nathan Rott December 6, 20195:01 AM ET

https://www.npr.org/2019/12/06/784422726/natures-brita-filter-is-dying-and-nobody-knows-why

On "good" bad days, the shells lie open at the bottom of the river, shimmering in the refracted sunlight. Their insides, pearl white and picked clean of flesh, flicker against the dark riverbed like a beacon, alerting the world above to a problem below.

"That's what we look for in die-offs," says biologist Jordan Richard, standing knee-deep in the slow-flowing waters of the Clinch River in southwest Virginia. He points at a faint shape submerged about 10 feet upstream. "I can tell from here that's a pheasantshell, it's dead and it died recently. The algae development is really light."

The pheasantshell is a freshwater mussel, a less-edible version of its saltwater cousin that spends most of its inconspicuous life part-buried in riverbeds, blending in with the rocks and filtering the water around them.

In recent years, though, biologists and fishermen noticed something was wrong. On sections of the Clinch and other waterways in the Pacific Northwest and Midwest, dead mussels were turning up on shores and could be seen glinting from the river bottom. Surveys revealed more recently dead or dying mussels half-buried and rotting in still-clasped shells.

"It would take you 20 to 30 seconds to go from one dead one to another to another," says Richard, who works with the U.S. Fish and Wildlife Service USFWS in Virginia. "And it's been like that week after week after week [every fall] since September 2016."

On the Clinch River alone, hundreds of thousands are believed to have perished, a mass mortality event that has baffled scientists and alarmed ecologists. Freshwater mussels, like pollinators and trees, are critical to their larger ecosystems and the world around them. They create habitat for other species, like freshwater coral reefs, and help maintain the structure and rigidity of the waterways they call home. They scoop up algae and nutrients, processing and concentrating them for others to eat.

But perhaps most importantly, these soft-bodied invertebrates improve the water quality around them (check out this video.) They filter out sediment and agricultural runoff, limiting the size and impacts of dead zones. They reduce fecal bacteria from water, lowering the risk of E. coli. They sequester carbon, phosphorous and heavy metals. There's even evidence they can remove

man-made contaminants from water such as pharmaceuticals, flame retardants and personal care products.

A single freshwater mussel can filter more than 15 gallons of water in a day.

They're like nature's "Brita filter," says Emilie Blevins, a conservation biologist with the Xerces Society for Invertebrate Conservation, an Oregon-based nonprofit that's monitoring and studying the recent die-offs.

"The loss is really huge and it's happening really quickly," Blevins says. "It's a major concern for the future and for the future of our fresh water."

Mussels on the brink

Freshwater mussels are one of most imperiled species on the planet. Nearly three-quarters of North America's roughly 300 native mussel species are endangered, at risk, or of concern. Dozens are already extinct. Humans are the primary cause.

For decades, freshwater mussels were overharvested for their shells. Before the era of plastic, they were collected and cultivated by the millions to satisfy a commercial demand for buttons. Even more damaging was the spread of human development and environmental degradation. Rivers were dammed for power. Streams were diverted for agriculture. Wetlands were paved for housing. All this continues today, imperiling far more than freshwater mussels.

A recent report by the United Nations found that human practices have put roughly 1 million species at risk of extinction, many within decades.

"The essential, interconnected web of life on Earth is getting smaller and increasingly frayed," wrote Josef Settele, a German biologist and co-chair of the report. "This loss is a direct result of human activity and constitutes a direct threat to human well-being in all regions of the world."

Richard, who says the report should be a wake-up call, says there are worrisome similarities between the plight of the freshwater mussel and the greater global extinction crisis.

"It's just subtle enough that species are slipping away without anyone really noticing. A species here and a species there," he says. "But over time that becomes 10, and 100, and 1,000 species here and there until you're left with this husk of the biodiversity you had before."

At first, biologists investigating the cause of the freshwater mussel die-off suspected human activity — contamination or pollution. Rivers and streams in the coal seam-striped southern Appalachian Mountains have a long history of environmental degradation. But pollution tends to be indiscriminate, and not every species is being affected.

In the Clinch River, it's the most abundant mussel species, *Actinonaias pectorosa* — the large, gold-brown colored pheasantshell — that's hardest hit. At one monitoring site, almost 90% of the population was lost in the year after the die-off was first discovered.

"It is weird to keep finding dozens or hundreds of dead *pectorosa* and other species look like they're doing just fine," says Rose Agbalog, another Virginia-based biologist with the USFWS.

To some researchers, the species-specific nature of the die-off suggests another cause: disease.

A human-spread pathogen is responsible for the ongoing "amphibian apocalypse," which has hurt more than 500 species. Scientists are looking at a virus and gut parasite that have been associated with bee colony collapse. White-nose syndrome, which has decimated North America's bats, is caused by a fungus.

Epidemiologists and other researchers from the University of Wisconsin and the U.S. Geological Survey have been testing mussel samples, sent in from the Clinch and other affected sites, for genetic, viral and bacterial irregularities — a challenge made more difficult by a dearth of information on *regular* mussel pathology.

The scientists have found a novel virus and a bacterium that are "statistically associated" with the dying mussels compared with control groups, but nobody is willing yet to label either the culprit. There's still too much uncertainty.

Are the mussels dying because they're filled with virus and bacteria? Or are they full of virus and bacteria because they're dying? Is there an environmental trigger driving it, such as drought or climate change?

"That's the hard part," Richard says. "There's a million things it could be, and we only have so much money and time to find out."

Raising new mussels

Given those challenges, the team is leaning into a contingency plan that nobody wants to depend on. Nestled in a shallow Appalachian valley, near the banks of the South Fork Holston River, a fish hatchery now serves as a nursery for freshwater mussels. It's home to some of the rarest species in North America.

In two long buildings, humming with running water and pumps, biologists with the Virginia Department of Game and Inland Fisheries are raising thousands of freshwater mussels in sand-filled pans — mussels that, when mature, will be brought out to supplement the sputtering populations that still exist in the wild.

One pan of the federally protected golden riffleshell "probably holds more than naturally still live in the creek," says Tim Lane, Virginia's southwest region mussel recovery coordinator. "It makes me nervous even looking at it."

When the recent die-off was first detected, Lane and other mussel specialists raced to the upper stretches of the Clinch River to collect healthy adult pheasantshells. Those mussels are now

serving as a baseline, normal specimens to compare to the sick, but they're also being seen as a backup.

"If this thing continues, at least we've got this other basket of eggs upstream so it's not all a loss," Lane says.

The idea is that someday biologists could repopulate parts of the Clinch River with pheasantshells.

It's an imperfect solution. Freshwater mussels have existed in these ecosystems for thousands of years, evolving to mimic intricate fish. They are the ultimate angler, Lane says, perfectly adapted to an ecosystem that humans could never re-create.

"Nature is so complex. Biology is so complex," he says. "We do not understand how important some things are until they're gone."

90% of northern Utah’s dust comes from shrinking lakes, BYU study finds

By Brian Maffly · Published: 5 days ago Updated: 2 days ago

https://www.sltrib.com/news/environment/2019/12/11/byu-study-blames/

Upwind from northern Utah’s urban centers is a network of lakebeds, dried-up remnants of a vast prehistoric inland sea that dominated the region when the climate was much wetter and cooler that it is today.

Now, as western Utah becomes even drier — from drought, water diversions and climate change — these playas have become a major source of dust settling on Wasatch Front cities and their mountain water sources, according to new research conducted by Brigham Young University geologists.

Led by geology professor Greg Carling, the study concluded 90% of the dust is blown off the exposed beds of the shrinking Great Salt Lake, Sevier Lake and other valley bottoms once covered by ancient Lake Bonneville.

“Lakebeds are muddy, but as they dry out, they become a dustpan,” said study co-author Michael Goodman, a former BYU graduate student now working as an environmental consultant in Houston. “Dry lakebeds are becoming a significant dust threat to nearby communities, not only impacting air quality but also impacting soil and what can grow in it.”

Airborne dust is considered a form air pollution, known as large particulate matter, or PM10. It is not as dangerous as fine particulate PM2.5 because it is not easily absorbed into lung tissues. But it remains a serious problem, particularly on the four to five days a year when major winds turn the Wasatch Front’s airshed gritty and darken the snowpacks that store water for Utah’s thirsty cities.

Accordingly, lakebed dust has become the focus of intense scientific scrutiny in the past decade. Geographers and geological and atmospheric scientists with the University of Utah closely study the beds of the Sevier and Great Salt Lake, as well as dust accumulating on Wasatch snowpacks, in an effort to understand how land-use practices and water diversions affect water supplies and alpine environments.

It's an alarming picture.

Scientists like the U.'s McKenzie Skiles have proved that West Desert dust storms leave a dark coating on the Wasatch snowpack. By reducing the snow’s ability to reflect heat, the dust accelerates the spring runoff, ensuring less water is available for stream and human uses.

“It’s a symptom of our water-use policies,” said Kevin Perry, another U. atmospheric scientist who recently completed an comprehensive analysis of the Great Salt Lake’s exposed bed. “We are poor at conserving water, and we have some of the highest per capita use of water. This is one of the consequences of not being waterwise in a desert ecosystem.”

Although drought is a factor, water diversions are the main reason the Great Salt Lake is shrinking, leaving about 750 square miles of bed exposed, and Sevier Lake is a memory.

According to a 300-page report Perry submitted this fall to the Utah Department of Natural Resources, much of the Great Salt Lake’s bed is protected by a crust that keeps windstorms from spreading dust.

“Only 9% of the lake right now is blowing dust," Perry said. "If the crust were to erode or be destroyed, then a maximum of 22% of the lake would actually have enough silt and clay particles to become dust sources. We know where those sources are. We know what needs to be protected.”

BYU’s new study adds to this science by attempting to characterize the quantity and quality of the West Desert dust falling on Utah’s big cities and nearby water sources in the mountains.

The BYU team collected more than 100 samples at 15 locations in Utah’s West Desert, including the dry beds of the Great Salt Lake and Sevier Lake, Tule Valley, Wah Wah Valley, Sunstone Knoll, Fumarole Butte, Pismire Wash, Fish Springs and Dugway Proving Ground.

They also collected samples in four major northern Utah cities from Provo to Logan and on spring snowpacks in the Wasatch and Uinta mountains.

Dust from particular sources exhibited distinct ratios of various isotopes, providing a signature that could match samples collected in the cities with specific source sites, according to Goodman. This isotopic analysis revealed the dry Sevier playa is a major source of dust turning up on the Wasatch Front.

A secondary takeaway from the BYU study is that dust deposits containing harmful elements are more likely coming from the cities themselves or mining sites, according to Carling.

“Even though the urban and mining area contributes only a small fraction of the dust load," Carling said, “it contains the most contaminants, such as antimony and copper."

The study, published in the journal Chemical Geology, was funded by the National Science Foundation and the Utah Division of Forestry, Fire, and State Lands. Co-authors included BYU geology professors Barry Bickmore, Stephen Nelson and Kevin Rey, as well as former student Colin Hale. U. professor Diego Fernandez and Jeffrey Munroe of Middlebury College also assisted with the research.

Plan for states, including Utah, to take less water from Colorado River gets praise

by KEN RITTER Associated Press

Thursday, December 12th 2019

https://kutv.com/news/local/plan-for-states-including-utah-to-take-less-water-from-colorado-river-gets-praise

States in the U.S. West that have agreed to take less water next month from the drought-stricken Colorado River got praise and a push for more action from the nation's top water official. U.S. Bureau of Reclamation Commissioner Brenda Burman told water managers from seven states that the promises they made to avoid severe cutbacks are crucial.

She also said Thursday that tougher challenges are ahead. Beginning Jan. 1, Arizona, Nevada and Mexico start taking less water from the river that supports about 40 million people. Officials say cuts won't be noticeable. California, Colorado, New Mexico, Utah, Wyoming also have a stake in river water.

Healthy Watersheds for a Healthy Utah

By Christine Osborne

https://deq.utah.gov/communication/news/featured/healthy-watersheds-utah

Did you know that wherever you are, you're standing in a watershed? We all know we're dependent on water for our survival, but we don't often stop to think about the role that watersheds play in making sure the water we use for drinking, irrigating crops, recreating in the great outdoors, and fueling economic growth is reliable, affordable, and accessible.

What is a watershed?

A watershed is a geographic area that drains into a common body of water such as a stream, river, lake, or wetland. Watersheds act like a funnel, channeling precipitation from the highest point in an area to the lowest point. Some of the water soaks into the soil as groundwater, while some flows into smaller tributaries or creeks that join together to form streams or rivers. These streams and rivers may then flow into larger areas to form lakes.

While some watersheds are small, others can cover thousands of acres. The Mississippi Watershed collects 1.15 million square miles of water from 31 states and two Canadian provinces! Smaller watersheds that span a single county or an inland lake may feed into larger watersheds. Ridges or hydrological divides separate watersheds; for example, precipitation that falls along one side of the Continental Divide of the Americas drains into the Pacific Ocean, while precipitation that falls along the other side drains into the Atlantic Ocean. We often think of watersheds as diverting mountain streams into low-lying valleys, but watersheds can also be relatively flat. All that's required for an area to be considered a watershed is that the water it contains flows downhill and collects in a body of water.

Why are watersheds important?

An area's water quality is inextricably tied to the health of its watershed. Watersheds provide a number of important ecological functions. They reduce erosion, regulate surface water and groundwater flow, prevent flooding, stabilize stream banks, filter and purify water, and provide important habitat for plants and animals. Many communities and individuals rely on healthy watersheds for clean drinking water, recreation, and agriculture.

We don't always think about the financial value of a healthy watershed until we start comparing it with investments in new or improved infrastructure such as drinking water treatment plants and flood control measures. It is often more cost-effective to invest in watershed protection than mitigation. The natural infrastructure provided by a watershed is a valuable and overlooked resource that can save millions of dollars in engineered solutions. According to the Environmental Protection Agency (EPA), more than $450 BILLION in food and fiber, manufactured goods, and tourism in the U.S. depend on clean water and healthy watersheds.

What are the threats to healthy watersheds?

Unfortunately, healthy watersheds are the exception rather than the rule. While the headwaters of many watersheds are relatively pristine, these waters can become contaminated by stormwater runoff and nonpoint source pollution as they move downstream. As water flows through the watershed, it picks up contaminants from runoff from urban areas, parking lots, roads, agricultural and residential areas, construction sites, and faulty septic systems. These contaminants can include chemicals, pesticides, fertilizers, oil and gasoline, *E. coli* from human and animal waste, pathogens, toxic materials, and sediment. Stormwater and nonpoint source runoff are the major sources of pollution to our watersheds.

What role does DEQ play in watershed protection?

Watershed monitoring is the best way to assess the condition of Utah waters. DEQ's Division of Water Quality (DWQ) conducts water-quality monitoring on a watershed basis to evaluate water-quality conditions, collect valuable information about overall watershed health, and determine whether waterbodies are meeting their designated beneficial uses. (Utah's waterways are assigned specific beneficial uses, including drinking water, recreation, agriculture, and cold-water fisheries, and DWQ develops criteria to protect, and if necessary, restore those uses). Waters not meeting the standards that protect for their beneficial uses are placed on the 303(d) List of Impaired Waterbodies. Once these waters are listed, DWQ conducts in-depth water quality studies to identify the possible sources of the pollutant(s) causing the impairment and create a plan called a Total Maximum Daily Load (TMDL) to restore the waters to their beneficial use(s).

DWQ is committed to protecting and restoring the water quality in Utah watersheds. It's an effort that will take all of us working together to accomplish. Our watersheds, and the benefits they provide, are worth it.

Visit the Utah Clean Water Partnership website to learn more about your watershed and the agencies, citizens, and organizations working to protect and restore Utah's waters. Want to know what you can do as an individual to help protect our watersheds? Here are some tips:

Limit fertilizer use on your lawn.

Pick up after your dog.

Reduce pesticide use.

Never pour chemicals, pharmaceuticals, or oil down the drain, toilet, or storm drain.

Fix leaky septic systems.

Use a rain barrel.

Volunteer to plant trees near rivers and streams.

As Winter Approaches, All Eyes Turn Toward Rocky Mountain Snowpack

By LUKE RUNYON • DEC 17, 2019

The West's water security is wrapped up in snow. When it melts, it becomes drinking and irrigation water for millions throughout the region. A high snowpack lets farmers, skiers and water managers breathe a sigh of relief, while a low one can spell long-term trouble.

The most recent seasonal forecast from federal forecasters at the National Weather Service's Climate Prediction Center shows much of the Colorado River watershed with equal chances for either above or below average precipitation from December through February. Northern portions of the basin are slightly favored to see precipitation above average, while its southern reaches are projected to see below average. Winter temperatures are set to be higher than average.

The winter bellwethers of El Niño and La Niña are absent this season. The large-scale climatic condition where longterm weather patterns are determined by the Pacific Ocean's temperatures are in neutral conditions, making already uncertain seasonal predictions for the Colorado River watershed even moreso.

The early season spikes in snowpack totals are promising -- the river's Upper Basin is currently at 125% of average -- but those who watch it closely are only cautiously optimistic.

The start of winter doesn't smell like fresh pine trees or burning logs in the fireplace for Brian Varrella. It smells like melted crayons.

Varrella's pre-winter ritual involves vice grips, a work bench and a tiny electric iron. For a month prior to the ski season's start, Varrella posts up in his Fort Collins, Colorado garage to wax skis from his own collection and his friends. His work area is adorned with a string of multi-colored Christmas lights.

For Varrella, an engineer with the state's Department of Transportation, the routine of dripping wax, curing, scraping and brushing is a way to mentally prepare for the season ahead.

"I'm not really thinking about anything except skis and snow and getting outside with my friends and that's it," Varrella said.

His thinking goes: if you wax it, the snow will come. Varrella's hoping for a repeat of last winter, which was one of the most abundant for the southern Rockies in the last decade.

"Now, I admit, this year I didn't put the stuff away," he said. "I left most of my tools out. We actually skied into July 4th."

Varrella is but one water user in a much wider web. The snow he skis on in December will be filling streams and causing wildflowers to bloom in June. It'll also boost reservoirs that more than 40 million in Southwest depend on for municipal and agricultural demands. But at the start of each ski season, there's no certainty how the season will shape up, with plenty of fates hanging on each storm that tracks over the mountains.

"I used to wonder, is it going to be a great snow year?" Varrella said. "Am I wasting my money going up in the mountains to play? Anymore I don't worry about it."

Varrella says people in the recreational community can have a selective memory when it comes to snow. They tend to only remember the good times, and forget the years cut short by a lack of snow in the mountains. It's the opposite for those in charge of using that melted snow to keep faucets flowing in Arizona.

"It's visceral, right?" said Kathryn Sorensen, director of Phoenix's water utility. The city gets more than 30% of its water from the Colorado River. "Because so much of what we do depends on the availability of water and hydrology that yeah, it's almost like a gut emotional reaction to both good years and bad years. Yeah, I do feel that."

Brian Varrella might struggle to name the poor snowpack years, but Sorensen can rattle off the years with ease. The past two decades have brought some of the scantest snowpack totals on record for the watershed: 2002, 2004, 2007, 2012, 2013, 2015 and 2018.

"We're always hoping for good snowpack and when it's absent, sure, we get nervous," Sorensen said. "But that's why we plan methodically for worst case scenarios so that we are prepared, come what may on the Colorado River watershed."

But while it's important to keep an eye on year-to-year snowpack to get a sense of what short-term impacts might be, University of Colorado-Boulder and Western Water Assessment researcher Jeff Lukas says you also need to look at the watershed as a whole.

"Any one year does not set the whole system into either crisis or into recovery," Lukas said.

Whatever happens this winter -- high snow, low snow or somewhere in between -- he says it won't cause the Colorado River's biggest reservoirs to rise or fall in any dramatic way. That takes back-to-back years of extreme highs or lows. The two largest reservoirs -- Lakes Powell and Mead -- are both so large and managed in such a structured way that only consecutive years of extremes cause large system-wide changes.

"There's no good that comes from a low runoff year like 2018," Lukas said. "But it's not the end of the world, especially if you're lucky enough to have that followed with a high runoff year like we had in 2019."

And if 2020 brings another high snowpack year, that doesn't mean the Colorado River is out of crisis mode. It just means we've kicked the can down the road because over the long term, climate change is diminishing snowpack across the West, Lukas said.

"And increasingly, we're seeing unprecedented conditions relative to the last 100 or 120 years of record," he said.

"There's there's an erosion of the value of the past as a guide to the future."

Back in Brian Varrella's garage, the newly waxed skis are fully cured. He picked up a plastic tool to scrape off the excess. With a good start to the ski season, he's pretty pleased.

"Can you make a prediction of whether it's going to be a good year or a bad year for snow, or is it still too early to say?" I ask.

"My prediction is this is gonna be a fantastic year," he said. "We're off to a good start, man. We're going to keep that momentum going."

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Fairview treated water is just right for irrigation

Ultra-efficient water treatment turns reclaimed water into a resource

By James Tilson Associate editor 10-3-2019

http://sanpetemessenger.com/archives/15137

FAIRVIEW—The city of Fairview uses a method of treating its waste water that makes the end product work "just like Miracle Grow."

Justin Jackson, the water superintendent for Fairview, says the filtering system Fairview uses is so efficient that the water that comes out of the system, which has too much phosphates and nitrates for culinary water, is ideal for irrigation.

"In order for the city to meet the state's phosphates limit rule, the city could chemically treat the water, or it could land-apply the water, where the plants in the ground eat the phosphates," says Jackson. "The water that comes out of our treatment facility is just like Miracle Grow."

According to Jackson, Fairview decided to use its treated water to irrigate city property a year and a half ago. The water will be applied to the city cemetery and the sports and recreation parks. At this time, the water will not be available for use anywhere but city property.

The reason Fairview's treatment facility is so efficient comes down the filters they use in their treatment facility. Jackson says the facility uses a membrane bio reactor (MBR), which filters the waste water down to 1 micron. A micron is equal to one millionth of a meter. One inch has 25,000 microns.

The MBR was installed in 2004. The MBR is so efficient, it cleans the water to a level that is significantly lower than most Utah cities' drinking water levels. In fact, MBR was developed in Japan, where it is used to reclaim waste water for use as drinking water. However, MBR is not used for that purpose in the United States.

Six other locations in Utah also use MBR. One of those is the Norbest plant in Moroni. The city of Santaquin uses MBR, and also uses the reclaimed water to irrigate its city property. Santaquin then will sell its extra water to Young Living Farms for their irrigation purposes.

The MBR is the preferred method by the Utah Department of Environmental Quality (DEQ). According to Jackson, the DEQ likes that MBR allows cities to use the reclaimed water in irrigation, and not put the phosphates and nitrates into rivers. The only addition the DEQ requires is the use of chlorine to rid the water of any pathogens.

The DEQ also likes the water conservation aspect of the MBR. By using the reclaimed water for irrigation, it alleviates demand on other sources of water. This makes it better than chemical treatment, which cannot be reused. Jackson says chemical treatment also runs the risk of dangerous error.

Jackson notes most other U.S. cities using the MBR have turned their reclaimed water into a commodity, for example, by having farmers lease city property to use the water. “The sewer treatment plant produces a commodity,” says Jackson. “Why are we not utilizing all of our resources?”

Jackson tells how cities outside of Utah, such as San Diego, Denver and Texas, have taken their reclaimed water and, by adding a reverse osmosis system to their treatment, have sold their water to beer breweries. “These cities have turned their waste water into a next-level commodity, instead of a burden on the community. Ideally, these systems will eventually pay for themselves.”

Jackson notes the decision to use the reclaimed water for irrigation of city property is still in its first steps, and has not been utilized yet. Fairview is currently in the final stages of engineering, and scheduled to finish in 2022.

The plan is to apply the water to city property only. If there is any left over, the city “may” sell it to area farmers. However, to do so would require a “best practices” contract, with supervision, in order to eliminate phosphate and nitrate saturation. And the water could only be used on city property.

Jackson says one irrigation company has approached the city for use of the reclaimed water. The city is hesitant to go forward with sale of the water to an irrigation company because of “a lot of legal stuff to work out.”

However, Jackson thinks having a hydroponic farm lease property from the city would be ideal. The farm could be placed on leased city property, and would use only a limited amount of water. Jackson even thinks a medical marijuana farm would offer the best return on investment, even though he hasn’t received much positive feedback from the city.