Drinking Water Board Packet

June 9, 2020

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 ELECTRONIC BOARD MEETING

Via GoToWebinar

To Register: https://attendee.gotowebinar.com/register/3037609086112035339

June 9, 2020 1:00 PM

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

1. Call to Order

2. Roll Call – Marie Owens

3. Approval of the Minutes:
   A. February 27, 2020
   B. April 27, 2020

4. Disclosure for Intent to Publicly Comment - Roger Fridal

5. Disclosure for Conflict of Interest - Roger Fridal

6. Operator Certification Commission - Michael Grange

7. Financial Assistance Committee Report
   A. Status Report – Michael Grange
   B. Project Priority List – Michael Grange
   C. SRF Loan Relief Policy - Michael Grange (Board Action Needed)
   D. Principal Forgiveness - Michael Grange
   E. Intended Use Plan Update – Michael Grange
   F. SRF Applications
      1) STATE
         a. Scipio Town - Heather Pattee
      2) FEDERAL
         a. Diamond Valley - Deauthorization - Skye Sieber
         b. San Juan Spanish Valley - Skye Sieber
         c. Willow Creek - Heather Pattee
         d. Sigurd Town - Heather Pattee

G. Provo River Water Users WIFA Project – Michael Grange

8. Division Strategic Planning Process - Nathan Lunstad & Mimi Ujiie

9. Rural Water Association Report – Dale Pierson

10. Directors Report – Marie Owens
    A. Enforcement Report
    B. Legislative Session Update
    C. New Employee Introductions- Elisa Brawley, Julie Cobleigh, Mimi Ujiie, Linda Ross, Russell Seeley, Brian Pattee
    D. Other

11. Public Comment Period - Roger Fridal

12. Open Board Discussion - Roger Fridal

13. Other

14. Next Board Meeting

Date:	September 1, 2020
Time:	1:00 PM
Place:	Multi Agency State Office Building Division of Drinking Water 195 N 1950 W Salt Lake City, Utah 84116

15. Adjourn

Agenda Item 3(A)

State of Utah
GARY R. HERBERT
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Environmental Quality

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

DRINKING WATER BOARD MEETING
February 27, 2020 2:00 PM
Dixie Convention Center
Garden Room
1835 S Convention Center Dr
St George, Utah 84790

DRAFT MINUTES

1. Call to Order

Roger Fridal, Chair, called the Board meeting to order at 2:00 PM.

2. Roll Call – Marie Owens

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

Division Staff present: Marie Owens, Director, Michael Grange, Heather Pattee, Allyson Spevak, Rachael Cassady, Nathan Lunstad.

3. Public Comment Period

No public comments were made.

4. Approval of the January 14, 2020 Minutes

- David Pitcher moved to approve the January 14, 2020 minutes. Kristi Bell seconded. The motion was carried unanimously by the Board.

5. Conflict of Interest – Roger Fridal

There were no conflicts of interest.

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 December 31, 2019 there is a balance of approximately $2,250,000 in the State SRF fund. Over the course of the next year, the Division is expecting $4.5 million to be added to the fund through annual tax revenue, and principal and interest payments. By the end of 2020 there will be a total of approximately $6.8 million available for State project allocation.

Michael then reported that currently there is a balance of $12,690,000 in the Federal SRF fund. Over the course of the coming year, the Division is expecting approximately $21.5 million to come into the fund from the EPA capitalization grant, state match, and principal and interest payments. By the end of 2020 there will be a total of approximately $34 million for federal program projects.

The programmatic financing money for Granger Hunter Improvement District and Kearns Improvement District, respectively, is going out and construction has started.

B. Project Priority List – Michael Grange

Michael reported that two new projects are recommended to be added to the Project Priority List: Sigurd Town with 27.5 points with a spring redevelopment, tank and chlorinator project; and Spring Creek Water Users with 11.4 points with a meter replacement project. The Financial Assistance Committee recommends the Board approve the updated Project Priority List as presented, with the addition of these projects.

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

C. SRF Applications

i) STATE

a) Fairview City – Michael Grange

Representing Fairview City was Justin Jackson, Culinary and Wastewater Superintendent and David Dillman of Horrocks Engineers.

Michael Grange informed the Board that Fairview City is requesting $240,000 in financial assistance to rehabilitate their springs and replace a section of transmission line that crosses the river. The city is requesting that the Board consider this an emergency project and therefore it did not go to the Financial Assistance Committee for project preview. The springs are adjacent to Highway 31 through Fairview Canyon and over the past several years the collection area has been negatively impacted by debris from the highway and canyon walls. The springs are now incapable of supplying enough water for the city's needs especially during the summer high water use months. The city intends to complete the project on the springs by the end of May 2020 in order to put them back in service before the high demand season begins.

In addition to the funding from the Board, the city is in the process of securing funding from the Emergency Watershed Protection Program through the Natural Resources Conservation Service to protect the slope above the springs and mitigate future debris impact in the spring collection area. Local 2018 MAGI for Fairview City is $44,800 which is 93% of the State MAGI. Their current average monthly water bill is $36.73 which is .98% of the local MAGI. Their estimated after project water bill will be $62.08 which is 1.66% of the local MAGI, therefore the city does not qualify for additional subsidy.

Staff is recommending the Board authorize a construction loan of $240,000 at 2.5% interest for 30 years to Fairview City.

The city clarified for Blake Tullis that the funding from the Natural Resources Conservation Service and that subsequent project would be separate from the Board's funding for spring re-development.

David Pitcher inquired if fencing would be incorporated into this project. The city replied that they don't expect to put in fencing and they've requested an exception on fencing as the slope is steep and a fence would be damaged by falling rock. The fencing exception would be due to the lack of grazing, the lack of access, and the fact that UDOT pushes rocks over the edge of the road.

Scott Morrison asked about their IPS cross connection program points. The city said their operator is scheduled to get the administrator certification this year and he's also told the city council what needed to happen during 2020.

- Scott Morrison moved that the Drinking Water Board authorize a construction loan of $240,000 at 2.5% interest for 30 years to Fairview City. Jeff Coombs seconded. <u>The motion was carried unanimously by the Board.</u>

ii) FEDERAL

a) Spring Creek - Heather Pattee

Representing Spring Creek was Gerald Vanlwaarden, President of Spring Creek Water Users.

Heather Pattee informed the Board that Spring Creek Water Users is requesting financial assistance in the amount of $57,974. Their project consists of meter replacement throughout the system. The local MAGI is 76% of the State MAGI and the after-project water bill would be 1.80%, therefore they do qualify as a hardship community to receive principal forgiveness.

The Financial Assistance Committee recommendation is that the Board authorize $57,974 in principal forgiveness to Spring Creek Water Users.

Gerald explained that their system has been in place since 1990 and the meters are the original analog and are not lead-free. Jones and DeMille Engineering has recommended a

type of meter that is both digital and analog. These meters will enable them to get more accurate water use data.

Marie asked if they would also take a service line material inventory while replacing the meters. Gerald said that they do know that most of the lines going from the meters to the residences are PVC. Marie said the meter replacement is a good opportunity to document the service line material. Gerald said that they are set up to do the following; record the existing value, record the new meter value, inspect the meter set, replace the check valve if necessary, and record the type of delivery lines going from the meter to the residences.

Gerald informed David Pitcher that $57,974 is the total project cost.

- Kristi Bell moved that the Drinking Water Board authorize $57,974 in principal forgiveness to Spring Creek Water Users. Eric Franson seconded. The motion was carried unanimously by the Board.

b) Canyon Meadows - Heather Pattee

Representing Canyon Meadows was Ted Mickelson with Jones and DeMille Engineering, Rick Kartchner, President of Canyon Meadows Mutual Water Company, and Tony Spackman, Canyon Meadows Water Operator.

Heather Pattee informed the Board that in January 2019 Canyon Meadows Mutual Water Company was authorized $1,925,000 in financial assistance to replace their existing treatment system with a closed media filtration system, construct a new tank and replace 15,000 linear feet of water line. The project went out to bid and the bids have come back significantly higher than anticipated. Canyon Meadows would like to add to the scope of work to replace additional water lines in the subdivision along with a few other small items for the treatment system.

The local MAGI is 180% of the State MAGI and their current water bill is $82.77 which is 1.2% of the local MAGI. The recommended funding package would raise the average monthly water rate to $174.75 a month which is 2.54% of the local MAGI, so that does qualify them for additional subsidy.

The staff recommendation is the additional subsidy would be in the form of an extended loan term, reduced interest rate and 20% principal forgiveness. Heather followed the formula of the original authorization which is 20% principal forgiveness. The Financial Assistance Committee recommendation is that the Board authorize a loan of $2,725,000 at 1% hardship grant assessment fee for 30 years with $550,000 in principal forgiveness for a repayable amount $2,175,000. Conditions include that they resolve all issues on their compliance report; including points for cross connection control and containment provisions for spills.

Kristi asked if their customers are aware of the large water bill increase and the Canyon Meadows representative said they've been made aware and they'll be able to afford it. The two developers who own the currently developing lots are also aware of the increase.

- David Pitcher moved that the Drinking Water Board authorize a loan for $2,725,000 at 1% hardship grant assessment fee for 30 years with $550,000 in principal forgiveness making the repayable amount $2,175,000 subject to taking care of the issues on their IPS report to Canyon Meadows. Eric Franson seconded. The motion was carried unanimously by the Board.

c) Swiss Alpine Water Company – Michael Grange

Representing Swiss Alpine Water Company were Dale Mickelson, Water Master, and Ryan Taylor with TO Engineers.

Michael Grange informed the Board that Swiss Alpine Water Company is drilling a new well to meet source requirement standards. The cost of the project is estimated at $1,752,000 and the system will be contributing $140,000. This project was initially authorized by the Board on March 1, 2018 and it was put out to bid June 2019; however, they did not receive any bids on significant parts of the project at that time. The project was put out to bid again in January 2020 and received multiple bids which were significantly higher than the engineer estimates from 2017. The bidders are only obligated to honor their bid for 60 days from the date of opening which was February 4, 2020.

The 2018 MAGI for Midway is $69,000 or 122% of the State MAGI and the proposed after project water bill is 1.82% of the local MAGI. Because of the high water bill they do qualify as a hardship community.

As a result, the staff recommended that the Board authorize a loan of $1,612,000 with a hardship grant assessment fee of .75% for 30 years, and to deauthorize the funding that was approved on March 1, 2018 and replace it with this new amount. Conditions include that they resolve issues on their compliance report.

Michael Grange confirmed for Jeff Coombs that this project would address their source capacity deficiency.

Dale Mickleson confirmed for David Pitcher that about 20 of their residents are full time with 100 connections and 120 lots. The water company is owned by the residents and is paid for by lot dues which have been tripled from $400 a year per cabin to $1,200 a year per cabin. The residents are well aware of what the water company is doing and the company has spent several years trying to find a less expensive alternative but were unable to do so. They have a problem in that they're only able to work from mid-April to mid-October.

Marie inquired about their correction action with the Division and Dale told her that it's a bilateral agreement for which Steve [Bennion] is working to get an extension.

- Jeff Coombs moved that the Drinking Water Board authorize a $1,612,000 construction loan with a hardship grant assessment fee of .75% for 30 years and deauthorize the funding that was approved on March 1, 2018, conditions include that

this project resolve all issues on their compliance report. Scott Morrison seconded. The motion was carried unanimously by the Board.

D. WIFIA Briefing -- Michael Grange

Michael Grange explained that the Water Infrastructure Finance Innovation Act (WIFIA) was passed by Congress in 2014 to provide an accelerated means to fund significantly larger projects through government action. There are a number of eligible projects but the basis of that is any project that would qualify for Drinking Water SRF or Clean Water SRF money also qualifies for WIFIA money. One of the big differences between the SRF and WIFIA programs is that WIFIA is managed and overseen by EPA headquarters.

The minimum size for a WIFIA project for large communities is $20 million and for communities of less than 25,000 people the minimum project size is $5 million. The maximum portion of eligible projects that WIFIA will fund is only 49%, so there's significant contributions required from the entities that qualify for this WIFIA program. Some of that money can come from the SRF program, but the maximum amount of federal dollars that can go to a WIFIA project is 80%. Interest rates on these loans are based on Treasury rates of similar terms, so the maximum term for a WIFIA loan is 35 years. On a 35-year project the entity would get the US Treasury rate.

The funding doesn't come from EPA, but rather comes directly from the US Treasury. Congress started allocating money for projects in 2017 and they allocate a security fund that is then used by EPA to provide back up to the WIFIA program in case there is a default or other emergency issue with the money they loan. For the current year, Congress authorized $25 million of this funding to provide the security for up to $3 or $4 billion in actual loans that will then contribute up to $15-20 billion in actual infrastructure projects.

Those eligible for WIFIA include local, state and tribal and federal government entities, partnerships and joint ventures, corporations and trusts and the Clean Water and Drinking Water SRF programs. Since 2017 Congress has authorized 89 projects using WIFIA funding, projects such as San Francisco Public Utilities Commission to construct a biosolids digester facility with $625 million; and City of San Diego for drinking water improvements for $492 million.

Michael is bringing this to the Board now because the Division has been contacted by the Provo River Water Users Association which has a $40 million project to improve the water intake at the Deer Creek Reservoir.

E. Provo River Water Users Association WIFIA Project -- Michael Grange

The association is in the process of applying for a WIFIA loan, which would cover 49% of the cost and so they will likely be coming to the Board for the next 31% to reach the 80% of maximum federal dollars. They're also looking at some self-funding and bringing together a consortium of other entities to provide the remaining 20% for this project.

The association is scheduled for the April Board meeting, where they will be presenting the concept for their project; there won't be any Board action required at that time because they don't have the WIFIA money yet. The application process for a WIFIA loan is rather extensive; you first must submit a letter of interest to EPA, then EPA selects projects to complete the application form. The application form is extensive and takes a considerable amount of time to put together. Provo River Water Users Association is probably looking at nothing happening on this until late 2021 or early 2022 but the Division wanted to bring this to the Board's attention now.

The association would be seeking $12 million in funding from the Board. This would be the first WIFIA project in Utah and the association is currently working on their letter of interest to submit to EPA for the next funding cycle.

Scott inquired about the association providing water for irrigation and drinking water and how the Board has handled such funding requests in the past. Michael replied that from a program standpoint, we have not done any funding for irrigation as it is outside the program's scope. Michael will do more research on whether there's an exception to that with WIFIA projects since WIFIA money can be used for both. We may have to put a stipulation in any agreement that the Board does make with Provo River to ensure that the $12 million is only applied to any drinking water portion of the project.

7. Five-Year Notice of Review and Statement of Continuation (Board Action Needed) - Michael Grange

Michael Grange explained to the Board that Utah Code Title 63G-3-305 requires each government agency to review each of its rules within five years after the rules' original effective date or within five years after filing the last five-year review. The Division last filed a five-year review notice for each of its rules in March 2015. To comply with the aforementioned requirement, the Division of Drinking Water must again submit a five-year notice of review and statement of continuation for each of its rules. If this notice is not filed all unreviewed rules will expire, will be removed from the Utah Administrative Code, and will become unenforceable.

Michael included in the packet one rule and the form of the five-year notice of review and statement of continuation. The Division rules – R309-100, 105, 110, 115, 200, 205, 210, 211, 215, 220, 225, 300, 305, 400, 405, 500, 505, 510, 511, 515, 520, 525, 530, 535, 540, 545, 550, 600, 605, 700, 705, and 800 – will be submitted with this five-year notice of review. Upon Board authorization to proceed, these notices will be signed by the Division Director and will be filed with the Division of Administrative Rules no later than March 12, 2020.

The Division staff recommends that the Drinking Water Board authorize staff to file the required five-year notice of review and statement of continuation for each of the referenced Division of Drinking Water rules with the Division of Administrative Rules.

Scott commented on a rule in the source protection series specifically about sewer line construction requirements and it points back to a rule in the 500 series, he believes, on what those construction requirements are. Scott has been working with his local reclamation district

and they have concerns about some of the language in the 500 series document, that it's essentially not able to be met. So, during rulemaking opportunities, Scott recommends reviewing and/or updating this rule or potentially try to tie it to another rule or another business practice where the Division doesn't have to update their rules every time the sewer industry changes their practices.

- Kristi Bell moved that the Drinking Water Board authorize the Division of Drinking Water to file the required five-year notice of review and statement of continuation for each of the referenced Division of Drinking Water rules with the Division of Administrative Rules. Scott Morrison seconded. The motion was carried unanimously by the Board.

8. IPS 2020 Status -- Rachael Cassady

Rachael Cassady informed the Board that IPS 2020 is a revision of the IPS rule. There are 1,027 active public water systems in the State of Utah, of those 967 have an approved rating, 20 have a corrective action rating meaning they're under a bilateral compliance agreement enforcement order with the Division, and 40 have a not approved rating. When IPS 2020 became effective on January 1, 2020 the Division identified 615 deficiencies that had changed from either a minor or recommended severity code to a significant code, which means that the water systems would have 120 days to fix those significant deficiencies. Failure to fix results in a failure to fix violation which adds more points to a water system's IPS report and is also reported to EPA as a health-based violation.

Of those 615 deficiencies, that accounts for 207 water systems that are year around and they all have been notified via letter along with staff making individual phone calls to those water systems to notify them of their options and also how critical it is for them to meet the deadline. Their options include fixing the significant deficiencies within that timeframe and report it the Division or they can enter into a Corrective Action Plan (CAP). A CAP is an agreement with the Division that extends the timeframe for fix, nothing to exceed a year. There are 66 seasonal water systems that have significant deficiencies and the clock for those significant deficiencies start when those water systems open.

When IPS 2020 became effective 15 water systems immediately went over the threshold for the approved versus not approved rating. The Division sent those systems a courtesy letter along with their IPS report, to provide the system with 30 days' notice that their IPS points have exceeded the threshold and they have 30 days to respond, otherwise a not approved rating by the director is warranted. The clock is still running on these 15 systems.

A quarterly compliance action planning meeting was held February 5, and 13 additional warning notices were added to the list. The Division is providing personal phone calls to those water systems so they know the not approved rating is eminent and the Division is available to help resolve their issues, if possible, before the deadlines hit. That help may be with sample site plans, engineering, site visits, but if it's a more complicated issues like treatment then we can go straight to enforcement. The Division has implemented a more streamlined enforcement process to enter into compliance agreements enforcement orders (CAEO), administrative orders and not approved orders.

There are 50 water systems since the start of the year who have corrected their significant deficiencies. 24 CAPs have been put in place to extend the timeframe for fixing their deficiencies before they receive a failure to fix violation. The Division is getting good feedback from water systems about the assistance and the personal touch they're receiving with the implementation of IPS 2020. Many appreciate the phone calls in addition to the letters. In trainings the Division is covering how to read the report, how to identify a significant deficiency, how to report the fixes, how to work with the division to make sure that the fix comes off the report.

Jeff Coombs asked if the local health departments (LHDs) conducting sanitary surveys have adapted to IPS 2020. Rachael says the LHDs have been great and have been front row at sanitary survey trainings. They're in a good position to train water systems when on site about rules and reading reports. The LHDs have been very helpful to improve upon and prepare for the upcoming sanitary survey season with the implementation IPS 2020.

Marie Owens acknowledged and thanked Rachael, her staff and other Division staff for their monumental effort of the IPS 2020 development, roll out and outreach to the water systems. Marie also acknowledged the public health protection and value that this is generating for the industry as a whole.

9. Rural Water Association Report – Dale Pierson

Dale welcomed the Board to the annual RWAU conference in St George, Utah. Dale has always appreciated that the Board comes down to participate in the conference. He believes it is an important aspect for their membership to realize that this is a place where they can be engaged with the Board and for the Board to be engaged with them.

Approximately 2,000 people are attending the conference and 90 people are taking water operator certification exams.

Dale thanked Marie and the Division staff for their participation in the conference.

Dale mentioned that at their upcoming conference awards banquet retired Division employees Eva Nieminski and Patti Fauver as well as former Board chair Betty Naylor were being honored.

Dale informed the Board that the RWAU report was in the packet.

10. Directors Report – Marie Owens

A. Enforcement Report

Rachael, in the IPS 2020 Status portion of the meeting, hit on the highlights of the enforcement report which is in the packet. It is the current enforcement report and we are working to move systems off that report, while adding some new systems.

B. Legislative Update

At the time of this meeting the 2020 Legislative Session was ongoing.

Senate Bill 88

Senate Bill 88, presented to the Board at the January meeting, proposes to make modifications to Title 19, which is the authorizing title for Utah Safe Drinking Water Act and the statute which forms and authorizes the Board. The bill proposes to move adjudicative hearings from the Board to be an administrative action which would bring this Board in line with all other DEQ boards. The bill has passed the Legislature and is supported by the Governor's Office.

House Bill 88

House Bill 88 concerns lead testing at school water taps and drinking fountains. It originally included testing at child care facilities, but they've since been removed from the bill. The bill has not made it very far through the process, but there are still approximately two weeks left.

Scott Morrison asked if it is the school's or the public water system's responsibility to test for lead. Under HB88 it is the school's responsibility to test and mitigate. The bill has a requirement for every consumable tap to be sampled and if the value comes back above 10 µg/L then the school would mitigate. The mitigation could just be taking that particular faucet or drinking fountain out of service. The appropriation on the bill would fully fund all of the sampling but not the mitigation.

The finalized Lead and Copper Rule revisions would require water systems to be responsible for sampling at schools. It is Marie's intent, if HB88 passes, that as long as we can confirm that the samples that the school collects as a part of this bill were taken correctly and run in a certified lab, we will work in the ability to use those samples for the lead and copper rule revisions so that there wouldn't be a duplication. If this bill doesn't pass before the Lead and Copper Rule revisions are finalized, the school testing requirement will fall to the public water systems. The Lead and Copper Rule revisions includes testing at child care facilities.

C. Other

Marie informed that Board about the media attention regarding Moroni City. While at this conference the Division has worked with Moroni City to issue a Do Not Drink order. The city has two wells; one is high in nitrate beyond the MCL, and the other is low. They have been meeting compliance by blending those two sources together. The source that was low recently failed and so they've only be delivering the high nitrate source to their community. High nitrate is of particular concern for infants under 6 months as it can cause blue baby syndrome as they can't metabolize nitrate and they quickly suffocate.

11. Open Board Discussion – Roger Fridal

There was no open board discussion.

12. Other

Kyle StClair with EPA Region 8 is at the conference representing water security issues within the region. The American Water Infrastructure Act (AWIA) was signed in 2018 and a part of the act is the upcoming deadlines for community water systems with populations greater than 3,300 to submit to EPA certification of a Risk Assessment and an Emergency Response Plan. The risk assessment is an all hazard approach to determine the threats and vulnerabilities to the system and in the emergency response plan they are required to mitigate or prevent the issues from happening if possible. If the issue can't be prevented, hopefully it can be detected prior to it happening. This may cost the system some money and they in turn may apply for funds through the Board or another source, but many of the things won't have a monetary value. Systems need to adopt the "if you see something, say something" mentality; training at the water system needs to happen across the board internally and externally.

Marie clarified that there are several requirements of AWIA, some of which the Division will be taking on, such as increased consumer confidence reports, while the risk assessment and emergency response plan will be implemented directly by EPA. Water systems need to work directly with EPA on the aforementioned requirements. Kyle said there are a lot of resources available to aid water systems to complete these requirements.

13. Next Board Meeting

Date: June 9, 2020
Time: 1:00 PM
Place: Multi Agency State Office Building
Division of Drinking Water
195 N 1950 W
Salt Lake City, Utah 84116

14. Adjourn

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

The meeting adjourned at 3:17 PM.

Agenda Item 3(B)

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 EMERGENCY ELECTRONIC BOARD MEETING
April 27, 2020 1:00 PM
Via GoToWebinar

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

DRAFT MINUTES

1. Call to Order

Roger Fridal, Chair, called the Board meeting to order at 1:07 PM.

2. Roll Call – Marie Owens

Board Members present: Roger Fridal, Kristi Bell, Scott Morrison, Barbara Gardner, Eric Franson, David Pitcher, and Scott Baird. Blake Tullis arrived at 1:11 PM. Jeff Coombs was absent.

Division Staff present: Marie Owens (Director), Michael Grange, Heather Pattee, Allyson Spevak, Skye Sieber.

3. Public Comment Period

There was no public comment.

4. SRF Loan Relief (Board Action Needed)

Marie explained that the Division will be presenting to the Board the idea of putting a program or policy in place to allow those with existing Drinking Water State Revolving Funds (DWSRF or SRF) loans to defer payments related to COVID-19 hardships, as other boards are doing.

Conflicts of Interest

Eric Franson's engineering firm has represented, in the past, many of these loan recipients in order to secure SRF funding.

Scott Morrison is the General Manager for Mountain Regional Water District and Mountain Regional has an SRF loan payment due this year.

David Pitcher is with Central Utah Water Conservancy District and CUWCD has an SRF loan payment due this year.

- Roger Fridal moved to allow participation and voting for those with conflicts of interest. Kristi Bell seconded. The motion was carried unanimously by the Board via roll call vote.

SRF Loan Relief

Michael Grange thanked SRF staff, Heather Pattee and Skye Sieber, for gathering the loan recipient information found in the memo.

Michael explained that the Division has been in discussions with other State agencies with funding boards and the State Treasurer, David Damschen, and we're moving forward with establishing policies and procedures to allow those entities with DWSRF loans to have some financial relief due to the COVID-19 pandemic if they need and request it.

There are 17 loan payments due between May 1 and June 30, 2020; 28 payments are due between July 1 and September 30, 2020; and 33 payments are due between October 1 and December 31, 2020. The Division was able to get in touch with 95% of these systems and based on those conversations the systems themselves are involved in providing financial relief to their customers. They're taking relief measures such as delaying payment due dates, accepting partial payments, not shutting off water for lack of payment, and other methods of relief. Most systems responded that they don't see any issues with loan payments during 2020, but if this emergency is not quickly resolved they could see some financial stress in 2021 and beyond.

Between May 1 and December 31, 2020 there are approximately $5 million in loan payments due. The worst-case scenario is if all of those systems failed to make their payments it would be an 8% reduction in total revenue to both the State and Federal programs for the remainder of 2020. Based on the information gathered from the loan recipients that is not likely to happen, but there could be some requests for deferrals or restructuring between now and the end of the year. The greater threat is for 2021; there are 112 loan payments due between January 1 and March 31, 2021 with a total value of $4.5 million. The worst-case scenario for 2021 is that if all of those systems defaulted or asked for a deferral it would be a 17.5% reduction in revenue to the State and Federal programs.

The Division is asking the Board to consider adopting a policy that will allow staff to proceed with granting requests for loan payment deferrals and loan restructuring. The Water Quality Board has implemented such a policy and they've directed Water Quality staff to review their loans. The Community Impact Board (CIB) has also adopted a policy that will allow their staff to work on CIB loan deferrals and restructuring. Included in the memo was a letter sent to Congress by the Council of Infrastructure Financing Authorities (CIFA) recommending changes to both the Clean Water and Drinking Water SRF programs to streamline the

financing process for projects. On their recent survey, American Water Work Associations (AWWA) received responses from about 512 water systems throughout the country; AWWA's initial read is that water systems nationwide could see a financial impact of $13.9-$15 billion during the coming year. That is a 16.9% impact to the drinking water sector. They're expecting communities to experience a total reduction in economic activity by as much as $33 billion over the course of the coming year.

Staff submits the following recommendations for Drinking Water Board consideration and approval;

1) The Drinking Water Board adopt the attached debt relief policy and authorize Staff to modify the policy to reference the Division of Drinking Water and Drinking Water SRF Program requirements.

2) The Drinking Water Board authorize Staff to develop policies and procedures to set the criteria water systems must meet to qualify for debt relief under the policy.

The above referenced debt relief is the CIB policy included in the memo; the Division thinks this is a good policy and just needs to be changed to reference the Drinking Water Board and the DWSRF program.

Michael contacted EPA Region 8 about our ability to restructure finances during this emergency; the State and the Board have the authority to restructure debt as long as it is within the program structure that Congress has established in the Safe Drinking Water Act.

Michael reiterated that it's possible there could be $2 - $7 million less revenue to the DWSRF program if every water system with a loan requested a payment deferral for a year maybe two, depending on their ability to document that their hardship is caused by the pandemic. For deferred payments, the Division must either write a new bond to spread the deferral over the remaining life of the loan or write a new bond to attach the missed payment to the end of the repayment period. The Division would like direction from the Board as to how to handle the cost of issuance for the new bond.

David Pitcher inquired about the short timeframe included in the CIB policy. Based on the information that Michael has read over the last week or so, including the AWWA survey, water systems could experience financial stress related to COVID-19 for a year or two. It would be up to the Board on how to proceed with the timeline for the DWSRF policy. It makes sense to Michael to establish a timeframe but also establish the Board's ability to re-examine and re-authorize the policy in 6 months or a year. Scott Morrison agrees with Michael and thinks it would be prudent to add a provision at the end of the policy which reserves the right of the Board to shorten the timeframe as things evolve.

Michael says the intent is to use the Board's authorization to revise the CIB policy and bring it to the June 9, 2020 meeting for Board approval. The proposed policy would be shared with the Board prior to the meeting so the members can have a chance to review and comment on it before the meeting. The policy will include the criteria to qualify for deferred or restructured

loan payments. Currently, there are no water systems that need a deferral before the June meeting.

Eric Franson suggested drafting the policy and criteria for the next Board meeting. The Board would adopt the policy and criteria which the staff would then use to make the decisions and administer the program.

Michael explained that the CIFA document was included in the memo to show that there is a national effort under way to provide some kind of relief not only to the loan recipients but to the state programs. The document is a petition to Congress to change the way program is structured for the duration of the pandemic to allow certain thing to be expedited in order to get projects under way. The AWWA survey pointed out that there are some water systems nationwide that are deferring capital improvements until after the pandemic has subsided to a certain extent. CIFA is suggesting that Congress relax some of the program requirements to help the state programs move the funding so there aren't billions of dollars of unliquidated obligations sitting in the accounts waiting to be spent.

- Eric Franson moved that the Drinking Water Board authorize staff to draft a debt relief policy and to develop policies and procedures associated with that debt relief policy establishing criteria that water systems must meet to qualify for debt relief under the said policy. Barbara Gardner seconded. After the discussion below, the motion was carried unanimously by the Board via roll call vote.

Discussion of the above-mentioned motion

As per David Pitcher's input regarding costs, Michael said that it can be mentioned in the policy that costs associated with loan deferrals can be looked at on a case by case basis.

Eric's interpretation of the criteria would be financial metrics from the water systems and a demonstrated financial impact in order to qualify for the program. Michael said that we don't know at this point what the impact will be on the system and therefore we can't include numbers in the actual policy, but rather general statements that the policy is in place to grant financial relief due to reduced revenue and refer to the procedure document for information to apply and qualify. Eric says that the policies and procedures will need to be revisited as the situation changes over time.

Michael will find out if any of the 17 payments due between now and June 30, 2020 have an immediate need for deferral. Michael said that the Board can do emergency authorizations for these deferrals, if needed, in another emergency meeting.

- Blake Tullis moved that if any payments occurring between now and the June 9, 2020 Board Meeting are in difficult circumstances that payment either be deferred until after that meeting or they can be handled on an emergency case by case basis. Eric Franson seconded.

- David Pitcher offered an amended motion to authorize Michael Grange to use his existing authority to waive the late payment for a payment that is due between now and the June 9,

2020 Board Meeting for COVID-19 related hardship without having to show proof that the payment is coming in anticipation of this new policy. Those systems could then be enveloped into the policy that will be considered at the June 9 meeting. Kristi Bell seconded the amended motion. Blake Tullis accepted the amended motion. After the discussion below, the amended motion was carried unanimously by the Board via roll call vote.

Discussion of the above-mentioned motion and amended motion

Michael explained that when a loan payment is due there is a 30-day grace period from the due date until penalties begin accruing. In the past, if a water system sends written notice with a valid reason for the late payment and the payment has been made, Michael as the Executive Assistant Secretary of the Drinking Water Board, can waive the penalty.

5. COVID-19 Discussion

David Pitcher offered that as we work through this, he agrees with Eric that this won't be the last time we talk about this and the thing we always have to keep in mind is our water systems have been disinfecting viruses for a long time and what's paramount is the safety of the systems we all work for and within and the public's safety. Most people don't recognize that and we have to keep that paramount that we keep it going with these financial considerations. And maybe even, depending on what comes from the federal government, leverage that to a point of emphasizing that importance to the economy. Most people don't recognize the relationship between the economy and the water systems that just keep on putting water out of the tap.

Related to David's comment, Marie has been trying to keep track of some of the stimulus and relief package discussions going on back in Washington; she doesn't know where they will land, but there has been some talk about providing relief for revenue disruptions for water and wastewater systems. There has been some discussion about routing that through the SRF program. With the discussion we've had in this meeting, it is valid to say that this situation may change and there may be money that is sent toward this program with the intent to get it out to the water systems in a way that this program doesn't typically route money, such as operational or relief-based funding. Right now, the SRF program is only allowed to give out money for infrastructure; actual construction projects or associated planning. Marie said the Division will pass along that information as soon as we have it.

6. Other

East Grouse Creek Pipeline

Eric said that he received a letter from East Grouse Creek Pipeline as it relates to an issue, as did the other Board members. Marie said those letters were sent preemptively before ever being sent to Marie. Marie has been in contact with the system's administrative contact, Julie Tanner, and she has given a recommendation on the issue.

Marie's report on the issue:

In 1992 the system had a series of positive bacteriological samples and the director at the time put them under an order to continuously disinfect their one source, a spring. The system serves a small community of less than 100 people. The system proceeded to install a gas chlorine system which they were unable to maintain and it fell into disrepair, an issue that was discovered during a sanitary survey. Subsequent to that, the system changed their chlorination process to a tablet chlorinator; however, they did not receive Division plan approval to switch from a gas chlorinator to a tablet chlorinator. Rather than purchasing a feed system, Grouse Creek created one to dissolve these tablets directly into a distribution box downstream of their spring. They also began using trichlor tablets which are used in swimming pools and are not an approved disinfectant for drinking water systems.

This was discovered during their last sanitary survey in 2019 and as a result were given two significant deficiencies; 1) failure to provide continuous disinfection, and 2) using a chemical feed system not approved by the Division. Julie Tanner took personal offense to the deficiency that they had not continuously disinfected which triggered the communication with each of the Board members, the Governor's Office, and the State and Federal legislators. Julie took offense because they had shown due diligence at taking chlorine residuals and showing a chlorine residual. The staff issued that deficiency because by using the swimming pool tablets, the chlorine residual they took is not reliable. The chlorine residual method that is utilized is not sufficient for that particular chemical, so the chlorine residuals the system has been reporting are likely to be higher than the actual chlorine residual that was in place. Because of the chemical, the staff was not certain that they had continuously disinfected.

As she talked with Julie, Marie is comfortable that one deficiency would be sufficient instead of both deficiencies as they both address the same issue; however, Marie wants their commitment to resolve the situation before she removes the second deficiency. The first deficiency will stay in place until the chlorine system is transitioned, approved and implemented according to NSF and Division standards. Julie verbally committed to resolving the situation, but she must first get it approved through their committee or board.

The Division did recommend a solution to Grouse Creek which was continuing to use tablets, authorized tablets, and purchasing a $450 feed system, but they would have to determine how and where to install it. The letter that the Board received was in resistance to the recommended $450 upgrade to their system.

Eric thought Marie gave a good report on the issue and that the Division is doing what they should by protecting public health.

Upcoming Board Meetings

The Board was originally scheduled to meet at the fall RWAU conference on September 1, 2020, but the conference has been moved to October. The staff recommends that the Board maintain their previously scheduled meeting on September 1 and that it just moves to DEQ Board Room at MASOB if we're allowed to have meetings in person at that time. The meeting will remain on September 1, 2020.

Dale Pierson with RWAU reported that fall conference has been rescheduled to October 5-7. Marie said that the Division can facilitate the Board attending the conference, if they're interested.

The staff is anticipating that the June 9, 2020 Board meeting will be held virtually.

7. Next Board Meeting

Date: June 9, 2020
Time: 1:00 PM
Meeting to be held via GoToWebinar

8. Adjourn

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

The meeting adjourned at 2:20 PM.

Agenda Item 7(A)

DIVISION OF DRINKING WATER

STATE LOAN FUNDS

AS OF May 20, 2020

	SUMMARY		
	Total State Fund:	$11,507,041	
	Total State Hardship Fund:	$2,596,884	
	Subtotal:	$14,103,925	
LESS AUTHORIZED	Less:		
	Authorized Loans & Closed loans in construction:	$8,245,000	*(see Page 2 for details)*
	Authorized Hardship:	$1,883,082	
	Subtotal:	$10,128,082	
	Total available after Authorized deducted	**$3,975,843**	
PROPOSED	**Proposed Loan Project(s):**	**$584,000**	*(see Page 2 for details)*
	Proposed Hardship Project(s):	**$0**	
	Subtotal:	**$584,000**	
AS OF:			
May 20, 2020	**TOTAL REMAINING STATE LOAN FUNDS:**	**$2,678,041**	
	TOTAL REMAINING STATE HARDSHIP FUNDS:	**$713,802**	

Total Balance of ALL Funds: **$3,391,843**

Projected Receipts Next Twelve Months:		
and Sales Tax Revenue		
Annual Maximum Sales Tax Projection	**$3,587,500**	
Less State Match for 2020 Federal Grant	($2,202,200)	
Less Appropriation to DDW/Board	($1,010,800)	
SUBTOTAL Sales Tax Revenue including adjustments:		$374,500
Payment:		
Interest on Investments (Both Loan and Hardship Accounts)		$240,000
Principal payments		$3,053,000
Interest payments		$782,819
Total Projections:		$4,450,319

Total Estimated State SRF Funds Available through 5-21-2021	**$7,842,162**

DIVISION OF DRINKING WATER
STATE LOAN FUNDS
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF May 20, 2020

Community	Loan #	Cost Estimate	Date Authorized	Date Closed/Anticipated	Authorized Funding Loan	Grant	Total
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
Virgin Town 0% int 20 yrs	3S1702	1,200,000	Jan-19		400,000	400,000	800,000
Genola City 0% int 30 yrs	3S1732	2,849,400	Aug-19	Jun-20	2,273,000	576,400	2,849,400
Subtotal Loans and Grants Authorized					6,645,000	1,442,400	8,087,400
PLANNING LOANS / GRANTS IN PROCESS							
Jensen WID grant	3S1757P	40,000	May-20			40,000	40,000
Escalante	3S1737P	38,000	Aug-19	Aug-19		18,032	18,032
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	Apr-20		20,000	20,000
Eureka	3S1743P	20,000	Sep-19			20,000	20,000
Thompson SSD	3S1747P	29,500	Jan-20	May-20		29,500	29,500
Church-Wells	3S1751P	40,000	Mar-20			40,000	40,000
Moroni pl grant	3S1752P	36,000	Mar-20			36,000	36,000
Sunset City pl grant	3S1754P	40,000	Apr-20			40,000	40,000
Austin DDS pl grant	3S1756P	40,000	Apr-20			40,000	40,000
							0
Subtotal Planning in Process					40,000	323,532	363,532
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
Mtn Regional-Community Wtr 2% 20 yr	3S254	2,600,000	Jul-18	Dec-19	1,000,000		1,000,000
Subtotal Closed Loans Partially Disbursed					1,560,000	117,150	1,677,150
TOTAL AUTHORIZED/PLANNING/OR CLOSED BUT NOT YET FUNDED					$8,245,000	$1,883,082	$10,128,082
PROPOSED PROJECTS FOR June 2020							
Scipio Town 3.0% 20 yrs	3S1750	524,000			524,000		524,000
Myton City 0% 5yrs	3S1753P	60,000			60,000		60,000
							0
Total Proposed Projects					584,000	0	584,000

DIVISION OF DRINKING WATER

STATE LOAN FUNDS

AS OF May 20, 2020

	5235 Loan Funds	5240 Interest (use for Grants)	Total
Cash:	$11,507,041	$2,596,884	$14,103,925
Less:			
Loans & Grants authorized but not yet closed (schedule attached)	(6,685,000)	(1,765,932)	(8,450,932)
Loans & Grants closed but not fully disbursed (schedule attached)	(1,560,000)	(117,150)	(1,677,150)
Proposed loans & grants	(584,000)	0	(584,000)
Administrative quarterly charge for entire year	(1,010,800)		(1,010,800)
Appropriation to DDW	0		0
FY 2020 Federal SRF 20% match	(2,202,200)		(2,202,200)
FY 2019 Federal SRF 20% match	0		0
	(534,959)	**713,802**	**178,843**
Projected repayments during the next twelve months			
Thru 05-21-2021			
Principal	3,053,000		3,053,000
Interest		782,819	782,819
Projected annual investment earnings on invested cash balance		240,000	240,000
Sales Tax allocation thru May-21-2021	3,587,500		3,587,500
Total	**$6,105,541**	**$1,736,621**	**$7,842,162**
* All interest is added to the Hardship Fee account.			

DIVISION OF DRINKING WATER

FEDERAL SRF

AS OF May 21, 2020

FIRST ROUND FUND	
1997 thru 2019 SRF Grants	
Net Federal SRF Grants:	$179,244,401
Total State Matches:	$41,251,100
Closed Loans:	-$217,889,701
Total Grant Dollars:	**$2,605,800**

FEDERAL SECOND ROUND FUND	
Principal Repayments	
Principal (P):	$68,733,476
Interest (I):	$19,360,456
Total P & I:	**$88,093,932**

Earnings on Invested Cash Balance	
Total:	**$1,220,634**

Hardship Fund	
Total:	**$1,401,422**

SUMMARY	
Total Federal State Revolving Fund:	$91,920,366
Total Federal Hardship Fund:	$1,401,422
Subtotal:	$93,321,788

LESS AUTHORIZED & PARTIALLY DISBURSED			
Less:			
	Authorized & Partially Disbursed Closed Loans:	$74,851,936	*(see Page 2 for details)*
	Authorized Federal Hardship:	$233,827	
	Subtotal:	$75,085,763	

PROPOSED			
	Proposed Federal Project(s):	**$2,365,000**	*(see Page 2 for details)*
	Proposed Federal Hardship Project(s):	**$0**	
	Subtotal:	**$2,365,000**	

AS OF:	**May 21, 2020**		
		TOTAL REMAINING LOAN FUNDS:	**$14,703,430**
		TOTAL REMAINING HARDSHIP FUNDS:	**$1,167,595**

Total Balance of ALL Funds after deducting proposed actions: $15,871,025

Projected Receipts thru May 22, 2021		
2020 Fed SRF Grant	$8,093,360	
2020 State Match	$2,202,200	
Interest on Investments	$2,011,200	
Principal Payments	$7,419,203	**Receive 60% in January**
Interest	$1,207,002	
Hardship & Technical Assistance fees	$292,315	
Fund 5215 principal payments	$100,200	
Total:	$21,325,480	

Total Estimated Federal SRF Funds Available through: 05/22/2021 **$37,196,505**

DIVISION OF DRINKING WATER
FEDERAL STATE REVOVING FUND
PROJECTS AUTHORIZED BUT NOT YET CLOSED
AS OF May 21, 2020

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	
West Corinne Water Co	553,000	2.5% hgf, 20 yrs	3F305	Aug-18	Aug-20	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	May-20	1,455,000	470,000	1,925,000	
Canyon Meadows Mutual Wtr	800,000	90/10 1.0% hgf, 30 yrs	3F1700	Feb-20	May-20	720,000	80,000	800,000	
Diamond Valley Acres	235,000	2.50% HGF 20 yrs	3F1706	Feb-19		235,000		235,000	
Central Utah WCD-Duchesne Valley WTP	18,000,000	1.25% hgf, 30 yrs	3F1731	Aug-19		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	
Hyde Park City	5,994,000	2.91% HGF 20 yrs	3F1744	Jan-20		5,000,000		5,000,000	
Swiss Alpine Water Co	1,752,000	.75% HGF 30 yrs	3F300	Feb-20		1,612,000		1,612,000	
Spring Creek	57,947	100% principal forgiveness	3F1746	Feb-20				0	57,947
								0	
					TOTAL CONSTRUCTION AUTHORIZED:	**$ 39,032,000**	**$ 1,556,000**	**$ 40,588,000**	**$ 57,947**
COMMITTED ADVANCES / AGREEMENTS or PARTIALLY DISBURSED CLOSED 2ND ROUND AGREEMENTS:									
					Date Closed				
								0	0
Rural Water Assn of Utah	676,000	5 yr contract for Development Specialist	Ongoing	Jan-18	Jun-18			0	32,240
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	135,000	39,350	174,350	
Moab	90,000	100% pf engineering planning study	3F292P	Aug-17	Feb-18		90,000	90,000	
Granger Hunter Improvement District	20,000,000	1.25% HGA 20 yrs (portfolio)	3F1708	Feb-19	Jul-19	17,317,600		17,317,600	
Kearns Improvement District	21,000,000	1.25% hgf, 20 yrs (portfolio)	3F1725	Jun-19	Dec-19	16,600,000		16,600,000	
Summit Culinary Water	36,600	100% pf 5 point analysis	3F1694P	Jun-18	Jul-18			0	23,140
Axtell Community Service Distribution	40,000	5 yr 0% master plan & gw well siting	3F1719P	Mar-19	May-19			0	500
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
					TOTAL PLANNING AUTHORIZED:	**$34,109,600**	**$154,336**	**$34,263,936**	**$175,880**
					TOTAL CONSTRUCTION & PLANNING:			**$74,851,936**	**$233,827**
					AVAILABLE PROJECT FUNDS:				**$17,068,430**
					AVAILABLE HARDSHIP FUNDS:				**$1,167,595**
PROPOSED PROJECTS FOR MAY 2020:									
Sigurd Town	2,300,000	0%, 30 YRS	3F1745			1,380,000	920,000	2,300,000	
Diamond Valley Acres	(235,000)	2.5% HGF 20 yrs	3F1706			(235,000)		(235,000)	
San Juan Spanish Valley	300,000	0% 30 YRS	3F1755			210,000	90,000	300,000	
								0	
					TOTAL PROPOSED PROJECTS FOR THIS MEETING:	**$1,355,000**	**$1,010,000**	**$2,365,000**	**$0**
*RWAU hardship grant is being disbursed monthly									
					TOTAL FUNDS AFTER PROPOSED PROJECTS ARE FUNDED:				**$14,703,430**
					TOTAL FUNDS AFTER PROPOSED HS PROJECTS ARE FUNDED:				**$1,167,595**
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 May 21, 2020

	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	$220,495,501				
Earnings on Invested 1st Round Funds			1,220,634		
Repayments (including interest earnings on 2nd round receipts)		68,733,476	19,360,456	1,401,422	311,211,489
Less:					
Closed loans and grants	-217,889,701				-217,889,701
SUBTOTAL of Funds Available	**$2,605,800**	**$68,733,476**	**$20,581,090**	**$1,401,422**	**$93,321,788**
Loans & Grants authorized but not yet closed or fully disbursed	-37,808,000	-36,889,600	-154,336	-233,827	-75,085,763
SUBTOTAL of Funds Available less Authorized	**-$35,202,200**	**$31,843,876**	**$20,426,754**	**$1,167,595**	**$18,236,025**
Future Estimates:					
Proposed Loans/Grants for current board package	-2,365,000			0	-2,365,000
SUBTOTAL of Funds Available less Proposed Loans & Grants	**-$37,567,200**	**$31,843,876**	**$20,426,754**	**$1,167,595**	**$15,871,025**
PROJECTIONS THRU May-2021					
2021 Fed SRF Grant & State Match	0				
2020 Fed SRF Grant	8,093,360				8,093,360
2020 State Match	2,202,200				2,202,200
Projected repayments & revenue during the next twelve months		7,519,403	1,207,002	292,315	9,018,720
Projected annual investment earnings on invested cash balance		1,620,000	360,000	31,200	2,011,200
TOTAL	**-$27,271,640**	**$40,983,278**	**$21,993,756**	**$1,491,110**	**$37,196,505**

Agenda Item 7(B)

Project Priority List
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD
PACKET FOR PROJECT PRIORITY LIST

There are three new project being added to the project priority list

Sigurd Town is being added to the Project Priority List with 27.5 points. Their project consists of a spring redevelopment, 300,000 gallon tank and a chlorinator.

Old Meadows is being added to the Project Priority List with 26.4 points.
Their project consists of a waterline and meters.

Willow Creek Water Company is being added to the Project Priority List with 16.7 points. Their project consists of a back up generator, tank mixer and meters.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board approve the updated Project Priority List.

April 20, 2020

Utah Federal SRF Program

Project Priority List

Total Unmet Needs: **$662,675,576** **Total Needs, incl. Recent funding** **$587,090,709** **Authorized** **$369,335,491**

	date	type	%Green	Priority Points	System Name	County	Pop.	ProjectTitle	Project Total	Request DWB	Funds Authorized
N				27.5	Sigurd Town	Sevier		Spring redevelopment, tank, chlorinator	$2,120,101	$2,020,101	
N				26.4	Old Meadows	Iron		Waterline and meters	$252,227	$222,227	
N				16.7	Willow Creek	Box Elder	260	Generator, mixer, meters	$123,000	$123,000	
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				11.4	Spring Creek Water Users	Iron		Meter replacement	$57,947	$57,947	
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
A				4.7	Hyde Park City	Cache		2 MG tank, trans & dist line, booster pump	$5,994,000	$5,000,000	$5,000,000

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 7(C)

FOR CONSIDERATION BY
THE DRINKING WATER BOARD:
PROPOSED DEBT RELIEF POLICY FOR
DRINKING WATER STATE REVOLVING FUND
FINANCIAL ASSISTANCE RECIPIENTS

STAFF COMMENTS:

The COVID-19 pandemic and the current state of emergency associated therewith has the potential to cause significant impacts to drinking water system revenue, and the possibility that lower revenue will strain systems' abilities to both maintain services and meet loan obligations.

Staff contacted many DWSRF loan recipients to ascertain the potential impacts. Most systems indicated that they will likely have sufficient funds to meet the current year's obligations. However, there is some concern with respect to future payments, especially if the emergency is not soon resolved.

At the April 27, 2020 Emergency Board Meeting the Board authorized staff to prepare policy documents related to water system debt relief due to a declared state of emergency. Those documents are attached for the board's consideration.

STAFF RECOMMENDATION:

Staff recommends the Drinking Water Board approve the attached "Drinking Water Board Policy Regarding Debt Relief Due to a Declared State of Emergency."

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 Policy
Regarding Debt Relief Due to a Declared State of Emergency

Utah Code Title 19 Chapter 4, Title 73 Chapter 10c, and the Drinking Water State Revolving Fund provisions of the federal Safe Drinking Water Act, authorize the Drinking Water Board to provide financial assistance to drinking water systems for infrastructure improvement construction projects and allow the Board to restructure all or part of a recipient's liability to repay due to exigent circumstances.

During a declared state of emergency, and for 180 days following, the Drinking Water Board will accept requests from loan recipients to restructure their loans based on financial hardship. The Board reserves the right to extend or shorten this timeframe based on extenuating circumstances. Loan restructure requests may be granted based upon documentation of hardship due to a declared state of emergency. A written request, including associated documentation, must be submitted on the DWB Loan Restructuring Request Form and be signed by the borrower's presiding official. A borrower's governing body must approve a restructuring request. The Board does not assume any responsibility for the cost of the loan restructuring process.

The Board authorizes staff to review and grant requests for loan restructure due to financial hardship.

The Board authorizes staff to waive the delinquent interest charges for any late payments during the restructuring process.

The Board directs staff to prepare a written report for each Board meeting detailing the number of loan restructures requested, the number of loan restructure requests granted, the names of the borrowers approved for restructuring and the restructured loan amount.

APPROVED: this _____ day of June, 2020.

_____
Roger Fridal
Chair, Drinking Water Board

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

UTAH DRINKING WATER BOARD
Loan Restructuring Request Form – due to a Declared Emergency

Name of Water System:
Project:
Due Date of Annual Payment:
Amount of Annual Payment:
Loan Number:

Terms of the Agreement:

Due to the declared state of emergency, the (water system name) _____ requests that the Drinking Water Board (DWB) restructure the loan for the (name of project) _____.

The (water system name) _____ agrees to repay the entire amount of the loan in the restructured payment schedule. Therefore, I, the undersigned presiding official of the (water system name) _____, agree to make future annual payments on the specified annual payment due dates of the restructured loan agreement. The Water System understands there will be additional requirements and costs in order to comply with the Utah Municipal Bonding Act.

Delinquent interest charges for any late payments during the term of the loan restructuring process will be waived. After restructuring, should (water system name) _____ default on any of the restructured loan payments (water system name) _____ will pay any late penalties and accrued interest until the entire late payment is received.

The Water System and the Drinking Water Board agree to the restructure payment terms listed above.

_____ _____
Presiding Official Signature Date

_____ _____
Presiding Official Printed Name Date
Title

_____ _____
Michael J. Grange Date
Assistant Executive Secretary to the Drinking Water Board

Division of Drinking Water
Checklist for Loan Payment Deferral Request due to the COVID-19 Emergency

System Name: _____

Loan Number: _____

Project & Description: _____

1. Document Hardship

Show the change of revenue and/or water use that indicates hardship due to the declared state of emergency:

- ☐ Monthly Revenue: current data and data for preceding 12 months
- ☐ Monthly Water Use: current data and data for preceding 12 months
- ☐ Documentation of measures taken to provide debt relief to users (e.g.: discontinued water shut offs, delayed payments, reduced payments, etc.)
- ☐ Documentation of retail/commercial/industrial water revenue lost due to business closures

2. Governing Body

- ☐ Board/council approval to request restructuring
- ☐ Completed request form

3. Existing Loan Terms

- ☐ Length of loan
- ☐ Annual payment amount
- ☐ Annual payment due date
- ☐ Remaining balance

4. Infrastructure Life

- ☐ Qualified professional's written estimate of remaining useful life for system infrastructure associated with the DWSRF financial assistance.

Agenda Item 7(E)

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

2020 DRINKING WATER STATE REVOLVING FUND INTENDED USE PLAN

Revised 5/2019

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

Table of Contents

SECTION A: Drinking Water State Revolving Fund (DWSRF) 3

A-1 Plan Introduction 3

Utah's DWSRF program results through SFY19 4

A-2 DWSRF Loan Program 5

SECTION B - Intended Use Plan 8

B-1 Summary, Financial Status and Goals 8

Short and Long-Term DWSRF Goals 8

B-2 Loan Program 13

B-3 Set-Asides 21

Set-aside requests and intended use 24

State Programs set-aside 24

Attachments 28

Utah Administrative Code Rule R309-705 28

Table 1 DWSRF Grants Summary 4
Table 2 Maximum Available Set-Asides 12
Table 3 Sources and Uses 13
Table 4 Authorized Funding 15
Table 5 Water System Projects 16
Table 6 Federal SRF program 17
Table 7 Federal Cash flows and Draw Forecast 18
Table 8 Set-Aside and State match Requests 22

SECTION A: Drinking Water State Revolving Fund (DWSRF)

A-1 Plan Introduction

The national Drinking Water State Revolving Fund (DWSRF) program established by the Safe Drinking Water Act (SDWA) Amendments of 1996, authorizes the U.S. Environmental Protection Agency (EPA) to award capitalization grants to states, which in turn may provide low-cost loans and other types of assistance to eligible public water systems to finance the costs of infrastructure projects needed to achieve or maintain compliance with SDWA requirements. States are also authorized to set-aside a portion of their capitalization grants to fund a range of activities including administration, technical assistance, source water protection, capacity development, and operator certification.

In recent years, two congressional acts have made changes affecting the DWSRF program. The Water Infrastructure Improvement for the Nation Act (WIIN) which passed in December 2016 and the America's Water Infrastructure Act (AWIA) of 2018 which was signed into law on October 23, 2018. Both of these acts have direct impact on how the DWSRF program operates and will be mentioned through-out this report when changes are directly related to the section.

The Utah Legislature enacted Utah Code Annotated (UCA) 19-4-101 et seq. establishing the Utah Safe Drinking Water Board (Board). UCA 19-4-104 empowers the Board with rule making authority to meet the requirements of federal law governing drinking water. UCA 19-1-105(1)(b) establishes the Division of Drinking Water (DDW) which is tasked with the responsibility to administer UCA 19-4-101 et seq. The Board has promulgated rules for making loans incorporating the requirements of the Federal Safe Drinking Water Act at Utah Administrative Code (UAC) R309-705. Additionally, the Board is authorized by UCA 19-4-104(1)(a)(v) and 19-4-104(2) to promulgate rules for certification of operators and governing capacity development in compliance with Section 1419 and 1420 of the Federal Safe Drinking Water Act.

The responsibility of the Board is to develop policies and procedures for program implementation and to authorize loans in the DWSRF program. The Utah Department of Environmental Quality (DEQ) through DDW directly administers the DWSRF program. The DDW's primary DWSRF activities include administering loans and managing and coordinating the fund.

DDW receives assistance and support from the DEQ's Office of Support Services, the State Division of Finance, the State Attorney General's Office and the State Treasurer's Office. The salaries and benefits of the employees, as well as indirect costs based on direct salary costs, are charged to the DWSRF program. Employees charging time to the DWSRF program are covered by the State of Utah personnel benefits plan. The DWSRF program is charged a loan administration fee by the Division of Finance.

The DWSRF program requires the states to deposit to the loan fund an amount equal to at least 20 percent of the capitalization grant. Loan repayments made by assistance recipients return to the loan fund and provide a continuing source of financing. The following table summarizes awards received by DDW, the allocation between loan and set-aside funds and the required state 20% match.

Table 1 DWSRF Grants Summary

Table 1 Summary of DWSRF Grants June 30, 2019								
Federal		Award Allocation						State
Fiscal	Award	Total		Loan Fund		Set-Aside Funds		20%
Year	Dated	Amount	%	Amount	%	Amount	%	Match
1997	February 9, 1998	$ 12,558,800	100%	$ 9,755,575	77.679%	$ 2,803,225	22.321%	$ 2,511,760
1998	September 20, 1999	$ 7,121,300	100%	5,633,563	79.109%	1,487,737	20.891%	1,424,260
1999	May 1, 2000	$ 7,463,800	100%	6,019,720	80.652%	1,444,080	19.348%	1,492,760
2000	August 21, 2000	$ 7,732,000	100%	6,515,880	84.272%	1,216,120	15.728%	1,551,400
2001	September 7, 2001	$ 7,789,100	100%	6,542,844	84.000%	1,246,256	16.000%	1,557,820
2002	July 30, 2002	$ 8,052,500	100%	6,384,100	79.281%	1,668,400	20.719%	1,610,500
2003	August 11, 2003	$ 8,004,100	100%	6,473,444	80.877%	1,530,656	19.123%	1,600,820
2004	July 8, 2004	$ 8,303,100	100%	6,724,604	80.989%	1,578,496	19.011%	1,660,620
2005	June 16, 2005	$ 8,285,500	100%	6,709,820	80.983%	1,575,680	19.017%	1,657,100
2006	June 29, 2006	$ 8,228,900	100%	6,583,120	80.000%	1,645,780	20.000%	1,645,780
2007	June 27, 2007	$ 8,229,400	100%	6,562,696	79.747%	1,666,704	20.253%	1,645,880
2008	July 31, 2008	$ 8,146,000	100%	6,516,800	80.000%	1,629,200	20.000%	1,629,200
2009	May 18, 2009	$ 19,500,000	100%	18,915,000	97.000%	585,000	3.000%	0
2009	June 22, 2009	$ 8,146,000	100%	6,822,275	83.750%	1,323,725	16.250%	1,629,200
2010	June 9, 2010	$ 13,573,000	100%	11,401,320	84.000%	2,171,680	16.000%	2,714,600
2011	July 1, 2011	$ 9,418,000	100%	7,440,220	79.000%	1,977,780	21.000%	1,883,600
2012	June 12, 2012	$ 8,975,000	100%	6,590,250	73.429%	2,384,750	26.571%	1,795,000
2013	June 26, 2013	$ 8,421,000	100%	6,224,890	73.921%	2,196,110	26.079%	1,684,200
2014	June 9, 2014	$ 9,229,000	100%	6,779,460	73.458%	2,449,540	26.542%	1,845,800
2015	June 8, 2015	$ 9,169,000	100%	6,645,060	72.473%	2,523,940	27.527%	1,833,800
2016	May 19, 2016	$ 8,674,000	100%	5,903,760	68.063%	2,770,240	31.937%	1,734,800
2017	September 28, 2017	$ 8,600,000	100%	5,800,000	67.442%	2,800,000	32.558%	1,720,000
2018	September 26, 2018	$ 11,107,000	100%	8,200,000	73.827%	2,907,000	26.173%	2,221,400
	Total	$ 214,726,500	100%	$ 171,144,401	79.703%	$ 43,582,099	20.297%	$ 39,050,300

Utah's DWSRF program results through SFY19

- ✓ Utah's DWSRF Fund Use Rate at the end of SFY19 was 75%. From the beginning of the program thru FY 2019 the DWSRF fund has provided drinking water assistance to communities of approximately $247.5 million, $329.8 million was available.
- ✓ In SFY19, Utah entered into fourteen binding commitments for a total of $7,368,273. As of May 21, 2020, DWSRF had eight projects authorized by the Drinking Water Board totaling $38,976,000, with three more loans which have already closed during the first half of FY 2020 totaling $44,695,000.
- ✓ The calculation of the use rate as of May 21, 2020 increased to 81%. DDW anticipates closing about fifty five million in new shovel ready loans in fiscal year 2021, which should increase the current use rate.
- ✓ The allotment between states is based on state needs surveys. DDW was allocated one hundredth percent for the federal fiscal years 2018 through 2021. It is anticipated that the needs survey process will begin once again soon for the years 2022 through 2025.

- ✓ DDW will continue to contract with Rural Water Association of Utah (RWAU) to assist small public water systems. They anticipate assisting approximately 300 water systems with capacity development or technical assistance.
- ✓ The State Auditor, in compliance with the provisions of the Single Audit Act, audits the DWSRF accounts. DWSRF accounts are also subject to review and audit by USEPA, the Office of the Inspector General. DWSRF Funds are included in Utah's Comprehensive Annual Financial Report (CAFR), which uses the modified accrual bases of accounting. Because funds are combined the DWSRF assets, liabilities, and net assets are not identifiable in Utah's CAFR.
- ✓ The State is required to submit an annual Intended Use Plan (IUP) to EPA as long as the Fund or set-aside accounts remain in operation.
- ✓ DDW under the direction of the Board administers the loan and set-aside programs.
- ✓ The DWSRF program and procedures are expected to primarily continue similarly as is described in the Operating Agreement.

A-2 DWSRF Loan Program

The loan program funds low-cost loans and other types of financial assistance to publicly owned and privately owned community water systems and non-profit non-transient water systems to finance the costs of infrastructure projects. States are responsible for developing a priority system that identifies how projects will be ranked for funding and a list of projects, in priority order, that are eligible for funding. A description of the criteria and the method used for distribution of loan funds is outlined in Utah Administrative Code R309-705. AWIA extended both the length of years eligible for water systems to repay the debt and the maximum time period allowed before requiring the first payment due on the outstanding principal balance.

Loans Program Eligibility Requirements

1. Repayment must begin no later than 18 months (previously 12, the change was part of AWIA Act) after completion of the project.

2. Loan repayment must be completed no later than 30 years (previously 20, the change was due to AWIA Act) after the completion of the project. A disadvantaged community loan may have up to 40 years (previously 30, the change was due to AWIA Act) as long as the period of the loan does not exceed the expected design life of the project.

3. A minimum of 15% of all dollars credited to the loan fund must provide loans to small systems, those that serve fewer than 10,000 persons.

4. Funding can be used for principal forgiveness for communities meeting the State's "Disadvantaged" criteria. The Board has defined disadvantaged communities as those communities located in an area which has a median adjusted gross income which is less than or equal to 80% of the State's median adjusted gross income, as determined by the Utah State Tax Commission from federal individual income tax returns excluding zero

exemption returns or where the established annual cost of drinking water service to the average residential user exceeds 1.75% of the median adjusted gross income.

5. The 2020 DWSRF capitalization grant may require a percentage of federal funds to be used for additional subsidization in the form of principal forgiveness, negative interest loans, or grants, or any combination of these. This will be defined in the programmatic conditions of the award and will be followed as defined.

6. It is anticipated the American Iron and Steel (AIS) provision will be included in the federal FY20 appropriation bill for the 2020 DWSRF capitalization grant. The AIS provision requires iron and steel products used during the construction of drinking water projects be produced in the United States. DDW intends to follow this requirement and request a waiver for an exception when necessary.

7. It is not anticipated the 2020 capitalization grant will require "Green Infrastructure Projects".

8. Construction bids are required to use Davis-Bacon Act wage rules.

Interest and Fees

1. Federal rules section 1452 allows the state to assess interest and/or fees. Fees are calculated and paid in the same manner as interest. Fees have fewer restrictions than interest. The Board has authorized by Rule the establishment of a fund (or account) into which the proceeds of annual fees are placed.

2. Interest payments are deposited to the same loan fund as principal payments and have the same restrictions.

3. Hardship fees are deposited to a separate fund authorized for providing grants to water systems through a state revolving fund (SRF) loan program.

4. Technical Assistance fees are to finance technical assistance for eligible water systems or other purposes as allowed by section 1452. This fee is part of the "effective rate" calculated using Table 2, R309-705-6**.** UAC R309-705-3 defines a SRF Technical Assistance Fund which means a fund (or account) that will be established for the express purpose of providing "Technical Assistance" to eligible drinking water systems. These fees are deposited into the hardship fee fund and are tracked separately. The Technical Assistance Fund will also provide low interest loans for technical assistance, and any other eligible purpose as defined by Section 1452 of the SDWA Amendments of 1996, to water systems that are eligible for Federal SRF loans. Repayment of these loans may be waived in whole or in part (grant funds) by the Board whether or not the borrower is disadvantaged.

5. Origination Fee: The Utah State Legislature established an origination fee to be charged to all new loans to fund the administration of the DWSRF program in accordance with UCA 73-10c-10. The set fee of 1% continues to be the rate charged by the Board. It is reviewed annually and may change based on the needs of the program. The origination fee amount is assessed to the loan recipient as a percentage of the principal balance of the loan. It is generally paid at closing as a one-time fee, but the loan recipient may choose to pay separately or with their first pay request from the loan proceeds. All proceeds are deposited into a separate fund. Since fees will be deposited into an account outside of the Fund, they will only be used for program administration or other purposes for which capitalization grants can be awarded under section 1452. Currently, these fees will not be used for any state match requirements. In addition, this fee will not be charged to any disadvantaged community which receives a loan subsidy provided from DWSRF funding.

State fund Drinking Water Loan Program

The Division of Drinking Water also operates a State funded Drinking Water Assistance Program also known as the Water Development Security Fund UCA 73-10c-5. The state program provides Utah the flexibility to put together loan packages without the restrictions that accompany the DWSRF program. The DWSRF program requires a 20% state match which is generated from the state SRF loan program.

A-3 Set-Asides

In addition to loan assistance to eligible public water systems, the DWSRF program also emphasizes the prevention of drinking water contamination by allowing states to reserve a portion of their grant to fund activities that encourage enhanced water system management and source water protection. The funded activities are referred to as set-aside funds.

The Water Infrastructure Improvements for the Nation (WIIN) Act which passed in December 2016; revised two set-asides. The WIIN Act removed the state 1:1 match for the ten percent set-aside and provided three options to choose from for the four percent set-aside. DDW will comply with all programmatic and administrative conditions as required for this grant award.

Set-aside activities include:

1. The four percent set-aside provides an allotment to administer the DWSRF and provide technical assistance to public water systems. The calculation for the four percent administrative set-aside consists of choosing the greatest one of three options: 1) $400,000; 2) 1/5 percent of the current valuation of the fund (must be an audited fund); or 3) an amount equal to four percent of all grant awards in the fund under this section for the fiscal year.

2. Up to ten percent of the allotment for state program management activities, including administration of the state public water system supervision program, administration of the source water protection program, development and implementation of the capacity development and operator certification programs. Prior to the WIIN Act of 2016, the

10% set-aside required a dollar-for-dollar state match; this is no longer required. Along with the 1:1 state match requirement change, the 1993 state match credit of $855,668 per 40 CRF 35.3535 (d) (2) is also no longer necessary as it was a credit applied to the 1:1 state match.

3. Up to two percent of the allotment to provide technical assistance to small public water systems.

4. Up to 15 percent of the capitalization grants to assist in the development and implementation of local drinking water protection initiatives, including capacity development, wellhead protection and other state programs.

SECTION B - Intended Use Plan

B-1 Summary, Financial Status and Goals

An Intended Use Plan (IUP) explains how the State will use all funds available from the capitalization grant, including funds that will be allocated to the set-asides. Specifically, the IUP describes how DDW plans to use available funds. Funds are received from the federal capitalization grants, the state match, loan repayments including interest and fee payments, and investment earnings.

The State is applying for the 2020 DWSRF of $11,011,000. DDW is requesting $8,093,360 to be added to the loan fund and $2,917,640 to the set-aside program. The federally mandated 20% state match of $2,202,200 will be funded from the Drinking Water State loan program and will be available to transfer into the DWSRF fund within 90 days of the award date. However, DDW anticipates amounts will be adjusted according to actual budget as Congress provides.

The Intended Use Plan (IUP) is for the 2020 DWSRF appropriations and will include:

1. Specifics on how the Board proposes to use the appropriations;
2. A description of the goals of the DWSRF program;
3. A list of projects eligible to receive DWSRF funding, which identifies those serving less than 10,000 people;
4. Cost estimates for listed projects;
5. An estimate of funds anticipated to be available for financial assistance;
6. Criteria for selecting projects to receive financial assistance;
7. Criteria for determining which communities qualify for hardship status;
8. The project scoring and ranking system;
9. Projects authorized for funding and those anticipated to be closed in FFY2020 and the 1st or 2nd quarter of FFY2021.

Short and Long-Term DWSRF Goals

The DWSRF program will help ensure Utah's drinking water supplies remain safe and

affordable, and drinking water systems are properly operated and maintained. The objectives of the DWSRF program include ensuring the public health, achieving compliance with SDWA, and assisting systems to provide affordable drinking water.

Short-Term Loan Program Goals

1. Seek the award of the FFY 2020 Capitalization Grant to secure federal funding for the DWSRF program and follow all the grant requirements.
2. Implementing process to accommodate water systems having difficulty with loan repayments due to the covid-19 pandemic. This process will likely be a restructure of their loan terms for their amortization schedule.
3. DDW is actively engaging in portfolio and programmatic financing.
4. Continue to upgrade and improve our enterprise resource planning tool.
5. Engage in a more aggressive marketing process to reach water systems in need of capital improvements, willing and able to meet DWSRF requirements.
6. Work diligently with borrowers to secure authorization of funding from the Board and closing loans in a timely and efficient manner to DWSRF loan applicants.
7. To maintain a permanent and solvent source of funding to assist communities with financing water systems' capital improvements thereby assisting them to maintain compliance with USEPA standards and promote public health.
8. Develop better cross/legacy training to improve employee development and to help with employee transitions.
9. Improve DDW relationships with drinking water stakeholders and others.

Long-Term Goals and the Set-Aside Goals

1. To help public water suppliers achieve and maintain compliance with Federal and State drinking water standards.
2. Continue outreach activities to ensure systems understand DWSRF assistance options and the need to develop managerial, technically and financially sound water systems.
3. Continue to educate and support water suppliers with their water protection (counter-terrorism) efforts.
4. Continue to expand and automate the Operator Certification program and make it fully funded by fees.
5. Improve on-boarding process for new hires
6. Continue identifying noncompliant water systems using the ETT (Enforcement Target Tool) to assist them to provide safe drinking water to the public.

Transfer of Drinking Water State Revolving Funds and Cross-Collateralization of Funds between the DWSRF and CWSRF

The Drinking Water Board and Division of Drinking Water reserve authority to transfer funds from the Drinking Water SRF program to the Clean Water SRF (CWSRF) program. The amount reserved for future transfers is up to 33% of the DWSRF capitalization grant award. The table below indicates the reserved transfer amount by award year.

Award Year	DWSRF Capitalization Grant Award	Reserved Transfer Amount
2019	$11,004,000	$3,631,320
2020	$11,011,000	$3,633,630
	TOTAL	**$7,264,950**

For FY20, the projected amount of funds to be transferred is $0, with no short- or long-term impacts on the fund. Justification for any transfers to the Drinking Water SRF program, including amount, type of funds, and fund impact, will be documented in a future IUP. Additionally, cross-collateralization is not anticipated to be used in the Drinking Water Program as the program does not leverage funding.

Portfolio Financing

The Division of Drinking Water SRF program has just issued its first loans through portfolio financing. This is a process that will aid larger water systems with substantially large and multiple projects. This will simplify the process as these water systems will be able to fund these projects with a single bond to build these projects over several years were as previous financing methods the financing would be broken out for each individual project.

Withholding of Funds

EPA has the ability to withhold funds under certain provisions, but the DWB/DDW has complied with the following:

1. The State has authority to ensure all new community water systems and new non-transient, non-community water systems commencing operation after October 1, 1999, demonstrate technical, managerial, and financial capacity with respect to each drinking water regulation in effect. Utah Code Annotated 19-4-104 empowers DDW with rule making authority to meet the requirements of Federal law governing drinking water.
2. The State has developed and is implementing a strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity.
3. The State has adopted and is implementing a program for certifying operators of community and non-transient, non-community public water systems.

EPA has approved the State's capacity development and operator certification programs.

Public Review of the IUP

A draft IUP will be published on the Drinking Water web site, www.drinkingwater.utah.gov in May 2020. Notice of the posting and request for public comment will be included in the DW Board's June 9, 2020 meeting. Minutes will be e-mailed to individuals and agencies asking for review and comments in May 2020. Comments may be made in writing addressed to the Board at 195 North 1950 West, PO Box 144830, Salt Lake City, Utah 84114-4830 or in person at a regular scheduled Board meeting. Comments received will be reviewed and incorporated as deemed necessary into the set-aside work plan (due to EPA 90 days from grant award date); however no comments are anticipated to be received.

Financial status

Initial capitalization for the Utah DWSRF program was provided from the 1997 Federal Capitalization Grant and state matching dollars. For the 22 years, 1997 through 2019, DWSRF capitalization grants totaled $225,730,500. $179,244,401 was the total loan program portion and $46,486,099 was used in the set-aside programs. The State 20% match for the same period was $41,251,100 was added to the loan program.

Through April 30, 2020 the Board has authorized 184 projects totaling approximately 331,177,811. A total of 173 projects totaling $243,845,411 have been closed (committed) thru the end of fiscal year 2019. So far another three projects have closed in fiscal year 2020 totaling $47,544,400. Total of 176 closed projects equal $291,389,811. Revenue, disbursements and balances are shown in the financial statements thru June 30th, 2019.

DDW is applying for $11,011,000 using the 1% allocation and based on the continuing resolution as adopted by Congress in fiscal year 2020. When funding is finalized, amounts may be changed to reflect the authorized amounts. It is anticipated $8,093,360 will be provided to the loan fund and $2,917,640 to set-asides. The state 20% match of $2,202,200 will be transferred to the loan fund within 90 days of the award date. Table 2 identifies the maximum set-asides which could be requested if every possible set-aside percentage and all reserves were requested to be awarded for in the 2020 capitalization grant.

Table 2 Maximum Available Set-Asides

TABLE 2 MAXIMUM AVAILABLE SET-ASIDE AWARDS W/STATE MATCH IF ALL RESERVES WERE USED THIS YEAR				
ACTIVITY	PROG ELEM	BEG RESERVE BALANCE	2020 max with 20% State Match	
Loan Fund	20DA		5,478,093	2,202,200
Combined Loan w/state match		-		**7,680,293**
4% Administrative Set-Aside	20DD		440,440	4%
4% Reserve Amount		782,026		
Maximum 4% w/max reserves		782,026	440,440	**1,222,466**
2% Small Sys Tech Asst Max	20DE		220,220	2%
2% Reserve Amount		301,683		
		301,683	220,220	**521,903**
10% Reserve Amount	20DF	1,035,788		
PWS Supervision full 10%			1,101,100	10%
Capacity Development Oversight				
Source Water Protection				
Operator Certification				
TOTAL State Program Set-Aside		1,035,788	1,101,100	**2,136,888**
15% Local Assistance Set-Aside Max	20DG	no reserve	1,651,650	15%
TOTAL Local Assistance Set-Aside		-	1,651,650	**1,651,650**
(No more than 10% in one category)				
TOTALS				
TOTAL LOANS W/STATE MATCH			5,478,093	2,202,200
TOTAL SET-ASIDES AVAILABLE		2,119,497	3,413,410	5,532,907
TOTAL CAPITALIZATION GRANT		2,119,497	8,891,503	**13,213,200**

Table 3 Sources and Uses

SOURCES AND USES TABLE 3					
	Cumulative Total thru 6/30/2019		7/1/19 - 6/30/20		Cumulative Total thru 6/30/2020
SOURCES:					
Federal Captalization Grants	214,726,500	a	11,004,000		225,730,500
State Match					-
20% Capitalization Grant Match	39,050,300	b	2,200,800	c	41,251,100
10% Set-Aside 1:1 Match	18,041,630		-	d	18,041,630
Principal Repayments on Assistance Provided	93,471,724		7,099,522	e	100,571,246
Interest Repayments on Assistance Provided	16,212,175		1,379,758		17,591,933
Investment Earnings	8,115,304		1,725,250		9,840,554
Funds from Leveraging	-		-	f	-
Fees Deposited into the DWSRF	-		-		-
Funds Transferred from (to) CWSRF	-		-		-
Sources Total	389,617,633		23,409,330		413,026,963
USES:					
Loan/Grant Agreements Entered:					
Large Systems (>10,000 population)	56,163,595		41,000,000		97,163,595
Small Systems (≤10,000 population)	191,295,328		3,695,000		194,990,328
Additional Subsidy	*42,426,998*		*2,511,273*		*44,938,271*
Projects w/loans pending (shovel ready projects)	-		33,741,000		33,741,000
Projects authorized w/loans pending	10,700,000		6,612,000		17,312,000
Proposed Projects not yet authorized	-		2,600,000		2,600,000
Projects not yet submitted (available 2nd round)			2,692,311		2,692,311
Set-Asides:					-
4% Administration	7,797,194		450,000		8,247,194
2% Small System Technical Assistance	4,122,927		90,000		4,212,927
10% State Program Management- 1:1 match	18,041,630		-		18,041,630
PWSS Program Augmentation	16,854,049		1,025,400		17,879,449
Source Water Administration	1,518,825		60,000		1,578,825
Operator Certification	1,053,210		-		1,053,210
Capacity Development Program Oversight	390,778		15,000		405,778
PD Database	620,000		-		620,000
State Program Management Total	38,478,492		1,100,400		39,578,892
15% Local Assistance/Other State Programs					-
Local Assistance & Capacity Development Outreac	8,861,706		1,100,400		9,962,106
Capacity Development Project in 1998	997,537				997,537
Source Water Assessments	352,978		-		352,978
Wellhead and GIS tracking	1,012,895		163,200		1,176,095
LA/Other State Program Subtotal	11,225,116		1,263,600		12,488,716
Uses Total	319,782,652		93,244,311		413,026,963

a. *Total federal appropriation thru FFY 2019 Capitalization Grant. DDW uses a FIFO methodology for Unliquidated Obligations which can be found in Table 7 "2020 and 2021 Cash Flows and Cash Draw Proportionality" Page 18. (Grant award for 2019 was not awarded until Aug 2019.)*

b. *20% State Match came from Water Development State Revolving Fund thru FY 2019.*

c. *20% State match for 2019 & 2020 Capitalization Grants will be deposited to fund within 90 days of award date.*

d. *Any award entered after December 16, 2016, no longer requires the 1:1 State Match in accordance with the 2017 WIIN Act.*

e. *2020 repayments, interest and investment earnings are estimated.*

f. *DDW does not leverage any of their SRF funds.*

B-2 Loan Program

UAC R309-705 establishes criteria for financial assistance to public drinking water systems in accordance with the Federal SDWA. A copy of UAC R309-705 can be found at http://www.rules.utah.gov/publicat/code/r309/r309-705.htm. The 2020 DWSRF capitalization grant along with carry forward funds from previous grant awards, repayments, interest and fee payments, and investment earnings provides the funds the Division has available to help public water systems finance needed drinking water projects.

Description of Criteria and Method Used for Distribution of Loan Funds

The complete description of the criteria and method used for distribution of funds is outlined in Utah Administrative Code (UAC) R309-705-6. As described in R309-705-6, the priority system assigns points to systems showing a deficiency in source, storage, treatment, and/or the distribution system. Points are assigned based on the relative risk of each deficiency, and are divided as applicable between health risk and compliance with SDWA. The applicant's priority points are modified by a financial factor, known as the Rate Factor, and the AGI Factor. Their calculation is shown below:

Priority rating = (Average number of points received) X (Rate Factor) X (AGI Factor)
Where: Rate Factor = (Average System Water Bill / Average State Water Bill)
AGI Factor = (State Median AGI/ System Median AGI)

The priority points for demonstrated deficiencies are multiplied by the Rate Factor and AGI Factor to arrive at a final priority rating. This method addresses financial hardships present in less affluent communities and in those already experiencing higher water rates.

Upon arriving at a final priority rating for each applicant, each application is rated and added to the priority list. The Board may, at its option, modify a project's priority rating based on the conditions described in R309-705. The Board sets the effective interest, hardship fee and/or technical assistance fee rate and decides the amounts allowed for principal forgiveness or grants. The most current Revenue Bond Buyer Index (RBBI) is used as the base rate. Table 2 in UAC R309-705-6 is used to determine the reduction of the interest rate (or other rate) which potentially may be reduced to zero percent.

Project Priority List (PPL)

DDW operates with a continuous project priority list. When applications are received throughout the year, they are reviewed to ensure compliance with federal and state drinking water regulations and scored based on the rating factors indicated in the previous paragraph. Currently, all applications meeting requirements are prepared to be taken to the Board for authorization. (The Board is required by Utah law to meet at least quarterly.) Since the applications are submitted throughout the year and may be scored and closed quickly, on occasion a water system project may not have been included in any intended use plan.

However, the continually updated PPL is posted on the division website and additions or changes are approved by the Board.

The PPL will be used for the 2020 DWSRF capitalization grant and any other funds used for loan projects. Projects authorized by the Board but which have not been closed are entered in the section titled "Authorized Funding". Staff is working with these systems to meet EPA requirements to close the loans. A list of authorized and proposed projects requiring funding is listed next in Table 4.

Table 4 Authorized Funding

TABLE 4. AUTHORIZED FUNDING as of 4/30/2020				
Community	**Loan #**	**Loan Amt**	**Forgiveness**	**Total**
Swiss Alpine Water Company	3F300	1,612,000		1,612,000
West Corinne Water Co	3F305	500,000		500,000
Lincoln Culinary Water Assn	3F1696	1,510,000	1,006,000	2,516,000
Canyon Meadows Mutual Wtr	3F1700	2,175,000	550,000	2,725,000
Central Utah WCD-Duchesne Valley WTP	3F1731	18,000,000		18,000,000
Hyde Park City	3F1744	5,000,000		5,000,000
Central Utah WCD	3F1741	10,000,000		10,000,000
San Juan Spanish Valley	3F1755	210,000	90,000	300,000
PROPOSED AND POTENTIAL PROJECTS				
Community	**Loan #**	**Loan Amt**	**Forgiveness**	**Total**
Sigurd Town	3F1745	1,380,000	920,000	2,300,000
		40,387,000	2,566,000	42,953,000

Green Infrastructure

The 2020 capitalization grant does **not** require projects to meet a minimum percentage to be used for water efficiency, energy efficiency, green infrastructure, or other environmentally innovative activities. However, DDW is always pursuing green projects including technological innovations to enhance green development.

Delayed Authorized Projects

Table 5 identifies and explains water system projects which were scored and included in previously submitted project priority lists or were previously included in the 2019 Intended Use Plan. Some of these projects have merely been substantially delayed while others have

withdrawn their request or their funding has changed and the project will not be funded with federal DWSRF funds for a variety of reasons.

Table 5 Water System Projects

TABLE 5 - DELAYS			
Community	Loan #	Amt of Loan	Reason not funded
Swiss Alpine Water	3F300	807,000	Deauthorized current loan amount as it was insufficent to cover bids for construction of project and authorized a new loan for $1,612,000
West Corinne Water Co	3F305	500,000	Issue with existing easement on Forest Service property. Construction will begin Fall 2020
Lincoln Culinary Water Assn	3F1696	$2,516,000	No submitted plans yet. Scouting well locations
Virgin Town	3F1702	$800,000	Tank is being constructed on BLM land and the process to get the rights of way and easements is delaying the project. Also bids for tank are higher then expected, talking about downsizing tank. Project has been deauthorized and reauthorized through state funding.
Canyon Meadows Multual Wtr	3F1700	1,925,000	Bids came in high, seeking additonal funding
Diamond Valley Acres	3F1706	235,000	Deauthrized 3/11/2020. Cancelled by applicant
Marysvale	3F1709	3,665,000	Deauthorized 11/5/2019
Bluffdale City	3F1726	6,000,000	Deauthorized 6/11/2019
Ogden Municipal	Proposed	16,000,000	Verbal discussions never resulted in application being submitted.
Boulder Farmstead	Proposed	?	Never submitted application

Current status and shovel ready loans

DDW staff routinely promotes the program and encourages water systems to apply for financial assistance at conferences, in presentations and training sessions, and through letters written to both water system administrative contacts and consulting engineers. Although DDW is aware of the need for drinking water system infrastructure improvement projects at systems throughout the state, to date these efforts have produced limited results. DDW will continue to explore ways to better market the DWSRF loan program with drinking water systems. Many water systems in Utah qualify and require substantial principal forgiveness (which is currently very limited in the Utah DWSRF Program). Therefore, if Congress were to increase principal forgiveness limits, it would likely encourage decision-makers to improve their system infrastructure and maintain compliance with regulations.

Table 7 identifies shovel ready projects from the authorized table projecting a federal draw forecast to provide federal cash flow in SFY 2020. All projects listed are either in progress or are shovel ready and should be closed in the summer of 2020 or early 2021 calendar year.

Table 6 Federal SRF program

Utah Federal SRF Program – Table 6								
					PPL Total Needs, incl. recently funded = $586,967,709			
	Priority Points	System Name	County	Pop.	Project Title	Project Total	Request DWB	Funds Authorized
N	27.50	Sigurd Town	Sevier		Spring redevelopment, tank, chlorinator	$2,120,101	$2,020,101	
N	26.40	Old Meadows	Iron		Waterline and meters	$252,227	$222,227	
N	16.70	Willow Creek	Box Elder	260	Generator, mixer, meters	$123,000	$123,000	
A	31.60	Virgin Town	washington	596	New tank and distribution lines	$1,200,000	$800,000	$800,000
A	30.70	Canyon Meadows	Wasatch	100	Trans line, Dist line, Tank, treatment plant	$1,724,068	$1,724,068	$1,925,000
A	25.00	Greenwich	Piute	67	Chlorination building	$130,000	$130,000	$130,000
A	24.30	West Corrine	Box Elder	1,275	Spring redevelopment and transmission line replacement	$533,075	$479,767	$500,000
A	22.50	Central Utah WCD	Utah		Programmatic financing	$10,000,000	$10,000,000	$10,000,000
A	18.80	Swiss Alpine	Wasatch	300	New Well and transmission line	$955,152	$815,152	$807,000
A	16.60	Lincoln Culinary	Tooele	489	Well development, trans line, dist line, supply line	$2,516,000	$2,516,000	$2,516,000
A	11.40	Spring Creek Water Users	Iron		Meter replacement	$57,947	$57,947	
A	7.20	Diamond Valley Acres	Washington	1,370	Well equipping and conn to system	$235,000	$235,000	$235,000
A	7.00	Geonal	Utah	1,500	Tank and Well	$2,849,400	$2,849,400	$2,849,400
A	4.70	Hyde Park City	Cache		2 MG tank, trans & dist line, booster pump	$5,994,000	$5,000,000	$5,000,000
		TOTAL AUTHORIZED						**$24,762,400**

N = New Application

A = Authorization

P = Potential Project – No authorization

Table 7 Federal Cash flows and Draw Forecast

TABLE 7 – 2020 and 2021 FEDERAL CASH FLOWS AND DRAW FORECAST

SUBRECIENT	LOAN NO	BINDING CLOSED DATE	STRT DATE	TOTAL ULO's and new loan amounts	FFY 2020 Ending 9/30/20					SFY 2021 Ending 6/30/21		
					QTR 4 (J-S 19)	QTR 1 (O-D 19)	QTR 2 (J-M 20)	QTR 3 (A-J 20)	QTR 4 (J-S 20)	QTR 1 (O-D 20)	QTR 2 (J-M 21)	QTR 3 (A-J 21)
Closed loans fed funds not fully disbursed as of 6/30/2019												
2019 closed loans												
San Juan Spanish Valley Special Service District	3F275	Jan-19	Jan-19	600,000	600,000							
Granger Hunter	3F1708	Jul-19	Jul-19	2,645,400	1,200,000		800,000		645,400			
Granger Hunter	3F1708	Jul-19	Jul-19	37,000	37,000							
2020-2021 loans based on projected start dates												
Kearns Improvement District	3F1725	Dec-19	Dec-19	350,000				350,000				
Kearns Improvement District	3F1725	Dec-19	Dec-19	2,550,000				1,650,000	900,000			
Kearns Improvement District	3F1725	Dec-19	Dec-19	1,100,000		1,100,000						
Twin Creeks SSD	3F1716	Dec-19	Dec-19	2,534,200		599,200			1,935,000			
Twin Creeks SSD	3F1716	Dec-19	Dec-19	1,100,800		1,100,800						
Canyon Meadows Mutual Wtr	3F1700			2,605,800					1,000,000	1,000,000	605,800	
West Corinne Water Co	3F305			500,000						500,000		
Central Utah WCD	3F1731			2,202,200						1,702,200		
Central Utah WCD	3F1731			4,401,680						1,350,000	1,000,000	2,051,680
Central Utah WCD	3F1741			4,051,680						1,000,000	1,000,000	2,051,680
2020-2021 potential projects												
Sigurd Town	3F1745											
TOTALS				$ 24,738,760	$ 1,837,000	$ 2,800,000	$800,000	$ 2,000,000	$ 4,540,400	$ 5,552,200	$ 2,605,800	$ 4,103,360
2018 SRF AWARD #FS 99878418	$11,107,000	fed		$ 3,595,400	$ 1,800,000		$800,000	$ 350,000	$ 645,400			
State Match was 100% trnsfrd to loans by Jul 19.		state		$ 37,000	$ 37,000	$ -						
				$ 3,632,400	$ 1,837,000	$ -	$800,000	$ 350,000	$ 645,400	$ -	$ -	
2019 SRF AWARD #FS 99878419	$11,004,000	fed		$ 8,100,000		$ 599,200	$ -	$ 1,650,000	$ 3,895,000	$ 1,350,000	$ 605,800	
State Match was 100% trnsfrd to loans by Dec 19.		state		$ 2,200,800		$ 2,200,800						
				$ 10,300,800		$ 2,800,000	$ -	$ 1,650,000	$ 3,895,000	$ 1,350,000	$ 605,800	
2020 SRF AWARD #FS 99878420	$11,011,000	fed		$ 8,103,360						$ 2,000,000	$ 2,000,000	$ 4,103,360
	state			$ 2,202,200		$ -	$ -	$ -	$ -	$ 2,202,200	$ -	$ -
				$ 10,305,560		$ -	$ -	$ -	$ -	$ 4,202,200	$ 2,000,000	$ 4,103,360
Total of all grants				$24,238,760	$ 1,837,000	$ 2,800,000	$800,000	$ 2,000,000	$ 4,540,400	$ 5,552,200	$ 2,605,800	$ 4,103,360

Additional information: *1.The 20% state match is transferred 100% into the DWSRF fund when the DWSRF grant is awarded (within 90 days).*
2. All federal funds are disbursed using a FIFO method (first in first out)

Assistance for Disadvantaged Communities

Section 1452 (d) changed in 2009 to require states to provide a minimum of 20 percent additional loan subsidies in the form of negative interest, grants or principal forgiveness to benefit communities meeting the State's definition of "disadvantaged". Since then there has been a variety of changes as to how much subsidization has been required each year or that may have been permitted with a ceiling percentage as high as 50 percent of the annual DWSRF capitalization award amount. The 2019 allotments from the Consolidated Appropriations Act of 2019 now mandates the states use at least six percent but not more than 35 percent for additional subsidization of the 2020 allotment of the DWSRF capitalization grant. Additional authority was authorized in the America's Water Infrastructure Act (AWIA) of 2018. In AWIA's authority, States must use 20 percent of the funds made available in the 2020 DWSRF capitalization grant to provide additional subsidization to eligible disadvantaged recipients. Therefore, a minimum of 26 percent to a ceiling amount of 55 percent will be included with the 2020 loans closed to provide subsidization to any DWSRF eligible applicant based on the definition adopted the State's definition. DDW will comply with the programmatic conditions of the grant award to match the 2020 subsidization requirements.

The Board defines disadvantaged communities as those communities located in an area which has a median adjusted gross income which is less than or equal to 80% of the State's median adjusted gross income, as determined by the Utah State Tax Commission (USTC) from federal individual income tax returns excluding zero exemption returns, or where the estimated annual cost, including loan repayment costs of drinking water service for the average residential user exceeds 1.75% of the median adjusted gross income. If, in the judgment of the Board, the USTC data is insufficient, the Board may accept other measurements of the water users income (i.e. local income survey or questionnaire when there is significant difference between the number of service connections for a system and the number of tax filing for a given zip code or city, or when the water system claims that the MAGI (incomes) of its users is lower than the MAGI (incomes) of the larger community covered by the USTC data).

The amount and type of financial assistance offered by the Board will be based upon the criteria shown in UAC R309-705-6 (2). Disadvantaged communities may receive zero-percent loans, negative interest rate loans, principal-forgiveness loans or grants. Terms for each method of financial assistance shall be determined by a Board resolution.

The Board has not set any pre-determined amount of DWSRF funds that may be used for principal forgiveness to disadvantaged communities. It is the Board's intention to authorize additional subsidization only to communities that meet the "disadvantage criteria".

Costs Incurred After Application and Prior to Execution of the Loan Agreement

Eligible project costs incurred after application to the Board and prior to execution of the loan agreement are eligible for reimbursement. Reimbursement will only be made after the loan closing.

Municipal Bond Legal Fees

The Board may purchase bonds of the applicant only if the bonds are accompanied by a legal opinion of a recognized municipal bond counsel selected by the Board UAC (R309-705-8 (2)). The loan recipient is responsible for the legal costs. Legal costs may be paid from the loan proceeds.

Capacity Development Requirements

Eligible Systems - The SDWA allows DWSRF assistance to publicly and privately owned community water systems and nonprofit, non-community water systems other than systems owned by Federal agencies. Federal Regulations also set forth certain circumstances under which systems that will become community water systems upon completion of a project may be eligible for assistance. UAC R309-705 Financial Assistance: Federal Drinking Water Project Revolving Loan Program (Effective July 1, 2011) establishes criteria for financial assistance to public drinking water systems in accordance with a federal grant 42 U.S.C. 300j et seq., Federal Safe Drinking Water Act. The SDWA requires that loan recipients must demonstrate the technical, managerial, and financial capacity (TMF) to comply with the SDWA and not be in significant noncompliance with any requirement of a national primary drinking water standard or variance. The State will assess TMF and compliance in accordance with UAC R309-800 Capacity Development Program after loan applications have been received. Those systems lacking in TMF or compliance may still be eligible for a loan if the loan will address the non-compliance or the system agrees to undertake feasible and appropriate changes in operations. In accordance with the AWIA changes, DDW will include in the state capacity development triennial report to the Governor a description of how the state will implement procedures to encourage the development of technical, managerial, financial and an asset management plan program with provisions of technical assistance. It is DDW's intention to encourage water systems to implement asset management plans that include best practices in any training or technical assistance into the division's capacity development methodologies.

Environmental Reviews and Categorical Exclusions

The State Environmental Review Process (SERP) is described in the Operating Agreement.

The Grantee, the State of Utah, may elect to partition an environmental review or Categorical Exclusion (Cat Ex) from environmental review. The procedures listed below will be followed by the State in order to evaluate if partitioning a project from environmental review is appropriate.

A. Authority

The authority for including these procedures in the Division's Intended Use Plan (IUP) and State Environmental Review Process (SERP) is contained in the SDWA Amendments of 1996 (Pub. L. 104-182) and the guidance provided by the EPA DWSRF Program Guidelines, document # 816-R-97-005 (February 1997). In particular, see Section IV. STATE/PROJECT LEVEL AUTHORITIES, Subsection B. Environmental Reviews.

1. Procedures for Making Determination Cat Ex:
2. If the Division has reason to believe that the project falls within one of the categories listed under paragraph "C" and thereby may qualify for a Cat Ex from environmental review, the State will make a preliminary survey of the proposed project site(s).
3. During this survey the State will evaluate whether or not the project meets the criteria for a Cat Ex from environmental review.
4. If the State determines the site qualifies for Cat Ex from environmental review, it will document the justification of this determination, including a listing of the dates of activities, which led to this determination, and a statement of relevant findings.
5. Even if the project qualifies for Cat Ex from environmental review according to the criteria listed under paragraph "C", the State may require an environmental review if the State determines that an environmental review is warranted or appropriate because of conditions found at the site or because the project is controversial.

Criteria for Categorical Exclusion from Environmental Review

In order for a project to qualify for an environmental determination of Cat Ex from environmental review, the general location of the project should have been previously disturbed. Site conditions which will be evaluated in making this determination include a) how urbanized the location is, b) whether wildlife has previously been displaced, and c) whether the wildlife habitat has been previously destroyed or replaced. The project site shall meet at least one of the following criteria:

1. A proposed water line will be placed in a roadway(s) and/or rights-of-ways where existing pipes, telephone wires, cables, or other facilities have previously been installed.
2. A proposed tank site will be located on a site with other previously constructed utility facilities on a previously disturbed site.
3. The proposed facilities will be located at a site with other existing community infrastructure; e.g. a booster station, pump house, water treatment plant, or similar facility within a previously disturbed area and which will not extend into sensitive areas in the ground or adjacent to the previously disturbed area.

Public Notice and Participation

The State will provide public notice when a Cat Ex is issued or rescinded. However, no formal public comment period need be provided prior to the Cat Ex becoming effective.

B-3 Set-Asides

Substantial set-aside changes were implemented with the "Water Infrastructure Improvements for the Nation (WIIN) Act passing in December 2016. The Act removed the overmatch (1:1) for the ten percent set-aside and provided calculation options for the four percent set-aside. DDW will comply with all programmatic and administrative conditions as required for the 2020 grant award.

Set-aside funding is used to:

- ✓ Fund established programs
- ✓ Fund continuing growth
- ✓ Fund increasing operating costs
- ✓ And to the extent set-aside funds are available, assist in funding the additional staff needed to implement new Federal rules regarding regulation of drinking water contaminants

The state will not use set-aside funds for those projects or project-related costs that are eligible or explicitly ineligible for assistance from the DWSRF except DDW may use set-aside funds for: 1) project planning on design costs for small systems, and 2) for costs associated with restructuring a system as part of a capacity development strategy.

Set-aside funds have been used on first in first out (FIFO) basis and will continue to be so. Usage is accounted for by set-aside. Unused funds are carried forward to the next fiscal year.

Final reports have been submitted to USEPA for DWSRF capitalization grants through 2016. 2017 and 2018 grant years are fully spent, and the final reports are being prepared. DDW is currently spending 2019 grant year. In anticipation of the 2020 grant year being delayed in being awarded, DDW respectfully requests authorization to receive pre-award ability to cover set-aside expenses for the period of July 1, 2020 through September 30, 2020. The loan funds are also treated on the FIFO basis.

Intended use of set-aside funds

Maintain the staff (FTEs) hired with set-aside funds including benefits, costs allocated as a percent of personal services, and other related costs.

Continue our contract with the Rural Water Association of Utah (RWAU) to implement portions of the expanded operator certification, wellhead protection and capacity development programs. RWAU has also been assisting the DWSRF program with capacity development outreach program.

Table 8 Set-Aside and State match Requests

TABLE 8 SET-ASIDE AND STATE MATCH REQUESTS				
ACTIVITY				TOTAL
Loan Fund & 20% State Match Requirement	20DA	8,093,360	2,202,200	10,295,560
4% Administrative Set-Aside max =	20DD	440,440	4%	
Plus $ from prior grant years reserve (see Table 9)				440,440
2% Small Sys.Tech. Asst. max =	20DE	220,220	2%	
Less $ whilch will be added to reserve bank (See Table 9)		(110,220)		110,000
10% State Program Set-Aside max =	20DF	1,101,100		
PWS Supervision		1,031,100	10.0%	
Plus/(less) reserves from prior grants		0	-10.0%	
Capacity Development Oversight		30,000	0.0%	
Source Water Protection		40,000	0.0%	
Operator Certification		0	0.0%	
TOTAL State Program Set-Aside		1,101,100	9.6%	1,101,100
15% Local Assistance Set-Aside max=	20DG	1,651,650		
Local Assistance and			0.0%	
Capacity Development Outreach		1,101,100	10.0%	
Source Water Assessment		0	0.0%	
Wellhead Protection		165,000	1.5%	
TOTAL Local Assistance Set-Aside		1,266,100	11.5%	1,266,100
TOTAL CAPITALIZATION GRANT =		11,011,000	2,202,200	13,213,200

Table 9 Set-Aside Reserves

Table 9 Set-Aside Reserve after grant year 2020				
Reserves	Corrected Beg Reserve Balance	changes to 2019 IUP Reserve Bal	grant year 2020	End Balance
4% Administrative Fund	838,920	(56,894)	-	782,026
2% Small System Tech Assistance	302,080	(397)	110,220	411,903
10% State Program	805,000	230,788	-	1,035,788
TOTAL	1,946,000	173,497	110,220	2,229,717

Set-aside requests and intended use

Administration set-aside

The calculation for the four percent administrative set-aside in accordance with the 2016 WIIN law, consists of an amount equal to the sum of any state fees collected (i.e. Loan Origination Fees) plus the greatest one of three options: 1. $400,000, 2. 1/5% of the current fund value if the fund has been audited from an outside agency (DDW's fund is not audited from an outside agency) or 3. Four percent of all grants awarded to the fund under this section for the fiscal year ($11,011,000 x 4% = $440,440).

Of the three options, DDW chooses option three of $440,440 for the four percent administration set-aside. The administrative set-aside also has reserve available of $839,920 accumulated from previous grant years (1997-2018) which have been reserved for future use. DDW does intend to use the $440,440 for the upcoming year of 2021. With amended changes to the 2019 IUP were an additional $56,894 will be requested for this category of set asides the total reserve account will have a balance of $782,026 in the account for future use (beg reserve balance of $839,920 subtract $56,894) as illustrated on Table 9. DDW anticipates having some carry-over funds available from grant year 2020 to provide adequate funding for fiscal year 2021.

The administration set-aside will fund five to six full-time equivalents (FTEs) positions to operate the program in SFY 2021. The budget estimate will fund salary, benefits, office space, equipment, travel, training, supplies, and an indirect allocation for SFY 2021.

State Programs set-aside

The state programs set-aside total amount request is $1,101,100. DDW is requesting the maximum amount (10% x $11,011,000) divided into the sub-categories as listed in Table 8. The sub-categories include PWS Supervision, Capacity Development, and Source Protection. In the past, DDW has requested a subcategory of funding for its Operator Certification Program. DDW has increased the Operator Certification and the Cross Connection fees and is working toward both programs being self-sufficient by fee revenue collected for each program, respectively. Budgeting, disbursements and draws are also accounted for by sub-categories. DDW does intend to use the $1,101,100 for the upcoming year of 2021. DDW discovered additional 10% set-aside reserves in the amount of $230,788 which will be added to the reserve amount. Between grant years 1997 to and including 2008 the 10% set-aside had not been previously calculated or reserved from this set aside. The total reserve account will have a balance of $1,035,788 (beg reserve balance of $805,000 plus $230,788) left in the account for future use as illustrated on Table 9.

The WIIN Act of 2016 removed the dollar for dollar match requirement for the 10% set-aside on any grant awarded after December 16, 2016. DDW is in the process of submitting final close-out forms from all grants prior to the WIIN Act.

PWS Supervision (augmentation) set-aside

DDW is requesting from the 2020 grant award. DDW discovered additional 10% set-aside reserves in the amount of $230,788 which will be added to the reserve amount. Between grant years 1997 to and including 2008 the 10% set-aside had not been previously calculated or reserved from this set aside. The total reserve account will have a balance of $1,035,788 (beg reserve balance of $805,000 plus $230,788) left in the account for future use as illustrated on Table 9. In addition DDW will not request any of 2020 grant award 10% set-aside to be added to the PWSS augmentation set-aside reserve.

The PWS Supervision set-aside is primarily used to support DDW's Engineering Section. Approximately six to seven engineers charge to this set-aside and two other employees for program support. Federal expenditures for SFY 2020 are estimated at $1,000,000. Additionally oversight of the PWS Supervision Program is funded from general funds and the Water Development Security Fund (state funds about $2.3 M) and $890,000 from the PWSS grant. Combined totals will also be expended for division related activities. The budget estimate will fund salary, benefits, office space, equipment, travel, training, supplies, and an indirect allocation for SFY 2021.

Engineering tasks include water system plans and specification reviews, operating permits, waivers, water treatment plant inspections, witnessing well grouting, and proactive recommendations to help water systems ensure the public receive safe drinking water. DDW's engineers also receive training to keep their skills diverse with new technologies in solving water system issues. Growth impacts in the state combined with the stricter EPA standard levels SDWA amendments and associated State and Federal regulations create a tremendous workload.

Capacity Development Program

DDW is requesting $30,000 from the 2020 grant for oversight of the capacity development program. The estimated carry-forward to SFY 2020 is $(5,000). The amount budgeted for SFY 2021 is $20,000. If expenses exceed the grant funds available in SFY 2021, a request to move funds from the PWS Supervision sub-category will be requested.

The State of Utah has statutory authority for a capacity development program (Section 19-4-104 of the Utah SDWA). Time of one FTE, as needed, will oversee and maintain the program. The Division is current with all reports due to the Governor and USEPA. The Division will add the language to encourage the development of technical, managerial, financial and an asset management plans to the Governor's Triennial Report as required in the Amendments in America's Water Infrastructure Act (AWIA) of 2018.

Operator Certification Program

The State has an Operator Certification program that has been mandatory since 1985. Prior to 1997 the program required community water systems serving more than 800 population and any public water systems treating surface water to have a certified operator. The statutory authority to reduce the threshold population from 800 to 25 was enacted by the 1997 Legislature. The Safe

Drinking Water Act requires all community and non-transient, non-community water systems and all public water systems that treat surface water to have a certified operator.

USEPA published final Guidance (EPA-816-R-98-006) in July 1998 establishing national policy regarding the implementation of the operator certification related provisions of the SDWA including how EPA would assess State operator certification program for purposes of making withholding decisions.

In 2019, a 50% increase was legislated for various fees in the Operator Certification program. The Operator Certification Program requires an operator to pay a fee to become certified. The fees received in FY 2020 are reasonably close to covering the expenses being incurred in the Operator Certification Program. It is the Division's intention for the Operator Certification and Cross Connection Programs to be self-funded by the fees paid by the water systems and/or operators.

Source Protection Administration

The SDWA Amendments of 1996 require each state to maintain a source water quality assessment program for all public water systems. The time of less than one FTE is dedicated to developing, implementing, and coordinating this program.

We are requesting $40,000 from the 2020 grant for the source water program. An estimated amount of $30,000 will be available to be carry forward to FY 2021. Estimate expenditures for FY 2021 were budgeted at $70,000. The budget estimate will fund salary, benefits, office space, equipment, travel, training, supplies, and an indirect allocation for SFY 2021.

Small Systems Technical Assistance

DDW is requesting $110,000 ($11,011,000 x 2% less $110,220 which will be added to the reserve bank on Table 9) for the 2% set-aside. A carry forward balance of approximately $80,000 will be available for 2021 with estimated expenses of $177,000. This set-aside is only used to fund our contract with the Rural Water Association of Utah (RWAU) which is primarily assisting public water systems serving 10,000 people or fewer (section 1452(g) (2)) to maintain viable water systems.

DDW created an energy cost saving handbook in 2016 which provided water system operators and managers with multiple strategies to reduce their energy costs. Some water systems have identified energy efficiency improvement opportunities in both operations and infrastructure. RWAU is encouraging all drinking water systems to investigate energy efficiency options to identify cost savings where possible. The small and very small water systems are often unable to take full advantage of such initiatives due to lack of knowledge, lack of money, and/or lack of proper equipment.

RWAU is a critical partner assisting DDW in responding to water system inquiries and taking action to assist water systems to be technically, managerially, and financially sound.
Such assistance includes, but not limited to:

a. Water rates & fees analysis
b. Applying for and obtaining funding for projects
c. Locating and securing consulting engineering services
d. Developing ordinances, resolutions and by-laws
e. System security
f. Preparing management, conservation, financial, capital improvement, sampling, and cross connection control plans
g. Train system boards and or councils in subjects related to capacity development
h. Perform Financial/Management audits with water systems as requested by the system or DDW
i. Encouraging and assisting public water systems listed on the ETT (enforcement targeting tool) with application for financial assistance where such assistance would help the water system return to compliance with drinking water rules
j. Assisting water systems which have borrowed funds from the Drinking Water Board during the construction and start-up phases of the project

Local Assistance, Capacity Development, Source Water Assessment, Wellhead Protection and Other State Programs (15% set-aside)

We are requesting $1,266,100 which is approximately 11.4% of the grant total. A carry forward balance of approximately $490,000 is anticipated for FY 2020, making a total estimated balance available of $1,756,100 for this set-aside. The FY 2020 budget was estimated at $1,279,100. It is divided into two sub-categories, local assistance/capacity development outreach and wellhead protection. Budgeting, disbursements, and draws are each accounted for by the two sub-categories separately.

Capacity Development Out-reach/Local Assistance with Public Water Systems Sub-Category

We are requesting $1,101,100 from the 2020 grant for capacity development, out-reach, local assistance. (10% of 11,011,000 the maximum allowed in one subcategory.) The estimated carry-forward to FY 2021 will be about $400,000 for a combined amount available of $1,501,100. The amount budgeted for FY 2021 is $1,100,000.

Some of the activities DDW employees will provide and charge to this set-aside include the following:

1. Math calculations to determine dosing, volumes, flows and horsepower, etc.
2. Minor repairs on pumps, as well as, knowledge of pump curves, monitory well levels, troubleshooting, hydraulics, motor maintenance and metering, etc.
3. Teach proper techniques for unidirectional flushing of fire hydrants, pipeline maintenance, pressure zones, valve maintenance (exercising and annual maintenance, instrumentation, tank inspections, and distribution system and treatment plants.
4. Proper disinfection techniques, and correct handling and use of various disinfection chemicals, properties of chemicals, emergency disinfection techniques, and monitoring of residuals.
5. Safety- proper use of equipment and how to follow proper procedures, MSDS.

6. Security- proper procedures to interact with law enforcement and mitigation.
7. Provide technical training on existing and new rules, proper sampling techniques, proper monitoring, and an understanding of sample results, reporting procedures.
8. Emergency Response- training on the Incident Command System (ICS) and how they would fit into that system. Train systems with the National Incident Management System (NIMS), response protocols, mitigation, setting-up table top exercises, maintaining a plan, flushing and disinfection.
9. Cross Connection Control assistance to help the water system properly assemble, avoid hazards, resolve physical deficiencies during a sanitary survey and follow State guidelines on managing a program.

DDW understands all charges by employees need to have direct interaction with the water systems with some form of training or technical assistance. Rural Water Association of Utah also has some tasks relating to direct interaction with the water systems and has been allocated $65,000 in their contract for this specific purpose.

Wellhead Protection Sub-Category

DDW is requesting $165,000 in funding for this category from the 2020 grant. DDW estimates carry forward funds of $90,000 will be available in fiscal year 2020. Total available funds in FY 2021 should be about $250,000. The budgeted expenses of $210,000 for SFY 2021 will cover expenses for salary, benefits, office space, equipment, interactive map upgrades and an indirect allocation. One employee will oversee the implementation and maintenance of GIS activities and will prepare ground water source protection plan updates for the water systems as review is required. This sub-category budget will continue to cover expenses to address a backlog of wellheads that need to be entered and/or updated. Maintenance of the source protection zone geo-database is an on-going project as new water sources are developed and existing source protection zones are modified. An ongoing nitrate study is also funded and conducted by the Division of Water Quality.

Attachments

Attorney General Enabling Legislation Opinion Letter for FY2020 base program

Organization Chart

Utah Administrative Code Rule R309-705

The Rule for Projects Receiving Assistance from the Federal DWSRF can be found at the website http://www.rules.utah.gov/publicat/code/r309/r309-705.htm

Construction Loan Program information is available at the website http://www.deq.utah.gov/FeesGrants/funds/drinkingwater/federal_srf.htm#loans

Agenda Item 7(F)(1)(a)

Scipio Town
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE

APPLICANT'S REQUEST:

Scipio Town is requesting funding assistance in the amount of $524,000 to drill a new well, install a transmission line, distribution line and a master meter.

STAFF COMMENTS:

The local MAGI for the Scipio Town is $56,900 which is 119% of the State MAGI and the current average water bill is $25.91 per month, which is 0.55% of the local MAGI. Scipio Town does not qualify as a disadvantaged community based on their MAGI and their current rates.
The total project cost is $1,240,000. Scipio Town will be receiving a grant from USDA RD in the amount of $686,000 for this project.

Option #	Description	Repayable Loan Amount	Interest Rate	Term	Monthly Water Rate	% Local MAGI
1	Full Loan	$ 524,000	3.00%	20 yrs	$39.51	0.83%

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of $524,000 at 3.00% interest for 20. Conditions include they resolve all issues on their compliance report.

APPLICANT'S LOCATION:

Scipio Town is located in Millard County approximately 25 miles north of Fillmore, UT.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

Scipio Town has a project consisting of a new well. 1,900 feet of 8-inch transmission line, 2,100 feet of distribution line and a master meter.

POPULATION GROWTH:

	Year	Population	Connections
Current:	2020	354	186
	2025	403	322
	2030	442	355
	2035	491	392
Projected:	2040	540	433

COST ESTIMATE:

Legal/Bonding/Admin	$ 31,402
Engineering – CMS (5%)	$ 184,653
Construction – Source	$ 698,275
Construction - Lines	$ 201,175
Contingency (~ 10%)	$ 89,255
Loan Origination Fee	$ 5,240
Total	**$ 1,210,000**

COST ALLOCATION:

Funding Source	Cost Sharing	Percent of Project
DWB – Loan	$ 524,000	43%
USDA – RD	$ 686,000	57%
	$ 1,210,000	100%

IMPLEMENTATION SCHEDULE:

DWB Funding Authorization:	April, 2020
Complete Design:	April 2020
Plan Approval:	May 2020
Advertise for Bids:	June 2020
Begin Construction:	August 2020
Complete Construction:	October 2020

IPS SUMMARY:

Code	Description	Physical Facilities	Quality & Monitoring	Significant Deficiency Violations
SP04	WS001 System Not Current on all DWSP Updates	5		
	Failure to monitor chlorine residuals - January		15	
	Failure to monitor chlorine residuals - February		15	
	Failure to monitor chlorine residuals - March		15	
	Total = 50	5	45	0

CONTACT INFORMATION:

APPLICANT:	Scipio Town PO Box 560066 Scipio, Utah 84656 435-253-0031
PRESIDING OFFICIAL	Dallen Quarenberg, Water Superintendent PO Box 560066 Scipio, Utah 84656 435-201-2299 Dquarnberg42@gmail.com
CONSULTING ENGINEER:	Kelly Chappell, P.E. Ensign Engineering 225 North 100 East Richfield, Utah 84701 385-315-8983 kchappell@ensignutah.com
RECORDER:	Rebecca Bond 435-253-0031 Sipiotown1859@gmail.com
BOND COUNSEL:	Richard Chamberlain Chamberlain & Associates 225 North 100 East Richfield, Utah 84701 435-896-4461 Rchamberlain13@gmail.com

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Scipio
COUNTY: Millard
PROJECT DESCRIPTION: New well, trans line, dist line

FUNDING SOURCE: State SRF

100 % Loan & 0 % Grant

ESTIMATED POPULATION:	327	NO. OF CONNECTIONS:	186 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$25.91 *			PROJECT TOTAL:	$1,210,000
CURRENT % OF AGI:	0.55%	FINANCIAL PTS:	13	LOAN AMOUNT:	$524,000
ESTIMATED MEDIAN AGI:	$56,900			GRANT AMOUNT:	$0
STATE AGI:	$48,000			TOTAL REQUEST:	$524,000
SYSTEM % OF STATE AGI:	119%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.58%		3.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.58%		3.00%
REQUIRED DEBT SERVICE:	$26,200.00	$37,136.59		$35,221.03
*PARTIAL COVERAGE (15%):	$3,930.00	$5,570.49		$5,283.15
*ADD. COVERAGE AND RESERVE (10%):	$2,620.00	$3,713.66		$3,522.10
ANNUAL NEW DEBT PER CONNECTION:	$176.08	$249.57		$236.70
O & M + FUNDED DEPRECIATION:	$44,164.00	$44,164.00		$44,164.00
OTHER DEBT + COVERAGE:	$0.00	$0.00		$0.00
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$237.44	$237.44		$237.44
TOTAL SYSTEM EXPENSES	$76,914.00	$90,584.74		$88,190.29
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$34.46	$40.58		$39.51
% OF ADJUSTED GROSS INCOME:	0.73%	0.86%		0.83%

* Equivalent Residential Connections

Agenda Item 7(F)(2)(a)

Diamond Valley Acres Water Company
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE

APPLICANT'S REQUEST:

On February 28, 2019, Diamond Valley Acres Water Company was authorized a federal loan in the amount of $235,000 to equip an existing well and connect it to the distribution system.

STAFF COMMENTS:

On March 13, 2020, staff received an e-mail from Meagan Barnum, Business Manager for Diamond Valley Acres Water Company indicating that they have decided not to go ahead with the loan. They will complete the project using their own funds.

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board de-authorize a loan of **$235,000 with a Hardship Grant Assessment Fee of 2.5% for 20 years** to Diamond Valley Acres Water Company.

Skye Sieber <sasieber@utah.gov>

Diamond Valley Acres Federal SRF #3F1706 - Loan Closing Checklist

Diamond Valley Acres Water Company <dvawc1@gmail.com> Fri, Mar 13, 2020 at 3:55 PM
To: Skye Sieber <sasieber@utah.gov>

We decided not to go ahead with the loan. Thank you so much for all of your time.

Maegan
[Quoted text hidden]
--

Business Manager
Diamond Valley Acres Water Company
435.268.1110 Ext. 81 - Email - Website

Agenda Item 7(F)(2)(b)

San Juan Spanish Valley SSD
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

San Juan Spanish Valley Special Service District (SSD) is requesting supplemental funding to pay for cost overruns on their newly constructed culinary water system. Prior to construction, bids came in slightly higher than anticipated. At that time, the county did not want to go back to the funding agencies for assistance and opted to handle the anticipated cost overruns themselves. Construction was substantially completed in August 2019. Today, San Juan County has a new public works director and county administrator and they prefer to go back to DWB and CIB to request supplemental funding in order to close out the project.

The total amount of estimated funding needed is $600,000. At the May 7, 2020 CIB meeting, the SSD's request for $300,000 was denied and they were asked to request the full amount from Drinking Water. They scored 25.3 points on the project priority list.

STAFF COMMENTS:

In 2016, the Drinking Water Board authorized a loan of $2,550,000 at 0% interest for 30 years with $765,000 in principal forgiveness to the SSD to construct a new culinary water system for 230 existing homes. The district is still in the process of connecting users to the system and has just started to collect monthly user and impact fees.

The local MAGI for San Juan County is currently $44,300, which is 92% of the State MAGI and the average water bill is estimated at $47.00/ERC. A second loan with the same terms and conditions as their first loan would result in an average water bill of approximately $74.93/ERC which is 2.03% of their local MAGI. Based on this after loan water bill, the SSD qualifies to be considered for additional subsidization. The following options were evaluated:

	Total Funding	Principal Forgiveness	Loan	Term	Interest Rate	Water Bill	% Local MAGI
Option 1	$600,000	$180,000	$420,000	30 yrs	0%	$74.93	2.03%
Option 2	$600,000	0	$600,000	30 yrs	0%	$77.43	2.10%

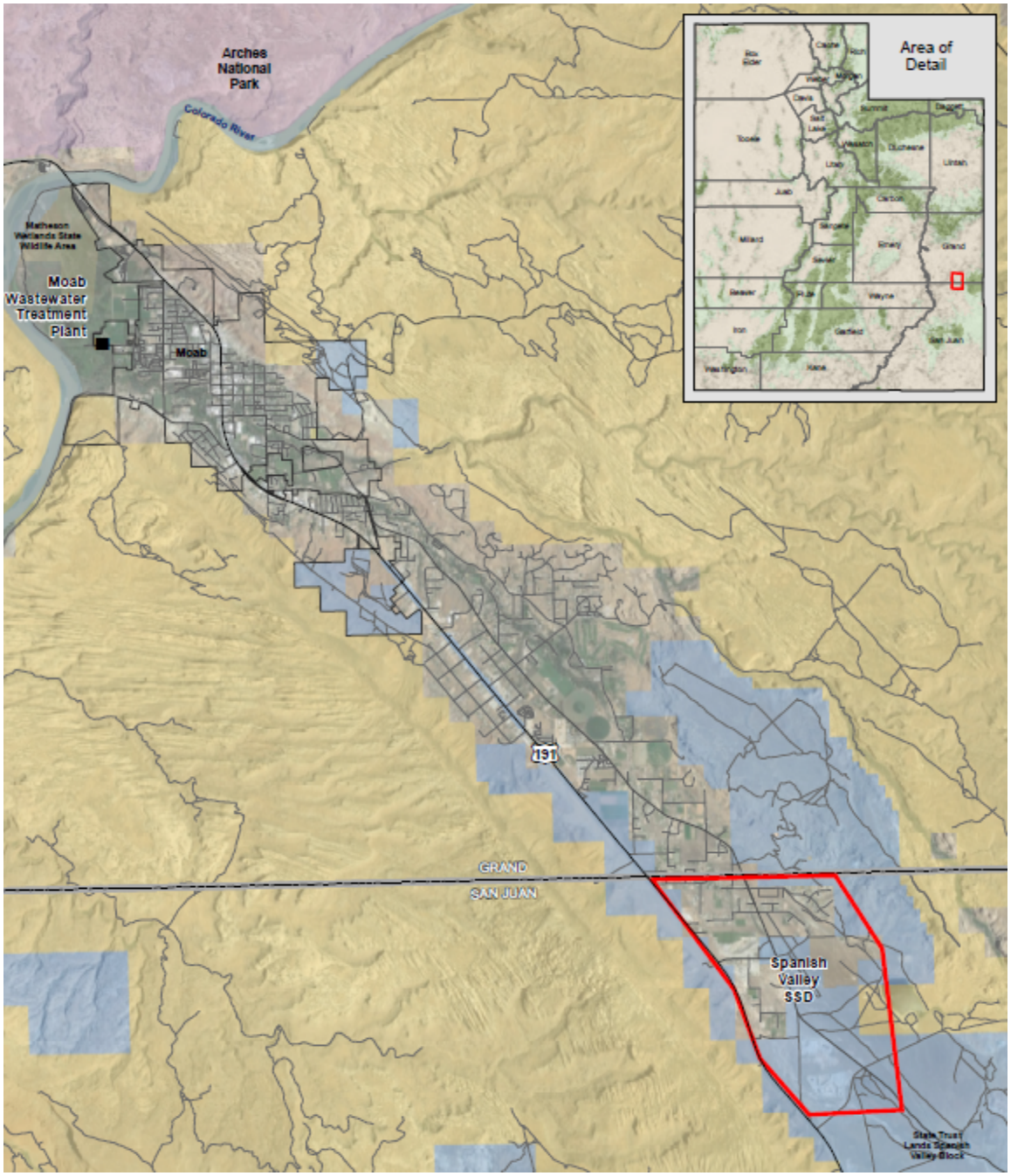
FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of $600,000 at 0% interest for 30 years with $180,000 in principal forgiveness to the San Juan Spanish Valley SSD.

APPLICANT'S LOCATION:

San Juan Spanish Valley SSD is located in San Juan County, 9 miles south of Moab.

MAP OF APPLICANT'S LOCATION:



PROJECT DESCRIPTION:

This project is a supplemental funding request to cover the cost overruns from construction of San Juan Spanish Valley SSD's new culinary water system. Construction was substantially completed in August 2019 and includes a new well, 500,000-gallon water storage tank, 3,000 feet of distribution piping and several valve stations.

POPULATION GROWTH:

Based on the Master Plan prepared for the San Juan Spanish Valley SSD, a growth rate of approximately 2% per year is expected over the next 20 years. The new system has been designed with sufficient capacity to serve reasonable growth for the next 30 years.

	Year	Population	ERC
Current:	2020	575	229
Projected:	2040	854	340

IMPLEMENTATION SCHEDULE:

Loan Closing:	July 2020

COST ESTIMATE:

DDW Loan Origination Fee	$3,000
Rights of Way & Easements	$22,000
Engineering/Professional Services	$203,000
Construction- Well	$168,000
Construction- Water Lines	$456,000
Construction- Storage Tank	$315,000
Road Repairs/Mobilization	($259,000)
Original Contingency	($358,000)
Other Legal/Bonding/Final Closeout	$50,000
Total Project Cost	**$600,000**

COST ALLOCATION:

The anticipated cost allocation for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB Loan (0%, 30-yrs)	$420,000	70%
DWB Grant	$180,000	30%
Total Amount	$600,000	100%

APPLICANT:	San Juan Spanish Valley SSD P.O. Box 188 Monticello, UT 84535 Telephone: (435) 587-3830
PRESIDING OFFICIAL or CONTACT PERSON:	Dawn Sanchez Administrative Contact P.O. Box 9 Monticello, UT 84535 Telephone: (435) 459-4121 spanishvalleywater@gmail.com
CONSULTING ENGINEER:	Daniel Hawley Jones and DeMille Engineering 1535 South 100 West Richfield, UT 84701 (435) 896-8266 Daniel.h@jonesanddemille.com
BOND ATTORNEY:	Richard Chamberlain Chamberlain & Associates (435) 896-4461 Rchamberlain13@gmail.com
TREASURER/RECORDER:	David Carpenter (435) 587-3228 docarpenter@sanjuancounty.org

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: San Juan Spanish Valley
COUNTY: San Juan
PROJECT DESCRIPTION: Distribution lines

FUNDING SOURCE: Federal SRF

70 % Loan & 30 % P.F.

ESTIMATED POPULATION:	575	NO. OF CONNECTIONS:	230 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$47.00 *			PROJECT TOTAL:	$600,000
CURRENT % OF AGI:	1.27%	FINANCIAL PTS:	39	LOAN AMOUNT:	$420,000
ESTIMATED MEDIAN AGI:	$44,300			PRINC. FORGIVE.:	$180,000
STATE AGI:	$48,000			TOTAL REQUEST:	$600,000
SYSTEM % OF STATE AGI:	92%				

	@ ZERO % RATE 0%	@ RBBI MKT RATE 3.58%		AFTER REPAYMENT PENALTY & POINTS 0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	30	30		30
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.58%		0.00%
REQUIRED DEBT SERVICE:	$14,000.00	$23,065.42		$14,000.00
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$1,400.00	$2,306.54		$1,400.00
ANNUAL NEW DEBT PER CONNECTION:	$66.96	$110.31		$66.96
O & M + FUNDED DEPRECIATION:	$70,250.00	$70,250.00		$70,250.00
OTHER DEBT + COVERAGE:	$112,437.50	$112,437.50		$112,437.50
REPLACEMENT RESERVE ACCOUNT:	$8,710.00	$9,163.27		$8,710.00
ANNUAL EXPENSES PER CONNECTION:	$832.16	$834.13		$832.16
TOTAL SYSTEM EXPENSES	$206,797.50	$217,222.73		$206,797.50
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$74.93	$78.70		$74.93
% OF ADJUSTED GROSS INCOME:	2.03%	2.13%		2.03%

* Equivalent Residential Connections

Agenda Item 7(F)(2)(c)

Willow Creek Water Company
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION LOAN

APPLICANT'S REQUEST:

Willow Creek Water Company is requesting financial assistance in the amount of $123,000. Their project includes a backup generator, meters and a tank mixer.

STAFF COMMENTS:

The local MAGI for Willow Creek Water Company is approximately $56,100 (117% of the state MAGI), their after project water bill at a full loan will be $84.61 which is 1.81% of the local MAGI.

Option #	Description	Repayable Loan Amount	Interest Rate	Term	Grant or Principal Forgiveness	Monthly Water Rate	% Local MAGI
1	Full Loan	$123,000	1.00%	20 yrs	0	$84.61	1.81 %

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The Drinking Water Board authorize a loan of $123,000 at 1.0% interest for 20 years. Conditions include that they resolve all issues on their compliance report.

APPLICANT'S LOCATION:

Willow Creek Water Company is located in Box Elder County approximately 13 miles North East of Tremonton.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

Their project includes a backup generator, replacement culinary water meters and a submersible mixer for storage tank.

POPULATION GROWTH:

Projected populations and number of connections are shown in the table below: These are based on a 1.0% growth rate.

Year	Population	Connections
2020	260	67
2025	260	67
2030	262	68
2035	262	68
2040	264	69

IMPLEMENTATION SCHEDULE:

DWB Funding Authorization:	June 2020
Complete Design:	July 2020
Plan Approval:	July 2020
Begin Construction:	Aug 2020
Complete Construction:	Sep 2020

COST ESTIMATE:

Legal – Bonding, Admin	$1,000
Engineering- Plan, Design, CMS	$9,000
Construction – generator	$62,000
Construction – mixer & meters	$51,000
Total Project Cost	**$123,000**

COST ALLOCATION:

The cost allocation proposed for the project is shown below:

Funding Source	Cost Sharing	Percent of Project
DWB Loan	$123,000	100%
Total	$123,000	100%

IPS SUMMARY:

Code	Description	Physical Facilities	Quality & Monitoring	Significant Deficiency Violations
S033	COM SYSTEM WITHOUT NATURALLY FLOWING SOURCES LACKS BACKUP POWER FOR AT LEAST ONE WATER SOURCE	25		
V035	STORAGE TANK VENT LARGER THAN 6 INCHES IN DIAMETER LACKS PROTECTIVE SCREEN	5		
DS001	45 FAILURE ADDRESS DEFICIENCY (GWR)			50
	RTCR		25	
	Total = 105	**30**	**25**	**50**

CONTACT INFORMATION:

APPLICANT:	Willow Creek Water Company 14005 N 400 W Beaver Dam, Utah 84306 435-731-9265
PRESIDING OFFICIAL & CONTACT PERSON:	Troy Cooper Vice President 8045 W 1900 N Petersboro, Utah 84325 435-557-1901 Troyacooper2@gmail.com
CONSULTING ENGINEER:	Eric Dursteler Forsgren & Associates 95 W 100 S ste 115 Logan, Utah 84321 435-227-0333 edursteler@forsgren.com
RECORDER:	Craig Veibell 435-452-1907
BOND COUNSEL:	

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Willow Creek Water Company
COUNTY: Box Elder
PROJECT DESCRIPTION: Generator, meters, mixer

FUNDING SOURCE: Federal SRF

100 % Loan & 0 % P.F.

ESTIMATED POPULATION:	260	NO. OF CONNECTIONS:	67 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$82.94 *			PROJECT TOTAL:	$123,000
CURRENT % OF AGI:	1.77%	FINANCIAL PTS:	31	LOAN AMOUNT:	$123,000
ESTIMATED MEDIAN AGI:	$56,100			PRINC. FORGIVE.:	$0
STATE AGI:	$48,000			TOTAL REQUEST:	$123,000
SYSTEM % OF STATE AGI:	117%				

	@ ZERO % RATE 0%	$123,000 FULL LOAN 3.51%		AFTER REPAYMENT PENALTY & POINTS 1.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	20	20		20
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.51%		1.00%
REQUIRED DEBT SERVICE:	$6,150.00	$8,662.25		$6,816.08
*PARTIAL COVERAGE (15%):	$0.00	$0.00		$0.00
*ADD. COVERAGE AND RESERVE (10%):	$615.00	$866.22		$681.61
ANNUAL NEW DEBT PER CONNECTION:	$100.97	$142.22		$111.91
O & M + FUNDED DEPRECIATION:	$47,414.00	$47,414.00		$47,414.00
OTHER DEBT + COVERAGE:	$10,000.00	$10,000.00		$10,000.00
REPLACEMENT RESERVE ACCOUNT:	$3,078.20	$3,203.81		$3,111.50
ANNUAL EXPENSES PER CONNECTION:	$902.87	$904.74		$903.37
TOTAL SYSTEM EXPENSES	$67,257.20	$70,146.28		$68,023.20
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$83.65	$87.25		$84.61
% OF ADJUSTED GROSS INCOME:	1.79%	1.87%		1.81%

$0.00

Agenda Item 7(F)(2)(d)

Sigurd Town
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD
BOARD PACKET FOR CONSTRUCTION ASSISTANCE

APPLICANT'S REQUEST:

Sigurd Town is requesting $2, 300,000 in financial assistance for a spring redevelopment with associated piping, 300,000 gallon tank and a chlorinator. Sigurd Town is contributing $100,000 to the project for a total project cost of $2,400,000.

STAFF COMMENTS:

The local 2018 MAGI for Sigurd Town is $35,100 which is 73% of the State MAGI of $48,000. The average water bill is $38.57 per month, which is 1.32% of the local MAGI. The after project water bill would be $94.44, which is 3.15% of the local MAGI. Therefore the water system does qualify for subsidy.

	Option	**Loan**	**%/fee**	**Term**	**P.F.**	**Repayable amount**	**% of local MAGI**	**Water bill**
1	Loan	$2,300,000	0%	20 yrs	$0	$2,300,000	3.36%	$100.78
2	70/30	$2,300,000	0%	30 yrs	$680,000	$1,620,000	2.44%	$73.15
3	70/30	$2,300,000	0%	40 yrs	$680,000	$1,620,000	2.23%	$67.04
4	60/40	$2,300,000	0%	30 yrs	$910,000	$1,390,000	2.32%	$69.68
5	60/40	$2,300,000	0%	40 yrs	$910,000	$1,390,000	2.15%	$64.44

FINANCIAL ASSISTANCE COMMITTEE RECOMMENDATION:

The financial assistance committee did not make a recommendation to include the entire Board in the discussion.

APPLICANT'S LOCATION:

Sigurd Town is located in Sevier County between Salina and Richfield.

MAP OF APPLICANT'S LOCATION:

PROJECT DESCRIPTION:

Sigurd Town's project consists of a spring redevelopment, developing a well site, 16,500 feet of spring line, a 300,000 gallon concrete tank, a chlorinator and chlorination building. Sigurd Town is planning a number of Town Council meetings to discuss the project and entertain public comments to show support of the project.

POPULATION GROWTH:

Year	Sigurd Population	Equivalent Connections
2019	455	190
2025	482	207
2030	502	215
2035	520	225
2040	539	234

IMPLEMENTATION SCHEDULE:

DWB Funding Authorization:	June 2020
Final public hearings	February 2020
Commence design	April 2020
Complete design	July 2020
Receive DDW plan approval	August 2020
Advertise for bids	September 2020
Loan closing	October 2020
Begin construction	October 2020
Complete construction	May 2021
Receive DDW operating permit	June 2021

COST ESTIMATE:

Legal	$ 17,500
Engineering: planning and design	$ 210,000
Engineering: CMS	$ 100,000
Construction: source and storage	$1,315,000
Construction: treatment, water lines & mobilization	$ 483,000
Land acquisition	$ 30,000
Contingency	$144,000
Total	$ 2,300,000

COST ALLOCATION:

The cost allocation proposed for the project is shown below.

Funding Source	Cost Sharing	Percent of Project
DWB loan	$ 1,390,000	58%
DWB principal forgiveness	$ 910,000	38%
Local Contribution	$ 100,000	4%
	$ 2,300,000	100%

IPS SUMMARY:

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

APPLICANT:	Sigurd Town PO Box 570064 Sigurd, Utah 84657
PRESIDING OFFICIAL & CONTACT PERSON:	Kelly Alvey Mayor PO Box 570064 Sigurd, Utah 84657 435-896-3670 sigurdtown@cut.net
TREASURER/RECORDER:	Vicki Houston PO Box 570064 Sigurd, Utah 84657 435-896-4645 sigurdtown@cut.net
CONSULTING ENGINEER:	Kelly Chappell Ensign Engineering 255 North 100 East Sandy, Utah 84754 435-896-2983 kchappell@ensignutah.com
BOND COUNSEL:	Richard Chamberlain Chamberlain Associates 225 North 100 East Richfield, Utah 84701 435-896-4461

DRINKING WATER BOARD FINANCIAL ASSISTANCE EVALUATION

SYSTEM NAME: Sigurd
COUNTY: Sevier
PROJECT DESCRIPTION: Spring redevelop, 300,000 gal tank, chlorinator

FUNDING SOURCE: Federal SRF

70 % Loan & 30 % P.F.

ESTIMATED POPULATION:	455	NO. OF CONNECTIONS:	230 *	SYSTEM RATING:	APPROVED
CURRENT AVG WATER BILL:	$38.57 *			PROJECT TOTAL:	$2,400,000
CURRENT % OF AGI:	1.29%	FINANCIAL PTS:	54	LOAN AMOUNT:	$1,620,000
ESTIMATED MEDIAN AGI:	$35,999			PRINC. FORGIVE.:	$680,000
STATE AGI:	$45,895			TOTAL REQUEST:	$2,300,000
SYSTEM % OF STATE AGI:	78%				

	@ ZERO % RATE	@ RBBI MKT RATE		AFTER REPAYMENT PENALTY & POINTS
	0%	3.92%		0.00%
SYSTEM				
ASSUMED LENGTH OF DEBT, YRS:	40	40		40
ASSUMED NET EFFECTIVE INT. RATE:	0.00%	3.92%		0.00%
REQUIRED DEBT SERVICE:	$40,500.00	$80,876.22		$40,500.00
*PARTIAL COVERAGE (15%):	$6,075.00	$12,131.43		$6,075.00
*ADD. COVERAGE AND RESERVE (10%):	$4,050.00	$8,087.62		$4,050.00
ANNUAL NEW DEBT PER CONNECTION:	$220.11	$439.54		$220.11
O & M + FUNDED DEPRECIATION:	$117,557.00	$117,557.00		$117,557.00
OTHER DEBT + COVERAGE:	$16,846.25	$16,846.25		$16,846.25
REPLACEMENT RESERVE ACCOUNT:	$0.00	$0.00		$0.00
ANNUAL EXPENSES PER CONNECTION:	$584.36	$584.36		$584.36
TOTAL SYSTEM EXPENSES	$185,028.25	$235,498.53		$185,028.25
TAX REVENUE:	$0.00	$0.00		$0.00
RESIDENCE				
MONTHLY NEEDED WATER BILL:	$67.04	$85.33		$67.04
% OF ADJUSTED GROSS INCOME:	2.23%	2.84%		2.23%

* Equivalent Residential Connections

Agenda Item 7(G)

DEER CREEK INTAKE PROJECT | Safeguarding Water Securing Our Future

PROVO RIVER WATER USERS ASSOCIATION

Safeguarding Water

Securing Our Future

Deer Creek Dam & Reservoir

Supplies Water to Over 1.6 Million People

Vital to Utah's Economy

One of the Most Utilized Recreational Ecosystems in Utah

1 Out of every 2 Utahns
Count on This Vital Water Supply

80-Year Old
Intake & Guard Gates

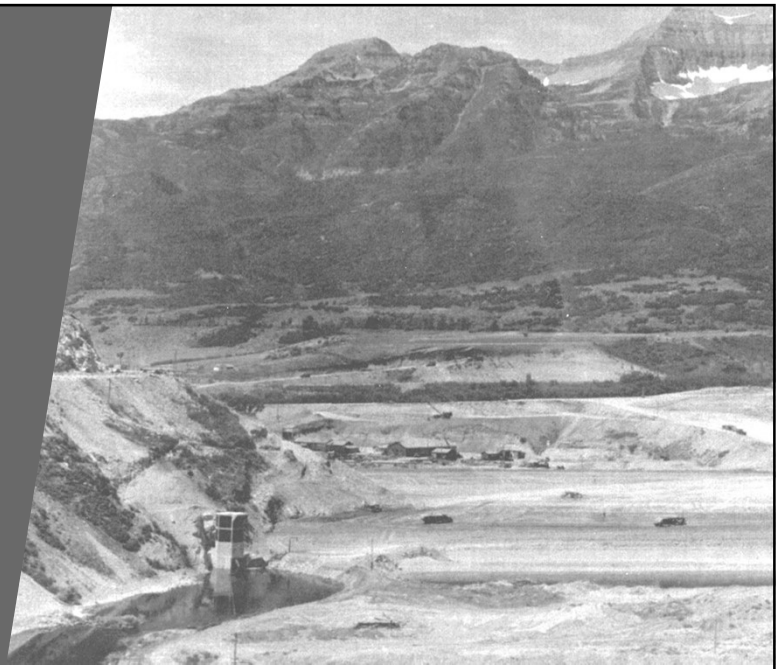
153,000 AF
Of Water Storage

75% Increase
In Population Served By 2060

Planning

2018
Preliminary Study

- Aging Infrastructure
- Invasive Species Mitigation
- Water Quality
- Construction Scheduling
- Coordination with State Parks



Water Supply Concerns

Aging Infrastructure

- Intake & guard gates built 80 years ago
- End of useful life reached
- Manufacturer parts no longer available
- Performing maintenance is challenging without having to drain the reservoir

Invasive Species Threat

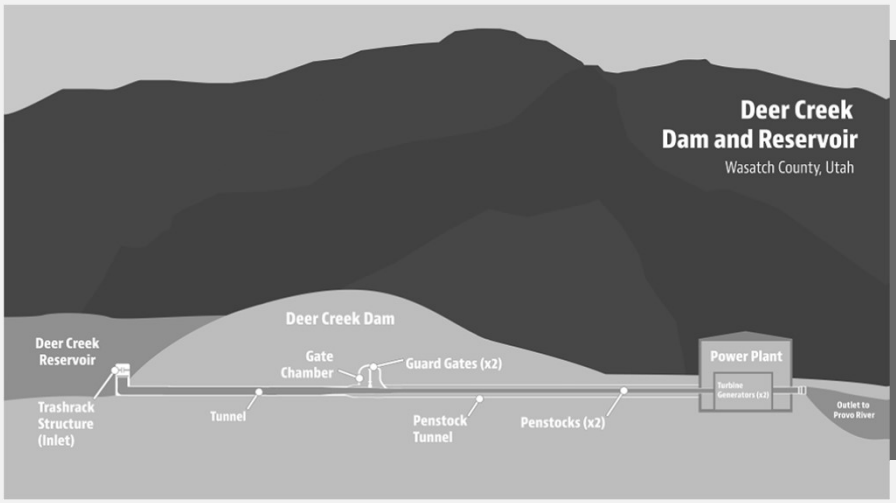
- Imminent threat from Quagga mussels with no effective defense against them
- Would render intake and guard gates useless or require extensive maintenance
- Negative impacts on reservoir ecosystem

Innovative Solution, Uninterrupted Water Supply

Innovative design and construction method replaces intake and guard gates WITHOUT draining reservoir

State-of-the-art defense mechanisms against Quagga mussels with design features to improve water quality

Evaluation of Alternatives



- Guard Gate Replacement
- Modify Existing Intake Trashracks
- New Intake Tower

Underwater Construction

AE2S

- No Draining of Reservoir
- Less Impactful to Wet and Dry Water Years

Anticipated Construction Schedule

- Summer 2020
  - Geotechnical Investigation
    Preliminary Design Options
- 2020-2021
  - Design Phase
- 2022-2023
  - Construction

Community Awareness

- Educate Public & Users

CUWCD Jordanelle Intake Tower

Digging In: Project Schedule

Project began with diving the reservoir and crews are currently boring

	2018 to 2019	2020				2021				2022				2023				2024			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Study																					
Study & Report																					
Preliminary Design																					
Final Design																					
CMGC																					
Construction																					
Post-Construction																					
I&C System Services																					
Communications																					

*Project schedule is not finalized

Funding Options

- **WIFIA**
- **State of Utah**
  - Drinking Water Board
  - Water Resources Board
- **CUWCD**
- **Other Partnering Agencies**

WIFIA

Water Infrastructure Finance and Innovation Act

- **EPA program that leverages federal funds one hundred-fold**
- **$20M minimum project size**
- **WIFIA will fund up to 49% of a selected project**

Deer Creek Intake Project

Meets WIFIA Funding Criteria

- Regionally significant project.
- Area is affected by climate change and extreme weather conditions.
- $40M Multigenerational project that provides water for drinking, irrigation, and economic development.
- Funding would allow the project to start significantly sooner.
- Project design and construction protects against invasive species and reduces disruption to ecosystem.
- Project serves an area of the US with significant water issues and a population projected to increase 75% by 2060.
- Addresses 80-year old infrastructure that is reaching the end of its service life.
- Can meet cost share responsibilities.

Deer Creek Dam & Reservoir By the Numbers

1 OUT OF EVERY 2 UTAHNS
counts on this vital water supply

100,000 ACRE-FEET
of water delivered to end users every year

1.6M+ AMERICANS
will be spared from water interruption or shortages

80-YEAR OLD
intake & guard gates

$40M +/-
to construct replacement infrastructure

2022
year the Deer Creek Intake Project will be shovel ready

Safeguarding Water Securing Our Future

Agenda Item 8

Division of Drinking Water Strategic Planning Process
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD PACKET
DDW Strategic Planning Process

Table of Contents

Strategic Plan Development Process Proposal……2

Strategic Plan Development Committee Guiding Principles……...5

DDW Strategic Plan Timeline…….6

DDW SWOT Analysis 2020……7

1. This Cover Sheet
2. Handout for the Board

DRINKING WATER

April 3, 2020

Strategic Plan Development Process Proposal

Based on the SUCCESS Framework Seven Fundamentals of a High Performing Organization

Outline based on the SUCCESS Framework Seven Fundamentals of a High Performing Organization

- Develop goals and objectives using SMART
- Develop full action plans with measures and timeline
- Create a strategic planning document and publicize

- Determine available data
- Determine value of existing data
- Collect additional data/information
- Summarizing data/information

- Conduct a SWOT/SWOC analysis
- Identify theme
- Prioritize and select strategic Issues
- Identify priorities
- Develop strategies to address priorities

- Develop mission and vision statement
- Develop organizational values statements
- Communicate vision, mission and values

- Establish a strategic plan development committee involving board member, external partners, executives, and various levels of staff
- Conduct Stakeholders Analysis

- Identify formal, informal, and funding mandates
- Align strategic plan priorities and goals and objectives

Governor's Office Initiative:

SUCCESS FRAMEWORK

The SUCCESS Framework is a set of management principles designed to boost the quality and efficiency of government services with the goal of creating more value for every tax dollar invested.

These tools provide assistance in meeting the complex challenges facing government services, including increased demand, fragmentation and reduced budgets.

For more information, please visit Governor's Office of Management and Budget (GOMB) SUCCESS Framework website: https://gomb.utah.gov/operational-excellence/success-framework-introduction/

DRINKING WATER

April 3, 2020

Proposed Steps Summary

In order to aim and achieve the status of a high performing organization, the Division of Drinking Water (DDW) at the Utah Department of Environmental Quality proposes the following steps to develop, draft, and implement the next iteration of the strategic plan.

1. Laying the Foundation

- Establish a strategic plan development committee
- Conduct Stakeholders Analysis
- Determine available data
- Develop a project plan with process and timeline

2. Developing Mission, Vision and Values Statements

- Identify formal, informal, and funding mandates
- Develop mission and vision statement
- Develop organizational values statements
- Communicate vision, mission and values

3. Compiling Relevant Information - environmental scan

- Determine value of existing data
- Collect additional data/information
- Summarizing data/information

4. Analyzing Results and Select Strategic Priorities

- Conduct a SWOT/SWOC analysis
- Identify themes
- Prioritize and select strategic Issues

5. Developing the Strategic Plan with Implementation Plan

- Identify priorities
- Develop strategies to address priorities
- Develop goals and objectives
- Develop full action plans with measures and timeline
- Create a strategic planning document and publicize

6. Implementing, Monitoring and Revising as Needed

- Establish accountability
- Where it is not meeting goals - opportunities for quality improvement (QI)

Strategic Plan Development Committee Guiding Principles

The Strategic Plan Development Committee is comprised of a variety of stakeholders; a cross section of various levels of internal staff (executives, managers, and non-supervisory), a DEQ executive team member, as well as a board member and external partners.

Each of us has been selected to serve on the Committee based on our background, expertise, interest, capacity and ability to carry out assignments, and communication skills. It will be a process that involves many hours of discussions and analyses.

The new iteration of the strategic plan will give DDW and Utah's Public Water Systems a framework and mindset that creates robust water systems throughout the state, who safeguard Utah's public health. This committee is tasked with establishing an effective strategic planning process to develop a five-year strategic plan with measurable goals and time targets.

In order to keep our meetings efficient and effective, we are adopting the following guiding principles below:

Guiding Principles

Strategic Orientation

We embrace system thinking and take a long-range view. We will refrain from narrow, detail-oriented, short-term, or internal thinking. Our task is to formulate a long-term strategy and not to define DDW's operations.

Critical thinking and Open Mindedness

We employ critical thinking. The future of Utah's DW systems is likely to look different than its past and present; there might be external trends, events, or other factors that could impact our community. In addition, we live in an ever-changing world with rapid advancement in technology; we are willing to investigate new opportunities.

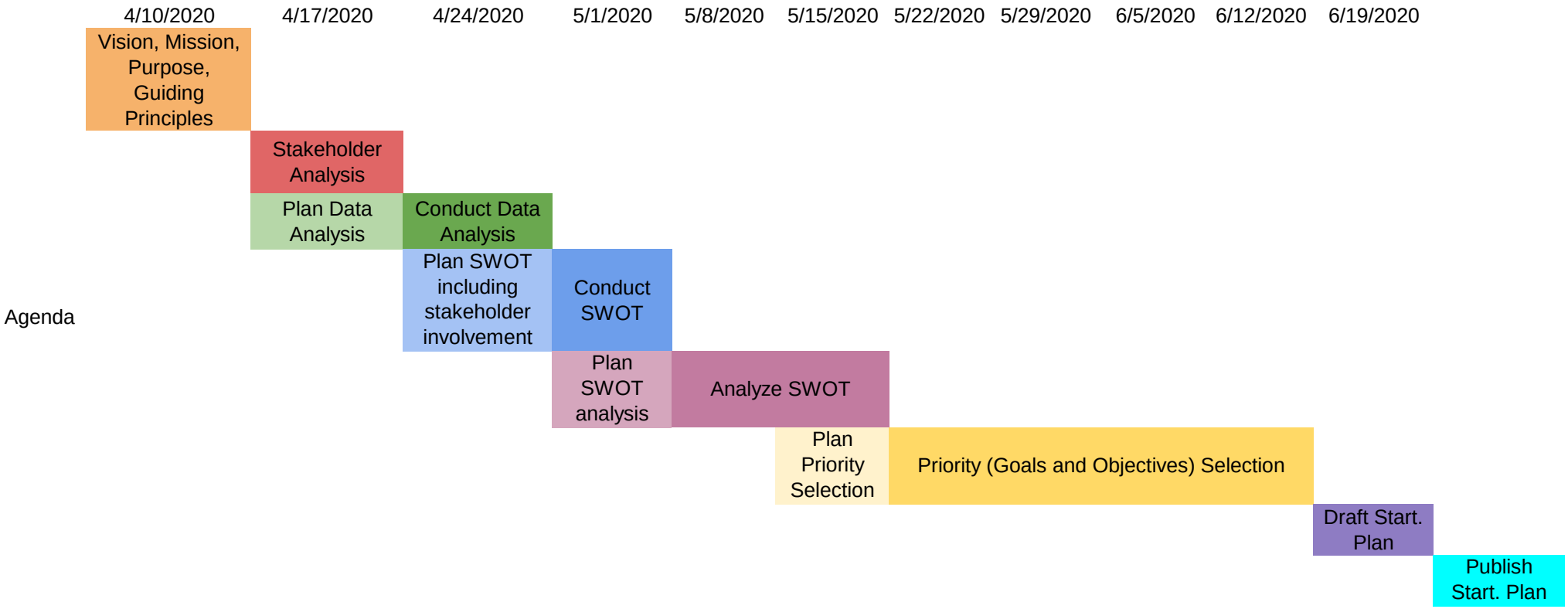
DDW and Public Water Systems First

We will focus on the best interests and best course for DDW and Public Water Systems as a whole and are not to be motivated by personal or other agendas.

Respect and Trust

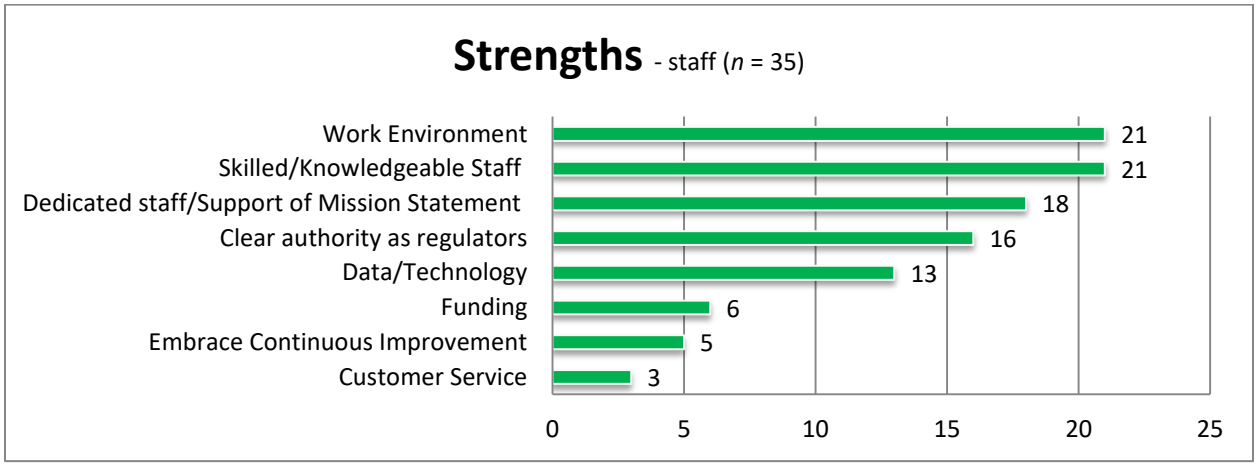
We demonstrate trust and respect toward each other. We show our respect by investing time and efforts in the process and by doing so, we earn others' trust. When we attend meetings, we are present mentally as well as physically (no cell phones please). We engage but we talk less and listen more, and we complete action items on time.

DDW Strategic Plan Timeline



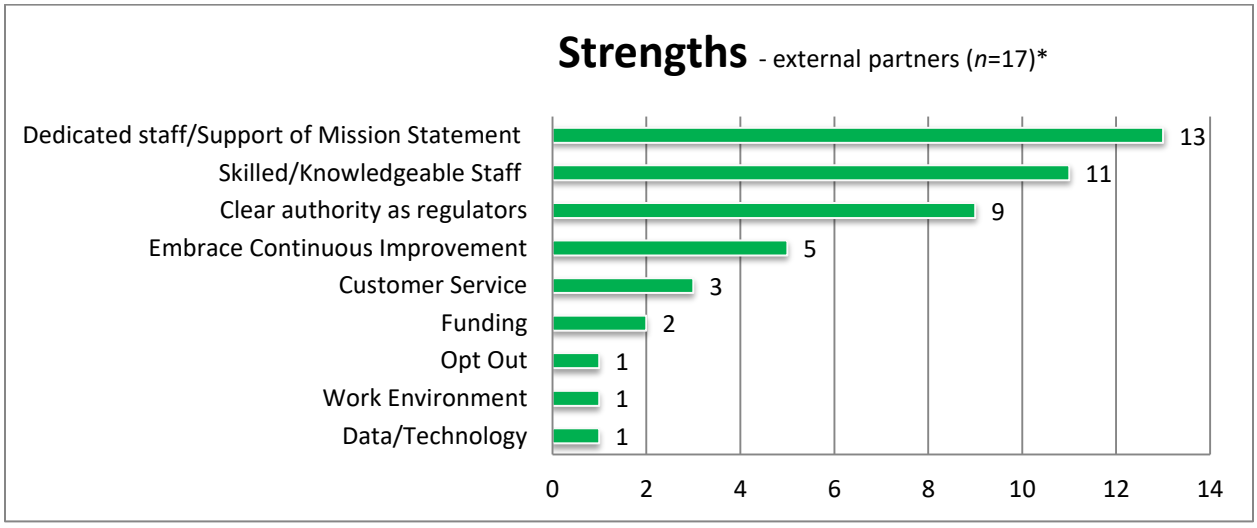
DDW SWOT Analysis 2020

SWOT Analysis Results – Internal (staff) & External Partners



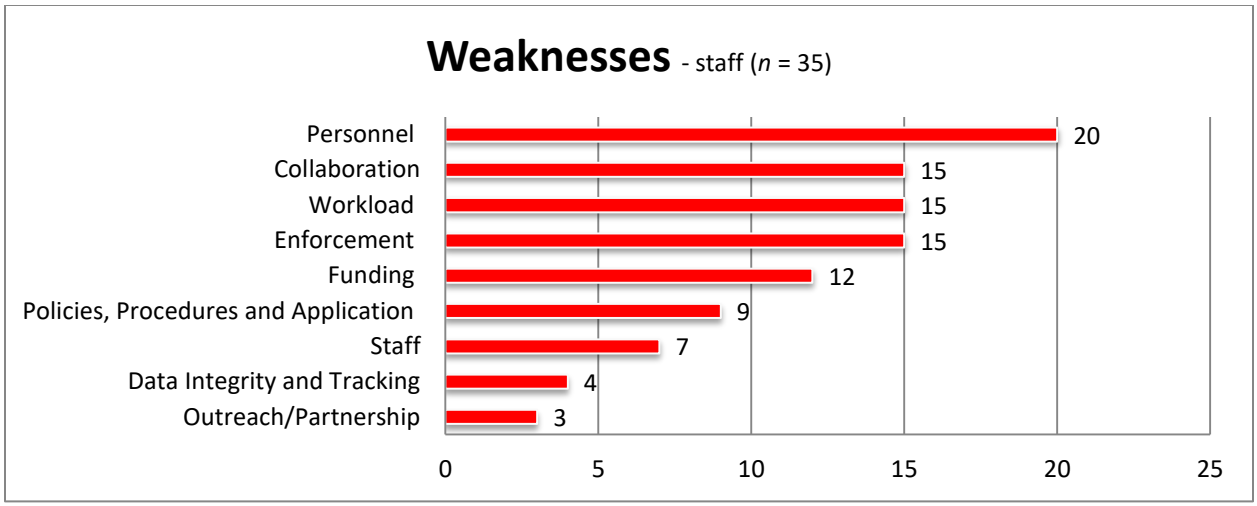
Other Categories:

- As a regulator they have the authority to protect public health if they choose to exercise this authority
- skilled/knowledgeable of some staff, but not all



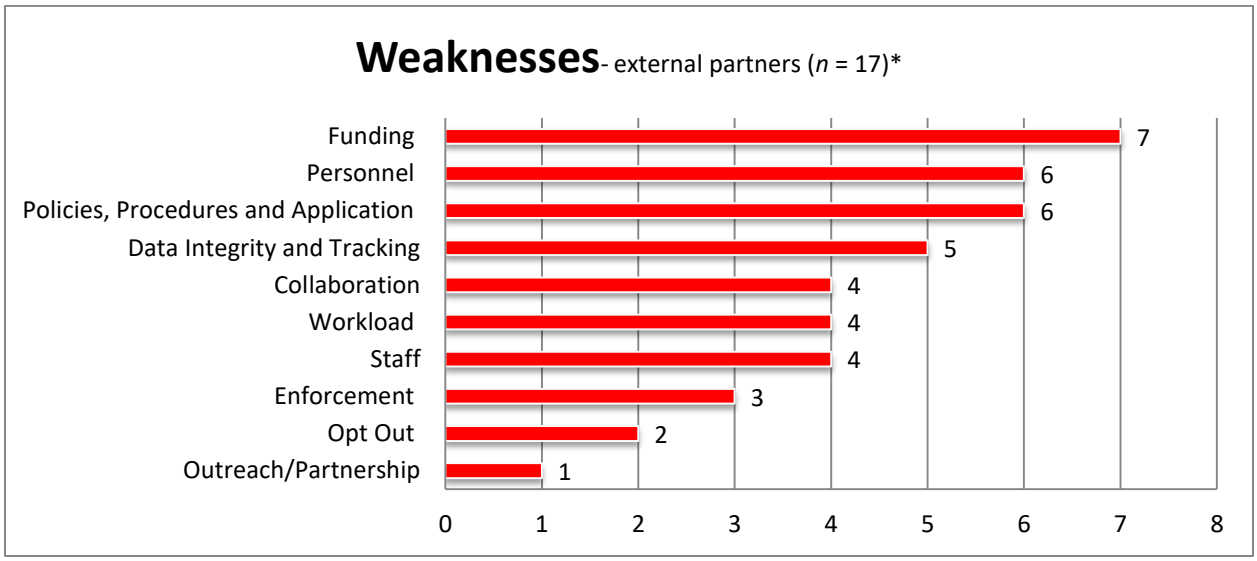
Other Categories:

- Ability to make changes
- Opportunity for Operator Education
- "…The other major strength of the organization is the Water Quality Alliance…"



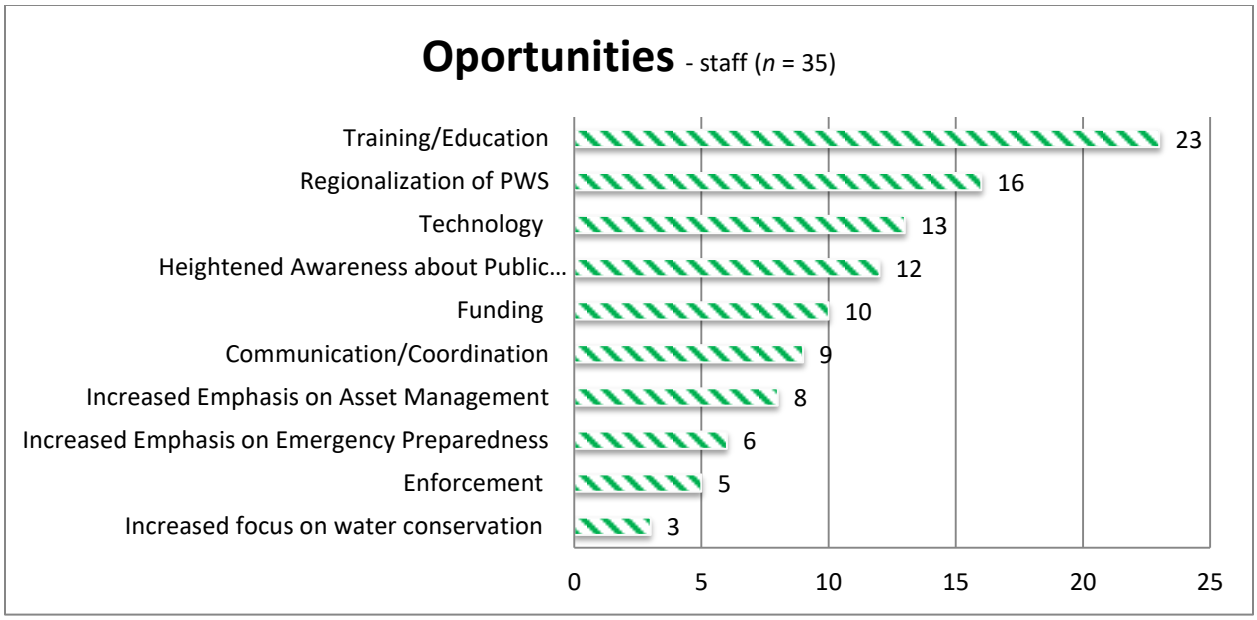
Other Categories:

- Too much focus on old project closeout with fees that is not related to public health and safety
- Enforcement. DDW do not enforce rules and requirements with water systems.
- Customer Service



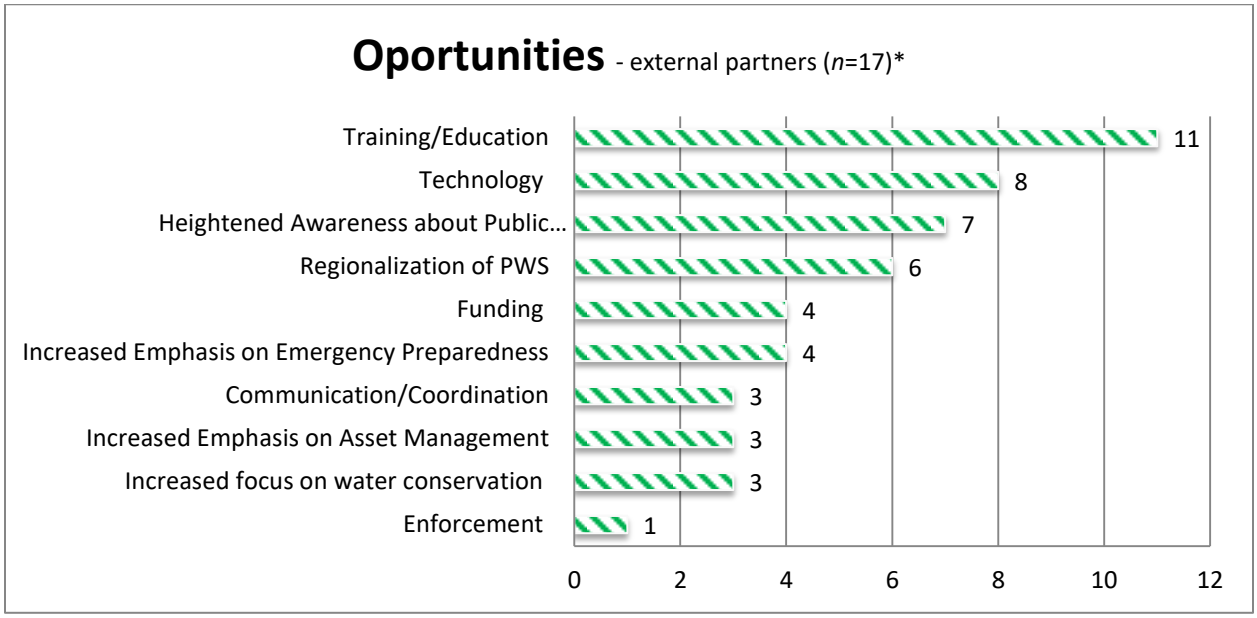
Other Categories:

- I only see two that i think apply
- Expertise in the surface water treatment rule (SWTR)



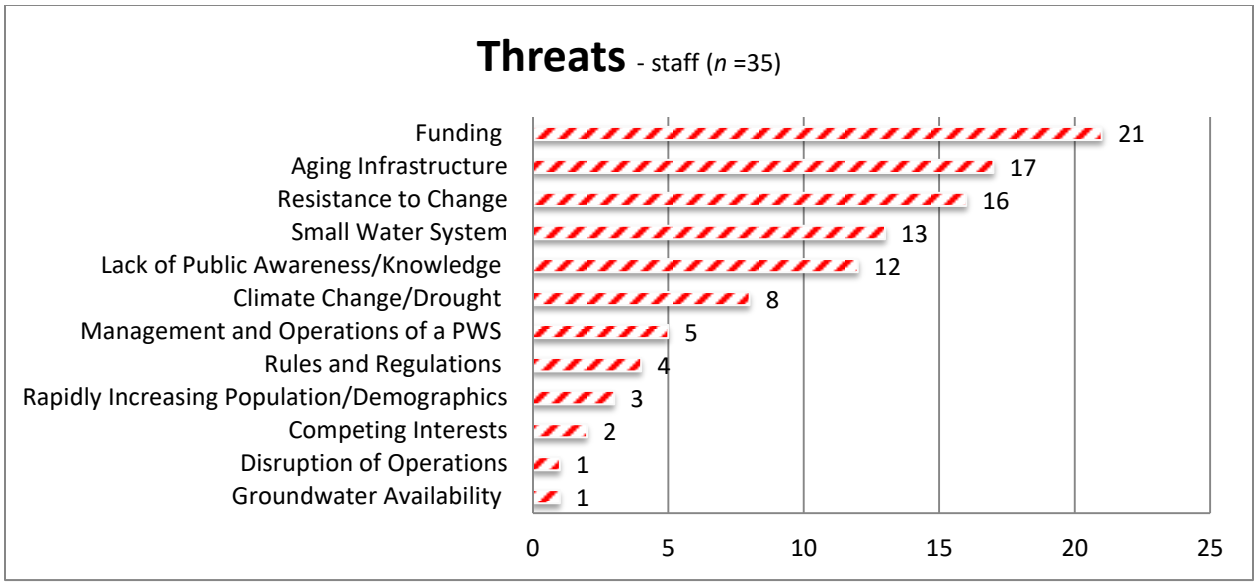
Other Categories:

- Customer service/responsiveness to issues raised by water systems.



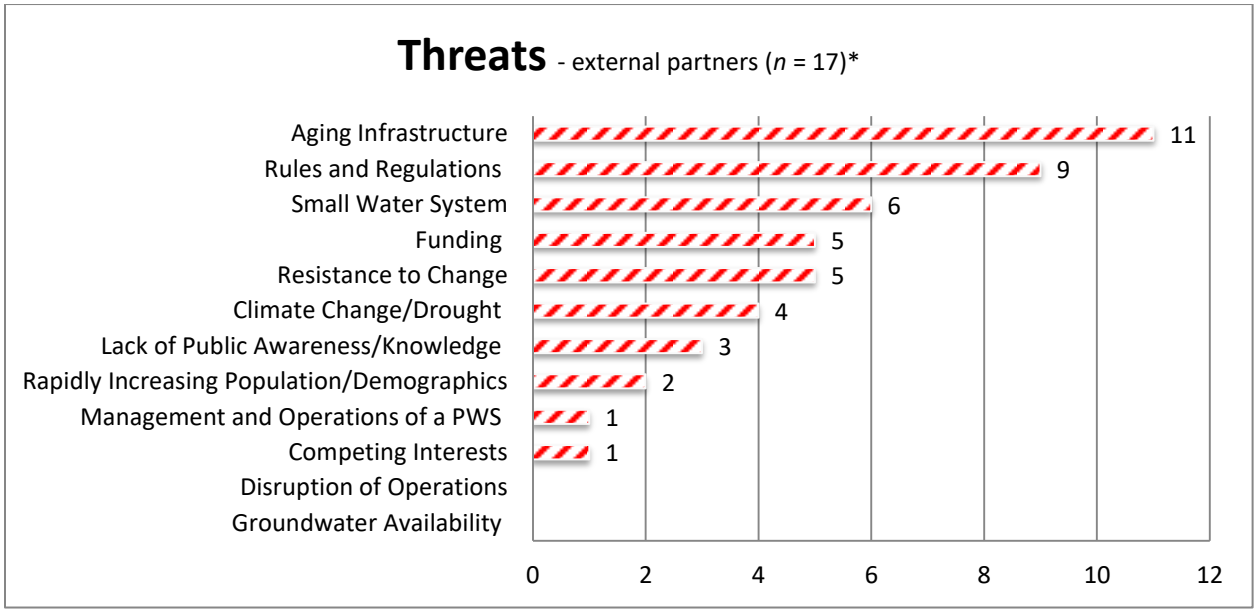
Other Categories:

- Engaging nationally; encouraging stakeholder involvement; and hiring a solid compliance manager and mid-level technical staff who are committed to technical competency, DDW's mission and building relationships with the regulated community.



Other Categories:

- The ability to attract and retain capable water operators. This issue is impacted by demographics, increasing rules and regs and funding.
- Lack of adequately trained and compensated water operators (small - medium systems)



Other Categories:

- I think the other harmful force is very specific to whether you are a large or small system, improvement district or municipality

- Finding and hiring staff who want to make a career out of it, and willing to put in the time and training etc.
- Lack of and retaining experienced Staff in DDW
- EPA's Lead and Copper Rule, if finalized as proposed, will create significant effort by utilities to verify the unknown service line material when there may be no lead service lines based on historic professional knowledge. In this case verification of every service line will be expensive, without public health benefit. It will be important that DDW gain an understanding of flexibility or creativity that can be applied to this effort.

*External Partners Participation (total of 17 responses):

Organization	# of Responses
Water Quality Alliance	4
Large Public Water System	1
Small Public Water System	1
Prepare60	1
Local Health Department	1
Drinking Water Board	5
Professional Organizations (AWWA and RWAU)	3
Operator Certification Commission	1

Agenda Item 9

DRINKING WATER BOARD PACKET
Rural Water Association Report

Table of Contents

Terry Smith – Management Technician.....2

Brian Pattee – Compliance Circuit Rider.....4

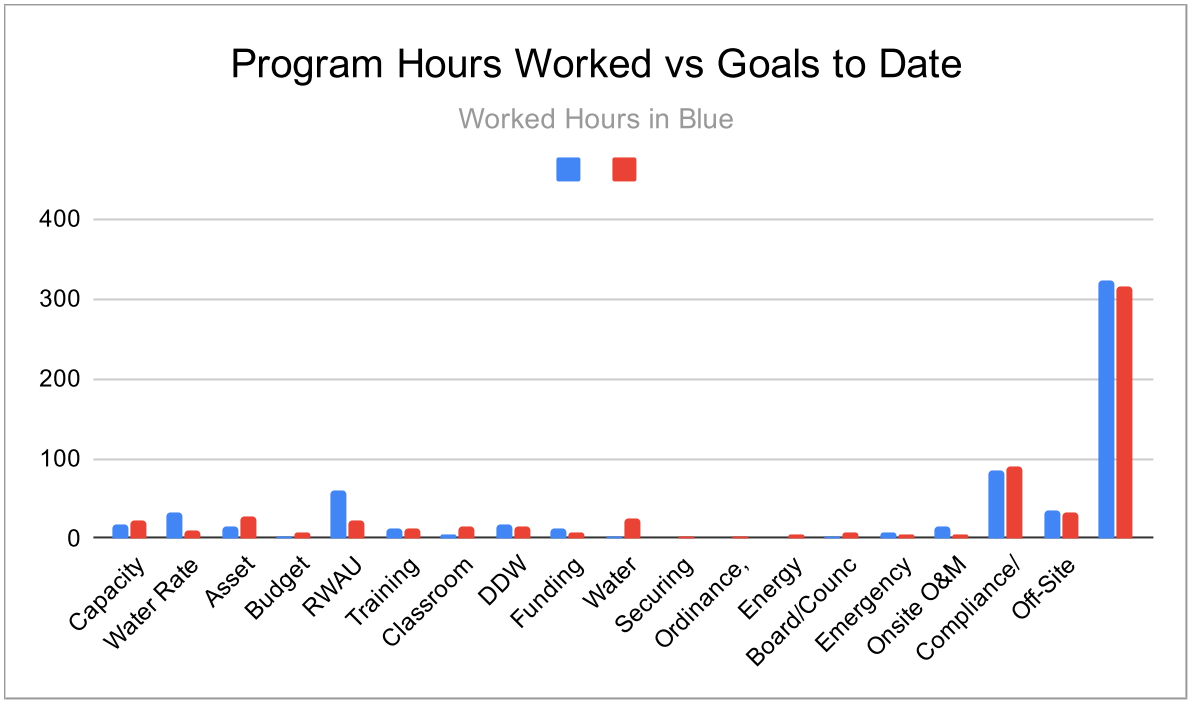
Curt Ludvigson – Development Specialist 6

Rural Water Association - DWB Report

Report Period: April, 2020

Terry Smith - Management Technican

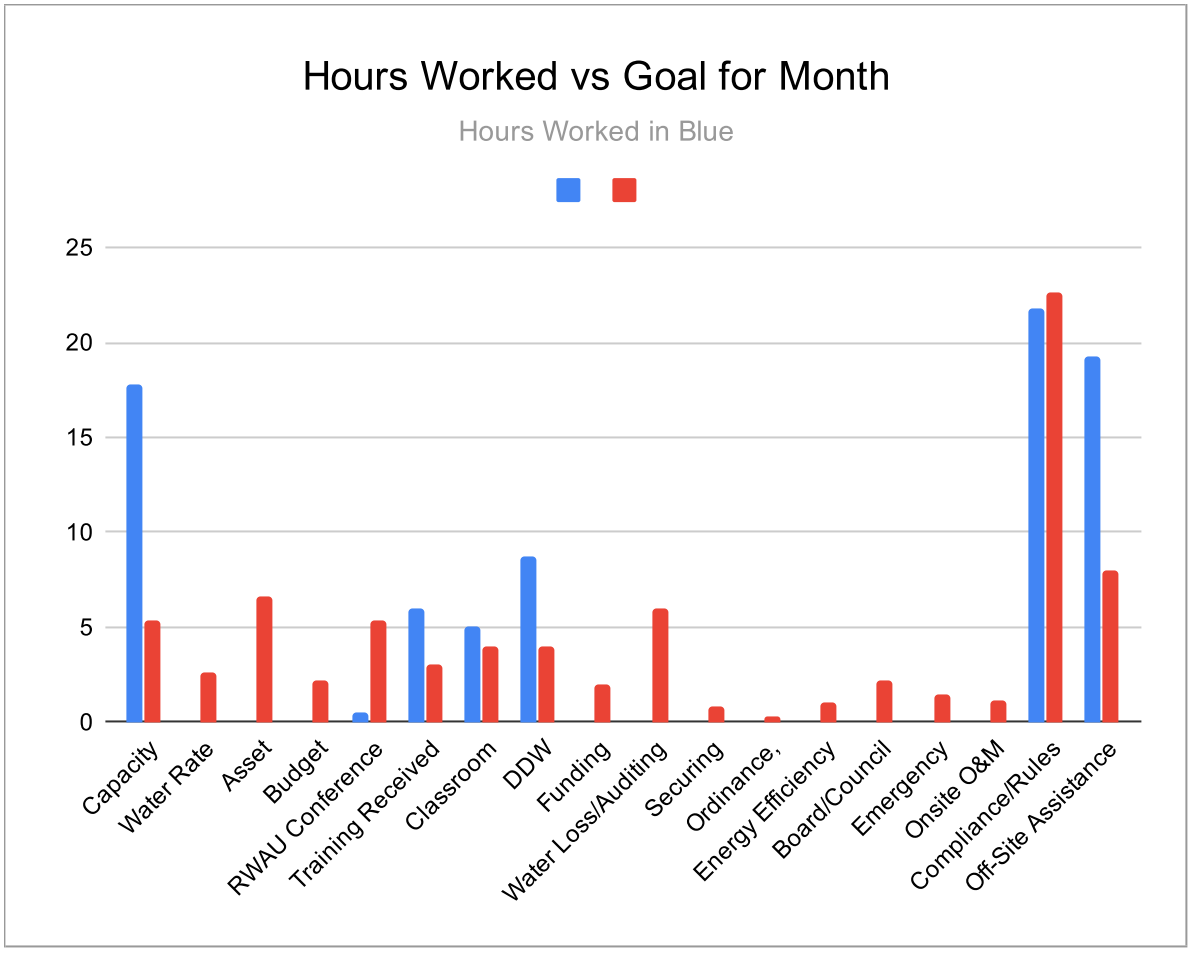
Contract Goal Titles	Report Period Hours:	Program Hours to Date:	Program Goals:
Capacity Development/Master Planning	17.75	21	64
Water Rate Development/Analysis	0.00	11	32
Asset Management/Evaluation	0.00	27	80
Budget Planning/Evaluation	0.00	9	26
RWAU Conference	0.50	21	64
Training Received	6.00	12	36
Classroom Instruction/Training	5.00	16	48
DDW Interaction/Meetings/Reports	8.75	16	48
Funding Procurement	0.00	8	24
Water Loss/Auditing	0.00	24	72
Securing Engineering	0.00	3	10
Ordinance, Resolutions, By-Laws Development	0.00	1	4
Energy Efficiency Study	0.00	4	12
Board/Council Training	0.00	9	26
Emergency Response	0.00	6	18
Onsite O&M Training	0.00	5	14
Compliance/Rules Assistance	21.75	91	272
Off-Site Assistance	19.25	32	96
Total:	**79.00**	**315**	**946**



Report Period: April, 2020

Notable Assistance & Work Performed

System Name:	Description:
MONROE CITY	Consulting with Devin - policy related to max gpm/customer
ELBERTA	Helping Elberta with compliance - lack of storage deficency
PINE VIEW HOMEOWNERS	Helping Pine View resolve deficiencies - SP update, source, generator
HEBER CITY	Response to Matt's request - chlorine reporting, tracking, etc.
EAST CARBON CITY	Assisting Tracy with CCR planning and Op-Cert status for crew
SNAKE CREEK MUTUAL WTR	Snake Creek - chlorine pump troubleshoot and repair, Jake Anderson
MIDVALLEY EST WTR CO	Cross-Connection training and material - Lynn Heaton
JUNCTION TOWN	Helping troubleshoot/repair pressure/chlorinator valve
WANSHIP MUTUAL WTR CO	Assisting Wade with exception letter
CORINNE CITY	Capacity analysis - source and storage
WELLSVILLE CITY	Working on conservation plan update
CHURCH WELLS SSD	Online CCR training
SALINA CITY	Online CCR training

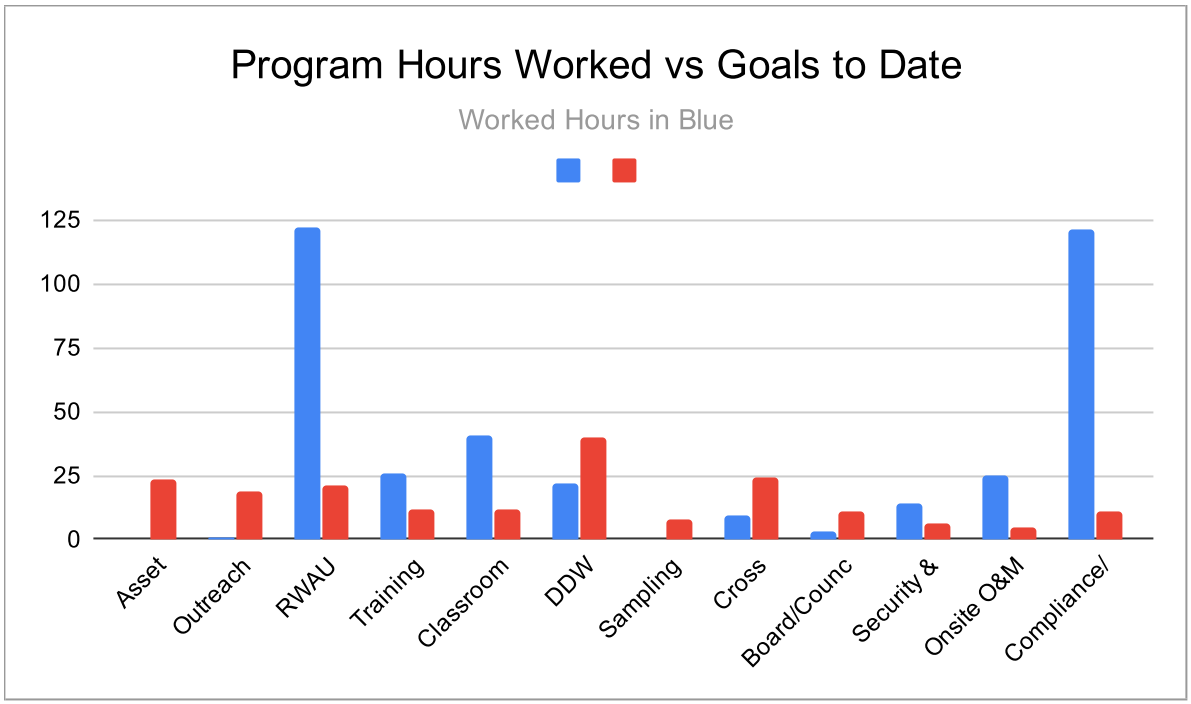


Rural Water Association - DWB Report

Report Period: April, 2020

Brian Pattee - Compliance Specialist

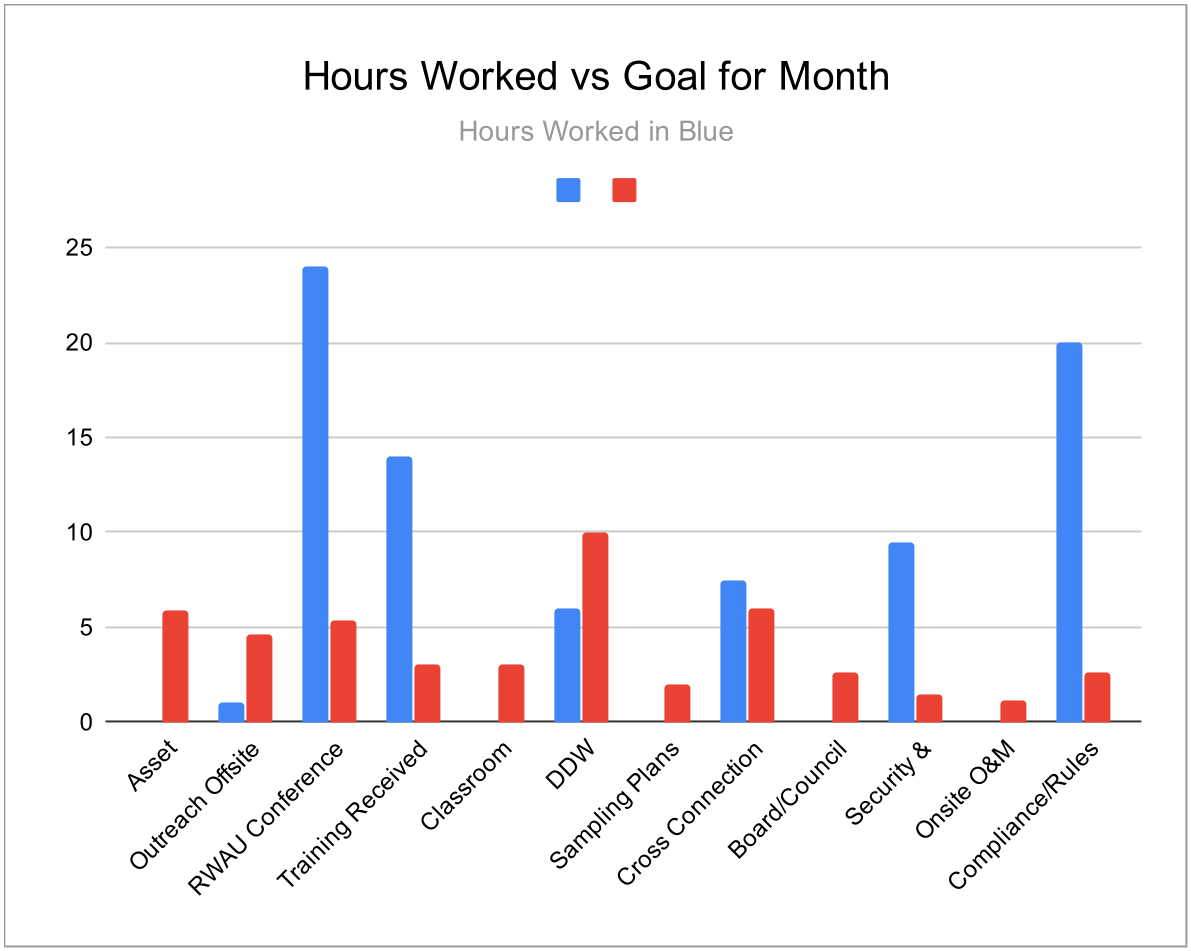
Contract Goal Titles	Report Period Hours:	Program Hours to Date:	Program Goals:
Asset Management/Evaluation	0.00	24	71
Outreach Offsite O&M Training	1.00	19	56
RWAU Conference	24.00	21	64
Training Received	14.00	12	36
Classroom Instruction/Training	0.00	12	36
DDW Interaction/Meetings	6.00	40	120
Sampling Plans Technical Assistance	0.00	8	24
Cross Connection Control Program Assistance	7.50	24	72
Board/Council Training	0.00	11	32
Security & Emergency Response	9.50	6	18
Onsite O&M Training	0.00	5	14
Compliance/Rules Assistance	20.00	11	32
Total:	**82.00**	**192**	**575**



Report Period: April, 2020

Notable Assistance & Work Performed

System Name:	Description:
	Review systems WTTC requirements left to complete
SPRINGVILLE CITY	Response to system on emergency notification signs
SUMMIT VISTA WATER CO	System advice and instruction on WTTC
SUMMIT VISTA WATER CO	WTTC instruction and review for system
NORDIC MOUNTAIN WATER	System compliance issue review as per Jake
SUMMIT VISTA WATER CO	Continued work with system on WTTC
ERDA ACRES WTR CO	Respond to system question
GRAND WTR & SWR AGENCY	System phone call question on chlorination
TOQUERVILLE TOWN	System CCC assistance
OLD MEADOW WATER CO	Review system IPS
SUMMIT VISTA WATER CO	Summit Vista continued assistance on WTTC
	DWB meeting
	DWB meeting agenda prep
COTTONWOOD COVES	System assistance with WTTC
SUMMIT VISTA WATER CO	System assistance with WTTC

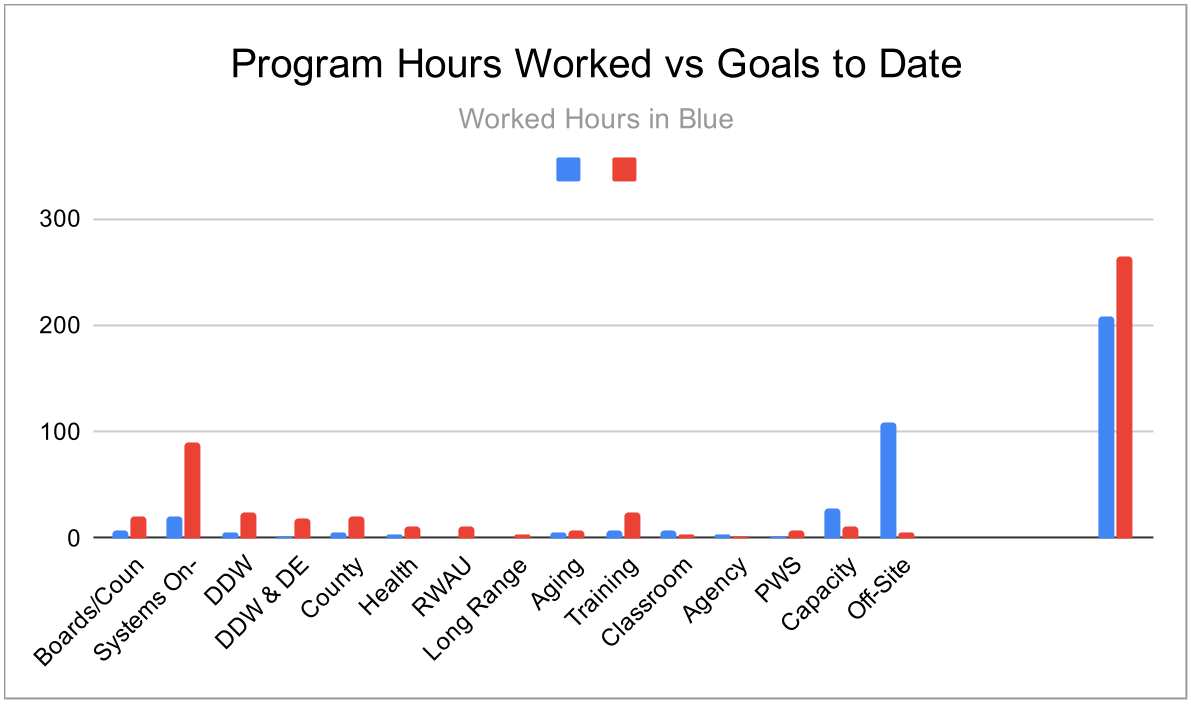


Rural Water Association - DWB Report

Report Period: April, 2020

Curt Ludvigson - Managment Technican

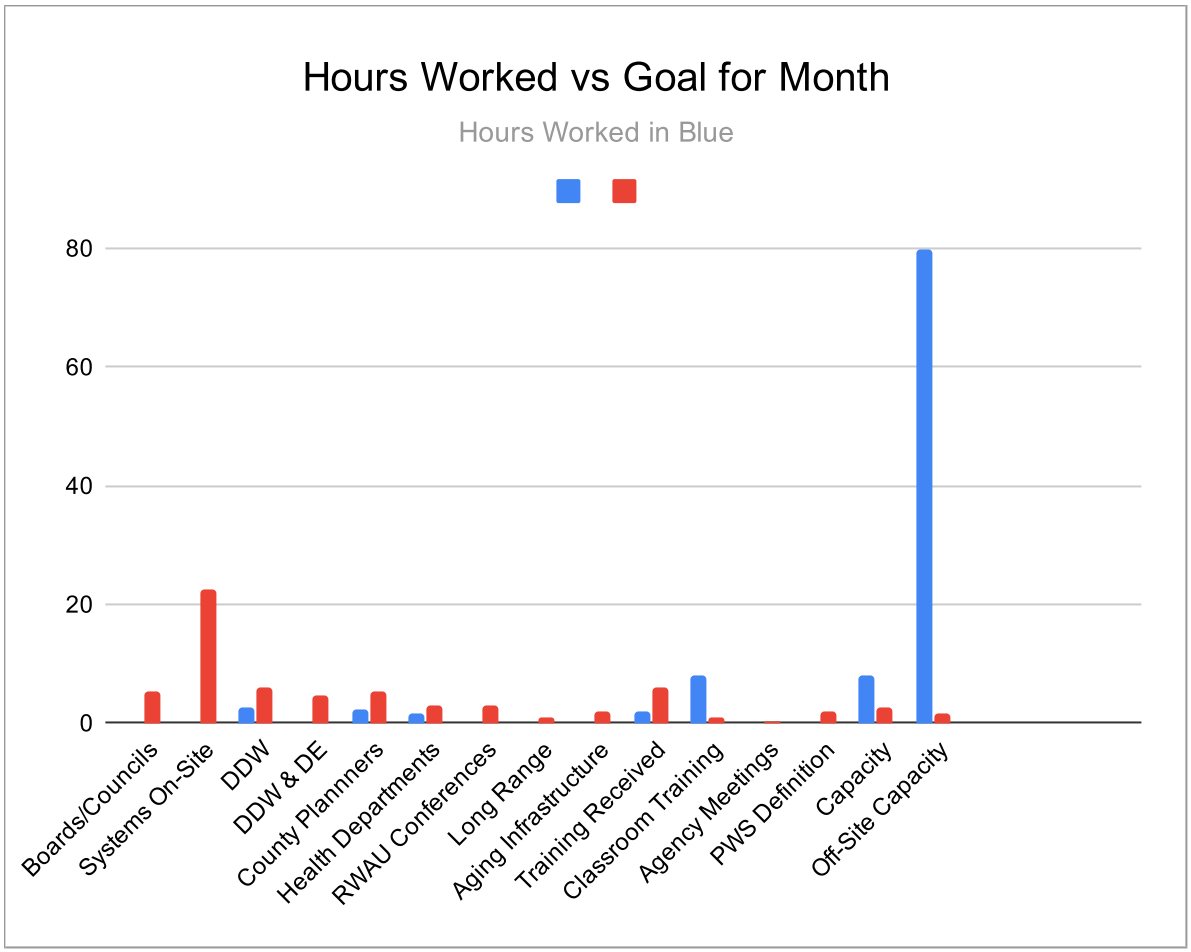
Contract Goal Titles	Report Period Hours:	Program Hours to Date:	Program Goals:
Boards/Councils	0.00	21.33	64
Systems On-Site	0.00	90.67	272
DDW Interaction/Meetings	2.75	23.67	71
DDW & DE	0.00	18.67	56
County Plannners	2.25	21.33	64
Health Departments	1.50	12.00	36
RWAU Conferences	0.00	12.00	36
Long Range Planning	0.00	3.33	10
Aging Infrastructure Planning	0.00	8.00	24
Training Received	2.00	24.00	72
Classroom Training	8.00	3.33	10
Agency Meetings	0.00	1.33	4
PWS Definition Training	0.00	8.00	24
Capacity Development Planning	8.00	10.67	32
Off-Site Capacity Development	80.00	6.00	18
	0.00	0.00	
	0.00	0.00	
	0.00	0.00	
Total:	**105**	**264**	**793**



Report Period: April, 2020

Notable Assistance & Work Performed

System Name:	Description:
MORONI CITY	Conference Call with Moroni City concerning projects and system needs
	Drinking Water Board Meeting (Zoom)
DUCHESNE CITY	Ordinance work for Duchesne City
	Phone Conference with Michael Grange
INDIAN RIDGE WCD	Policy work for Indian Ridge WCD
BIG WATER MUNICIPAL	Rates analysis for Big Water
UINTAH CITY	Rates Analysis for Uintah City
NORTH EMERY WTR SSD	Review of Budget for North Emery Water Users
	Sanpete County Planning Commission Meeting (Zoom)
	Training Seminar
	Training Seminar
JENSEN WID	Working on Ordinance review and budget for Jensen Water
INDIAN RIDGE WCD	Working on Policies revision for Indian Ridge WCD
BICKNELL TOWN	Working on Rates for Bicknell
	Zoom Meeting with the Central Board of Health concerning Covid-19



Agenda Item 10(A)

Processed Enforcement Actions April 29, 2020						
PWS ID	PWS Name	PWS Type	Pop Served	IPS Pts	Rating	Rating Date
Finalized AO						
UTAH09034	BEAR PAW LAKEVIEW RESORT	Non-Community	80	30	Not Approved	03/31/2016
UTAH11043	OLD MEADOWS	Community	48	285	Not Approved	04/18/2017
UTAH10033	SORREL RIVER RANCH	NTNC	260	0	Not Approved	07/26/2017
UTAH18028	SANDY CITY	Community	99750	2	Approved	03/11/1980
UTAH09069	PARADISE PARK	Non-Community	120	60	Not Approved	6/14/2018
UTAH25035	WILDWOOD SUBDIVISION	Non-Community	162	55	Not Approved	3/15/2018
UTAH22019	WANSHIP COTTAGES	Community	79	195	Not Approved	4/11/2019
UTAH25023	BRICKERHAVEN	Non-Community	150	55	Not Approved	9/5/2019
Corrective Action Systems						
UTAH25013	GOSHEN TOWN WATER SYSTEM	Community	925	195	Corrective Action	3/8/2016
UTAH25077	RIVERBEND GROVE, INC.	Non-Community	25	420	Corrective Action	12/13/2016
UTAH15038	TAGGARTS GRILL	Non-Community	60	110	Corrective Action	2/6/2018
UTAH09077	BRISTLECONE	Non-Community	180	65	Corrective Action	1/23/2019
UTAH26049	SWISS ALPINE	Community	300	100	Corrective Action	4/14/2016
UTAH23028	DELLE AUTO TRUCK STOP	Non-Community	138	280	Corrective Action	5/30/2019
UTAH22009	WEBER MEADOWVIEW	Non-Community	65	95	Corrective Action	5/30/2019
UTAH27077	MOUNTAIN SPRINGS WATER	Community	660	0	Corrective Action	6/18/2019
UTAH26026	BRYANTS FORK SUMMER HOMES	Non-Community	50	0	Corrective Action	6/11/2019
UTAH02078	M & J TRAILER HOME COMMUNITY	Community	27	10	Not Approved	8/20/2018
UTAH07067	SOUTH DUCHESNE	Community	128	250	Not Approved	4/24/2019
UTAH25133	JEHOVAHS WITNESS CHURCH	Non-Community	100	150	Corrective Action	9/16/2019
UTAH03006	COVE WATERWORKS	Community	52	125	Corrective Action	9/17/2019
UTAH22001	CLUFFWARD PIPELINE	Community	188	100	Corrective Action	9/30/2019
UTAH07061	VALLE DEL PADRES SUBDIV	Non-Transient	98	600	Corrective Action	11/13/2019
UTAH22072	ECHO RESORT	Non-Community	915	37	Corrective Action	1/13/2020
UTAH25096	VIVIAN PARK HOMEOWNERS	Community	365	50	Corrective Action	1/13/2020
UTAH06006	KAYSVILLE CITY	Community	27300	15	Approved (per rc)	3/10/2020
UTAH25184	BATEMANS MOSIDA FARMS	Community	90	100	Corrective Action	4/14/2020
UTAH26061	CAMP ROGER YMCA	Non-Community	210	140	Corrective Action	1/14/2020
UTAH26074	SOAPSTONE SUMMER HOMES	Non-Community	110	80	Corrective Action	5/22/2020
UTAH09074	LAKE FRONT ESTATES	Non-Community	25	85	Corrective Action	5/22/2020
UTAH02003	BOTHWELL	Community	360		Corretive Action	5/22/2020
UTAH02031	GIRLS HOME	Non-Community	300	400	Corrective Action	5/27/2020
Failure to Comply						
UTAH26073	DIAMOND HILLS ASSOCIATION	Non-Community	125	220	Not Approved	1/14/2010
Not Approved Systems						
UTAH09084	JNB MARINE	Non-Community	36	60	Not Approved	9/17/2002
UTAH11091	MONUMENTS ACADEMY	Community	80	135	Not Approved	3/7/2008
UTAH15001	CROYDON PIPELINE CORPORATION	Community	92	15	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	10	Not Approved	11/03/2016
UTAH10034	SUN ARCHVIEW LLC	Non-Community	506	35	Not Approved	4/18/2017

UTAH18172	COTTON WOOD COVES	Community	250	0	Not Approved	9/27/2018
UTAH03005	CORNISH TOWN WATER SYSTEM	Community	270	60	Not Approved	9/27/2018
UTAH07023	YELLOWSTONE CAMPGROUND	Non-Community	25	135	Not Approved	9/27/2018
UTAH09078	BARKER REC	Non-Community	30	10	Not Approved	3/18/2019
UTAH22036	BRIDGER LAKE CG	Non-Community	65	30	Not Approved	3/18/2019
UTAH24049	PINE MEADOWS PUD	Community	224	100	Not Approved	5/29/2019
UTAH12028	HOUWELINGS TOMATOES	Non-Transient	150	455	Not Approved	5/29/2019
UTAH09016	BLUE SPRUCE CG	Non-Community	30	30	Not Approved	8/19/2019
UTAH26050	BACK FORTY RANCH HOUSE	Non-Community	70	190	Not Approved	8/19/2019
UTAH15018	SOUTH ROBINSON SPRINGS	Community	28	105	Not Approved	9/9/2019
UTAH29086	PINE VIEW HOMEOWNERS	Community	105	215	Not Approved	9/17/2019
UTAH09028	CALF CREEK	Non-Community	300	65	Not Approved	9/9/2019
UTAH25179	RIGTRUP EGG FARM	Non-Transient	35	370	Not Approved	10/2/2019
UTAH23069	ERDA WARD	Non-Community	600	25	Not Approved	10/2/2019
UTAH27093	CANAAN SPRINGS/BIG PLAINS SSD	Community	48	335	Not Approved	11/12/2019
UTAH04052	MADSEN BAY WATER COMPANY	Non-Community	30	100	Not Approved	12/17/2019
UTAH26033	DEER CREEK PARK LLC	Non-Community	150	515	Not Approved	12/17/2019
UTAH11012	ESCALANTE VALLEY HOUSING	Community	100	60	Not Approved	12/17/2019
UTAH18179	L & B RESOURCES	Non-Transient	100	640	Not Approved	12/17/2019
UTAH27046	ZION PANORAMA	Non-Community	25	160	Not Approved	12/17/2019
UTAH27081	HOMESPUN VILLAGES	Community	42	755	Not Approved	2/18/2020
UTAH13001	ALTON TOWN WATER	Community	136	170	Not Approved	4/24/2020
UTAH01015	GREENVILLE WARD	Non-Community	100	160	Not Approved	4/24/2020
UTAH11045	MEADOWS RANCH	Community	280	355	Not Approved	4/24/2020
UTAH07009	MT TABBY SPRINGS	Non-Community	434	135	Not Approved	4/24/2020
UTAH15029	STODDARD INN	Non-Community	25	285	Not Approved	4/24/2020
UTAH20073	INDIANOLA LDS CHAPEL	Non-Transient	320	135	Not Approved	5/12/2020
UTAH15015	MOUNTIAN GREEN	Community	60	95	Not Approved	5/12/2020

Current News

Current News
Presented to the Drinking Water Board
June 9, 2020

DRINKING WATER BOARD PACKET
Current News

Table of Contents

What new EPA rules mean for the West 4

Water projects top priorities for Provo public works..... 7

Is your drinking water safe? 350,000 Utahns receiving water from systems with known problems 9

Climate change has stolen more than a billion tons of water from the West's most vital river ... 11

How Climate Change Is Already Diminishing The Colorado River 13

Weber water district to hold public hearing on bond issue to acquire and install meters on secondary water 15

The Utah State Legislature is urged to bring power and water to a Navajo community..... 16

EPA will regulate two toxic chemicals in drinking water 18

Utah Valley snow packs in good shape 20

Colorado River Flows Are Diminishing. What Does That Mean For The Lake Powell Pipeline? 22

Increased nitrate makes tap water dangerous for infants in Moroni, officials warn..... 24

Moroni City residents warned not to give infants drinking water due to high levels of nitrates.. 25

Inside a giant tunnel through the Wasatch Front, the 'backbone' of Northern Utah's water system 26

State health department says water is safe from coronavirus, no need to stockpile water 29

High nitrate level reported in Moroni City water 30

SLC Department of Public Utilities reassures residents COVID-19 does not affect drinking water 32

Can You Get Coronavirus from Drinking Tap Water?..... 33

Coronavirus shopping: State, feds say no need for rush on bottled water supplies 36
Utah's snowpack and water supply in good shape as March winds down 38
Solar-powered cisterns bring running water to Navajo homes 40
Water Watch: Checking in on current conditions, conservation efforts in Utah 43
Provo digging into area aquifer systems with pilot projects 45
Magna tap water under a boil order — because of a dead raccoon 48
Free bottled water for residents under Magna boil order 49
New analysis confirms harmful 'forever chemicals' at Utah military bases 50
Kane County does an about-face, pulls out of Lake Powell pipeline project 52
Is Magna's water supply in danger with all of these earthquake aftershocks? 53
Reservoirs brimming but drought lurking 55
Why did Kane County pull out of the Lake Powell pipeline? Turns out, it doesn't need more water. 58
Supreme Court says Clean Water Act applies to some groundwater pollution 62
Utah fears lack of boat inspections due to coronavirus could put other lakes at risk of quagga infestations 65
Candidates for Utah Governor talk water, environment, economy during online forum 68
OVERNIGHT ENERGY: Green groups sue over Trump rollback of Obama-era waterway protections | Warren calls for SEC to require climate risk disclosures 70
Supercharged by climate change, 'megadrought' points to drier future in the West 72
Guest opinion: Residents of Utah's West Desert continue their fight for water 81
New Campaign Urges Utahns To Keep Water Supply Clean 83
SMART WATER MONITORING REACH EXTENSION 84
EPA decides against limits on drinking water pollutant linked to health risks, especially in children 87
House to pass water, environmental justice measures 90
Aluminum may affect lead levels in drinking water 91
Low-Tech Water Wand Finds Contaminated Drinking Water 93
LEAD IN DRINKING WATER CONTAMINATION: A CANARY IN THE MINE 94
The global market for Bottled Water is projected to reach US$307.6 billion by 2025 98
Health advisory issued after E. coli found in water at Rockport State Park picnic area 100
Clean water testing vital to billions 101

Utah tech company offers solution to food crisis with sustainable water, energy for farms 103
More Than 50% of US Home Water Tests Exceed Contaminant Health Goal 105

What new EPA rules mean for the West

At the end of January, the EPA announced it would be reducing the number of waterways covered under the Clean Water Act. The change would affect many of the waterways in the West.

By Sofia Jeremias Feb 18, 2020, 10:01pm MST

https://www.deseret.com/indepth/2020/2/18/21133672/wotus-clean-water-act-trump-epa-environment-rollbacks-hit-the-arid-lands-hardest-west

SALT LAKE CITY — At the end of January, while the Senate debated impeachment and the spread of the coronavirus dominated international headlines, the Environmental Protection Agency made an announcement that generated a brief moment of national coverage: It would no longer regulate a huge portion of water in the West.

The announcement fit a pattern. Since taking office, the Trump administration has tried to roll back over 90 environmental rules, regulating everything from methane emissions to fracking.

Even so, the proposed revision of waterways covered under the Clean Water Act has shocked environmentalists. If the changes survive a flood of lawsuits, it will mark the biggest rollback of federal water protections since the original law was passed in 1972.

Under the new rules, protections for ephemeral streams (those that run after rain or snowmelt), will be eliminated. In the arid West, this means most streams will no longer have federal protections. These streams provide drinking water for 1 out of 3 Americans.

Unless a state creates its own protections, industries will no longer need permits or environmental reviews before filling in certain wetlands or dumping waste in ephemeral streams. In Utah, over 90% of streams will be excluded from federal protections, although it is one of a few states that has some of its own protections put in place, according to the state's Division of Water Quality.

The drier, arid states of the West — where sometimes-dry stream beds monopolize the landscape — stand to lose the greatest federal protections.

A study funded by the EPA in 2008 found that in Arizona 94% of the streams are ephemeral/intermittent and 89% in Nevada. In other words, the new rule will leave the waterways that dominate the West unprotected.

"Utah is really going to be hurt, just as all of the arid parts of the country are really going to be hurt by this new definition," said Betsy Southerland, former director of science and technology in the EPA Office of Water.

She sees it as a transfer of cost from the polluters to communities downstream that will have to pay more to treat their water.

Take it to court

In the early 2000s, several Supreme Court decisions created confusion over what waters actually fell under federal jurisdiction. The standard required a waterway to be a "significant nexus" to the larger, navigable body of water (think so deep and so wide you could sail a boat on it). A wetland flowing into a river would have a "significant nexus," but what about a wetland farther away that did not have a direct link to the river but filtered out nutrients?

In 2015, under the direction of former President Barack Obama, the EPA tried to clear up that confusion and drafted a new definition of which waters were covered under the Clean Water Act. That definition was more expansive than previous interpretations and would have protected about 60% of the water in the United States. But the new definition roiled farmers and ranchers, who worried that irrigation ditches and other sources of water on their property would be under greater federal scrutiny.

After President Donald Trump took office, he promised to once again narrow the definition of protected waters. The new rule makes good on that promise, but it hasn't entirely cleared up the confusion over which waters fall under federal jurisdiction. Some streams that don't run year-round will still be federally regulated, but others will not, depending on whether or not they flow directly into a river. Environmentalists say the new laws will require more case-by-case assessments of streams and wetlands to figure out whether or not they are covered.

How water flows

At the heart of the controversy is the way water flows and how the streams, wetlands and rivers of the country are all ultimately connected.

If a stream passes the "significant nexus" test, which means it is linked to a larger river or lake that is federally protected, then it too would fall under the regulation of the EPA.

The problem is scientists have found that eventually all water is connected, no matter how small or haphazardly or frequently it flows. What may look like an isolated, trickling stream can turn into a turbulent river, Zach Frankel, executive director of the Utah Rivers Council, explained.

A wetland may not be directly next to a navigable body of water, but it can absorb nutrients and contaminants that can be harmful to it. One USDA web page describes them as "kidneys of the landscape," filtering out substances Western communities don't want in their drinking water.

Before the EPA published its final rule, the department's Office of Research and Development released a report concluding that the streams and wetlands no longer covered by the Clean Water Act are connected to downstream rivers and serve an important role in the watershed, even if they were not continually feeding into them.

Although the EPA rule noted that report in the final ruling, ultimately, the department wrote, they would not be relying solely on science to define what waters were protected: “science cannot dictate where to draw the line between Federal and State or tribal waters,” but rather, the definition should be grounded in the guidance of the Supreme Court.

But that guidance was never clearly settled.

Agriculture voices support

While environmentalists are alarmed by the changes, farmers and ranchers in the West see them as needed.

“The environment is so important to us,” said Ron Gibson, a dairy farmer in Ogden and president of the Utah Farm Bureau. “Farmers and ranchers value clean water.”

Water projects top priorities for Provo public works

By Genelle Pugmire Daily Herald

Feb 18, 2020

https://www.heraldextra.com/news/local/central/provo/water-projects-top-priorities-for-provo-public-works/article_a4987e22-e053-53df-bec7-2964a87829d6.html

Provo's Public Works director Dave Decker couldn't have been clearer in his first budget presentation to the municipal council for fiscal year 2021. Water projects and the airport expansion top his priorities list.

One of the three divisions of public works is water resources. Within that division, public works is in charge of water sources, distribution, wastewater collection and maintaining the water reclamation plant.

To help maintain wells that supply a portion of the city and other projects, public works must maintain the aquifers.

That's because the wells drop a given percentage each year, according to Decker.

"We've never drawn a well down where it can't produce water," Decker said. "But eventually you will hit bottom."

Decker said they know about what depth they can drill before the water is undrinkable.

"The snowpack is good and these are the years we need to be recharging the wells," he said.

He added that about half of the water that flows to the lake will evaporate and it would be better to stop it and artificially place it in the wells so the city doesn't lose it to evaporation.

The lake is only two feet away from overfill.

Waste Water Treatment Plant Decker said waste water treatment plant upgrades will begin this year and construction will continue for three years.

The current plant treats over 4 billion gallons of sewage every year. The new plant design will make treatment more efficient and meet all of the 2024 regulations as dictated by the state.

Airport construction

While residents may not be seeing anything different at the new airport terminal site, Decker said things are happening.

“There is a lot of activity on a daily basis,” Decker said. Construction continues on new hangars and new taxi lanes. There are four new hangars that have been built.

Land improvements, infrastructure and dirt have been put in place so that by next spring, residents will be able to see significant construction, pillars, concrete and more that will be happening at the site.

The airport capital improvement project, including the terminal building and additional personnel, comes in at about $34.3 million.

The Federal Aviation Administration also expects certain standards from the airport.

“The FAA said you need to start looking like a regional airport,” Decker said. “You need to step up your game.”

The new terminal designs meet those qualifications, according to Decker.

Other projects

Decker said he has received many requests from residents about the poor condition of sidewalks in various neighborhoods throughout the city. The problem is the cost to repair them far exceeds the money they have set aside for repairs.

Decker said one concerned resident in the Franklin Neighborhood had a phone conversation with him about the condition of the sidewalk. He drove to the corner that was mentioned to see for himself. Then he went to the next corner and around the block.

What Decker found as he continued checking sidewalks was that whole blocks needed maintenance, more than he first imagined. He will be asking for additional funds to fix the problem as the budget process continues.

After each of the departments make their presentations, they will hand in their budget requests to the administration for scrutiny, and then to the council. The council will hold budget retreats to discuss the figures.

A vote to approve the 2021 budget will take place during the second council meeting in June. The fiscal year beings July 1.

Is your drinking water safe? 350,000 Utahns receiving water from systems with known problems

After 170 ‘near miss’ events, regulators seek funding to boost compliance

By Amy Joi O'Donoghue@Amyjoi16 Feb 19, 2020, 10:00pm MST

https://www.deseret.com/utah/2020/2/19/21142973/drinking-water-safety-regulators-funding-compliance-sandy-fluoride

SALT LAKE CITY — It’s been a little more than a year since a malfunction in a Sandy drinking water pump led to an overfeed of fluoride — 100 times over the maximum limit — delivering contaminated water to close to 300 homes.

An estimated 350 illnesses resulted, including an infant who drank the water mixed with formula.

“During this week last year, Sandy city residents were experiencing what the (Centers for Disease Control and Prevention) has characterized as the largest fluoride overfeed event in the nation’s history,” Marie Owens told a legislative appropriations subcommittee last week.

Owens, who is director of the Utah Division of Drinking Water, delivered a detailed picture of the challenges of monitoring public drinking water supplies in the state, informing the Natural Resources, Agriculture and Environmental Quality Appropriations Subcommittee that the needs are great and infrastructure is aging.

In Sandy, the fluoride overfeed delivered twice the lethal dose to impacted homes, Owens said.

“Sandy City is not an isolated event,” Owens said, pointing out there were 170 “near miss” events in drinking water supplies over the course of a year that included boil orders, chemical spills and severe operational failures.

“Statistically, on average, there was one of these events every other day in the state of Utah,” she said. “I don’t need to explain to you that is unacceptable.”

Owens pointed to one instance in which there was a hole in a drinking water tank.

“Any rodent could walk right up to that tank and do whatever,” she said. “Fall in. Hang out.”

The division is seeking $2.5 million a year for five years to ramp up inspections for compliance, institute a fee-based permit system and particularly help smaller drinking water systems meet standards.

Owens described it as “bridge” money to help the division develop a sustainable model for revenue as population continues to grow in Utah.

An estimated 350,000 people in Utah are receiving water from systems with a known and fixable risk, but the resources are lacking, Owens said.

Much of the infrastructure for water delivery is either at, or nearing, its operational life span, presenting a fiscal challenge for many communities.

Laura Briefer, director of the Salt Lake City Department of Public Utilities, in a later interview with the Deseret News, said she is well aware of the challenges.

The city’s five- to 10-year plan is to replace or upgrade all three drinking water treatment facilities — which is easily a $100 million effort.

“Many of us in Utah and across the nation are facing aging infrastructure in our distribution pipelines,” she said.

The problem is compounded by slashed federal funding for programs that offer low-interest loans for system upgrades, while at the same time water providers are facing increasing pressure from new regulations, Briefer said.

Owens told the committee the division works closely with public water systems and their monitoring protocols, but there is a need to upgrade the inspection program, especially given the 20% backlog.

The city of Sandy continues to be under a stepped up monitoring schedule with the division for contaminants from the fluoride overfeed.

Climate change has stolen more than a billion tons of water from the West's most vital river

Declining snowpack is causing water supplies for the Colorado River to evaporate, new study finds

By

Juliet Eilperin

Feb. 20, 2020 at 12:00 p.m. MST

https://www.washingtonpost.com/climate-environment/2020/02/20/climate-change-has-stolen-more-than-billion-tons-water-wests-most-vital-river/

The Colorado River's average annual flow has declined by nearly 20 percent compared to the last century, and researchers have identified one of the main culprits: climate change is causing mountain snowpack to disappear, leading to increased evaporation.

Up to half of the drop in the Colorado's average annual flow since 2000 has been driven by warmer temperatures, four recent studies found. Now, two U.S. Geological Survey researchers have concluded that much of this climate-induced decline — amounting to 1.5 billion tons of missing water, equal to the annual water consumption of more than 10 million Americans — comes from the fact that the region's snowpack is shrinking and melting earlier. Less snow means less heat is reflected from the sun, creating a feedback loop known as the albedo effect, they say.

"The Colorado River Basin loses progressively more water to evaporation, as its sunlight-reflecting snow mantle disappears," write the authors, USGS senior resource scientist Chris Milly and physical scientist Krista A. Dunne.

The new findings are significant because about 40 million Americans living across the West depend on water from the Colorado River, which supports $1 trillion in economic activity each year. The water is shipped as far away as California's Imperial Valley and central Arizona, where farmers use it to irrigate crops, as well as across the Rockies to supply drinking water for Colorado's biggest cities.

Milly and Dunne, who analyzed 960 different areas in the Upper Colorado River Basin to determine how disappearing snowpack influenced the river's average annual flow, determined that the flow has dipped 9.3 percent for each temperature rise of 1 degree Celsius (1.8 degrees Fahrenheit). The average annual temperature for the area they surveyed has risen 1.4 degrees C (2.5 degrees F) in the past century, Milly said in a phone interview.

The region is poised to warm even more in the years ahead, Milly said, and it isn't "likely" that precipitation can compensate for these hotter and drier conditions. Comparing the Colorado River's historic flow between 1913 and 2017 to future conditions, he added: "That flow, we estimate, due to the warming alone would be reduced anywhere from 14 to 31 percent by 2050."

Colorado State University senior scientist Brad Udall, who has written two papers attributing half of the Colorado River's lower flows to warming temperatures, said in a phone interview that researchers now "have multiple lines of evidence pointing to a very similar number."

"And this number is worrying," Udall said of the new study. "I would say eye-popping."

Under a 1922 compact, Upper Basin states — Colorado, Utah, Wyoming and New Mexico — must deliver an average of 8.25 million acre-feet of water in 10 consecutive years to the Lower Basin states — California, Arizona and Nevada — and Mexico. (An acre-foot is what it takes to cover an acre of land in a foot of water, or roughly 325,000 gallons.)

But now that the Colorado River's average annual flow is nearly 20 percent below its historic average, this has put pressure on the system. Its two biggest reservoirs, Lake Powell and Lake Mead, are just under half full.

Andrew Mueller, general manager for the Colorado River District, said in an email that the new findings provide "confirmation of significantly grim indicators about future flow in the Colorado River."

The amount of water that would disappear with another 1 degree C temperature rise, he added, is nearly five times what Las Vegas uses each year. "A decline in flows of this magnitude will present a significant challenge to all inhabitants in the Colorado River Basin."

The current operating rules for the river expire at the end of 2026, and negotiations over how to share the water going forward start this year.

Udall said that in light of current projections, policymakers need to consider crafting an agreement where all the major players in the West will use less water than they do now.

"These projections are dire, but we're looking at a glass that's 70 percent full, not half full," he said. "It could be grimmer."

Officials at the U.S. Bureau of Reclamation, who brokered a drought contingency plan among seven states and Mexico last year, said that they are continuing to monitor the way climate change is affecting the river.

"Reclamation works closely with leading scientists at the state and federal level, as well as universities to understand the potential impacts of climate change on the Colorado River," said bureau spokesman Marlon Duke. "We will continue to use the best available science to manage the river to sustain reliable water far into the future."

How Climate Change Is Already Diminishing The Colorado River

By LUKE RUNYON • FEB 20, 2020

https://www.kuer.org/post/how-climate-change-already-diminishing-colorado-river#stream/0

Originally published on February 21, 2020 5:03 pm

A warming climate is already causing river flows in the Southwest's largest watershed to decline, according to a new study from federal scientists. And it finds that as warming continues it's likely to get worse.

Using hydrologic models, researchers with the U.S. Geological Survey found that the Colorado River basin is extremely sensitive to slight changes in temperature. In their new paper in the journal *Science*, they show for each degree Celsius temperatures rise, flows in the river are likely to decline more than 9%.

That decline is likely to cause severe water shortages in the Colorado River basin, where more water exists on paper in the form of water rights than in the river itself. Warmer temperatures diminish snowpack, lessening the amount of water available.

Snow in the Rocky Mountains, where the Colorado River and its main tributaries get their start, is brilliantly white, reflecting a large amount of solar radiation. With less of that reflective surface, evaporation will accelerate, the study finds.

"As snowpack declines, the basin is absorbing more radiation," said Chris Milly, a USGS hydrologist and the study's co-author. "That radiation is energizing the evaporation, it's cranking it up, and leaving less water behind to fill the river and supply the 40 million users downstream."

Seven U.S. states including Colorado, Utah, Wyoming, New Mexico, Arizona, California, Nevada, depend on the Colorado River for drinking and irrigation water. Mexico also receives water from the river.

The reductions might sound small, Milly said, but they will be felt throughout the basin.

"There's not a lot of slack in the system," Milly said. "In the long-term communities, states will be making adjustments to how they allocate water."

The new study builds on an existing body of scientific work that shows how the Colorado River will respond to warming.

Some climate models are mixed on whether climate change will cause more or less precipitation in the basin. But Milly said it would take a significant increase to offset the declines caused by warming.

“This is an eye popping result,” said Brad Udall, climate researcher at Colorado State University. His previous work showed the river basin likely to see severe declines in river flows caused by warming temperatures.

The finding comes as water managers throughout the watershed are gearing up for negotiations over a long-term plan for the river’s management. The Colorado River’s current operating guidelines expire at the end of 2026, and the states that make up the watershed are required to start negotiating new ones by the end of this year.

“The new rules must consider how to manage the river with unprecedented low flows in the 21st century,” Udall said. “The science is crystal clear — we must reduce greenhouse gas emissions immediately. We now have the technologies, the policies and favorable economics to accomplish greenhouse gas reductions. What we lack is the will.”

Weber water district to hold public hearing on bond issue to acquire and install meters on secondary water

By MEGAN OLSEN Standard-Examiner

Feb 17, 2020

https://www.standard.net/news/environment/weber-water-district-to-hold-public-hearing-on-bond-issue/article_53b4c7b7-8fab-5be3-8fd2-22787789417d.html

LAYTON — The public will have a chance to weigh in on Weber Basin Water Conservancy District's plan to issue water revenue bonds Thursday morning.

The hearing will be held at 9 a.m. on Thursday, Feb. 20, at the board's regular meeting place, located at 2837 E. Highway 193 in Layton. It will last as long as required for comments.

The district plans to issue about $2.7 million in water revenue bonds in order to acquire and install meters on secondary water in south Davis County, said Tage Flint, general manager and CEO of the district, which is the regional wholesaler of water for Davis Weber, Morgan, Summit and part of Box Elder counties.

The effort is part of the district's water conservation plan, Flint said. After the meters are installed, residents will be issued reports on their water use. Just issuing these reports to make people aware reduces their water use, Flint said, even without charging per gallon for the water.

Historically, secondary water has not been metered because it contains debris, but improvements in metering technology have made it possible to meter secondary water, Flint said. The district has gradually installed secondary meters around its service area.

The water revenue bonds are different from the bonds people usually associate with public entities.

"This is not a public-sold bond like you normally see ... this is actually a loan from the Utah State Division of Water Resources," Flint said. "And the way they do that with the large ... entities is to actually go through a bond process to secure the loan."

The loan comes with a low interest rate of only 1%, Flint said. The bonds will not by paid for with tax dollars, but will be covered by the district's revenue from its water rates, he said.

The Utah State Legislature is urged to bring power and water to a Navajo community

Funding request unites politically opposed sides

Posted: 3:24 PM, Feb 22, 2020

Updated: 9:37 PM, Feb 22, 2020

By: Ben Winslow

https://www.fox13now.com/news/local-news/the-utah-state-legislature-is-urged-to-bring-power-and-water-to-a-navajo-community

SALT LAKE CITY — Evangeline Gray walked from room to room in the Utah State Capitol to meet with lawmakers, asking for money.

She lives in Westwater, a community that has no power or water. It's right next to Blanding, where residents enjoy modern appliances and internet access.

"To get the house heated, we still use wood and fire," Gray told FOX 13.

Gray hauls in water to a tank at her home. A little bit of solar helps provide some power for a refrigerator.

"We're still in a third world community per se and we don't need that," Gray said. "We need water and electricity like everybody else."

Accompanied by Alastair Bitsói of Utah Diné Bikéyah, Gray and other residents of Westwater are asking the Utah State Legislature to fund $500,000 to help build infrastructure into the community of about 29 families on roughly 120 acres of land.

"It comes down to which government agency wants to help these citizens who are in desperate need of basic services that the rest of America takes for granted," Bitsói told FOX 13.

Westwater exists in an interesting space, politically speaking.

"Westwater sits next to the city of Blanding. It's on a piece of ground that's owned by the Navajo Nation but it's not reservation land," said Rep. Phil Lyman, R-Blanding. "So it's fee title land, owned by the nation. It's land that's been occupied long before the town of Blanding."

"Fee simple" land is owned by the Navajo Nation, but it is basically private land with taxes going to San Juan County. Because of those issues, Westwater resident Pamela King said it has gone without water and power.

"Well, it’s Navajo Nation. Well, it’s the city. Well, it’s Utah," she said. "It’s just kind of been bouncing around."

The project is expected to cost millions, Utah Diné Bikéyah said. A number of different sources have been coming together to fund it. Utah State Treasurer David Damschen, who oversees the Navajo Trust Fund, is utilizing some funds. Utah Governor Gary Herbert included it in his proposed budget, and the Navajo Nation is also supportive.

Helping Westwater residents has also united Utah Diné Bikéyah and Rep. Lyman, who are normally on opposite sides of issues in southeastern Utah.

Rep. Lyman, a staunch supporter of President Trump, opposed the creation of Bears Ears National Monument and backed the president's decision to shrink it. Utah Diné Bikéyah strongly advocates for the monument and its preservation.

While Bears Ears is a subject they disagree vehemently on, Westwater is one the two sides find common ground. Rep. Lyman said the people of Westwater are his neighbors and friends and they deserve this funding.

"Political differences aside, it’s a human need," said Bitsói. "I’m glad that we can stand together in that regard to help resolve this plight among our community members."

Utah Diné Bikéyah has said ideas for providing water and electricity to Westwater may not necessarily involve utility lines, but investments in solar and leech fields for septic.

In the Utah State Legislature, funding is always a fight. But Rep. Lyman said he was confident the money could be found to help Westwater residents.

"In this situation, it’s hard for anybody to not recognize the need," he said. "This community is the highest priority."

King said she hoped lawmakers would step up and fund the request. The legislature's Executive Appropriations Committee could decide on granting the money as early as next week.

"We’re just praying and hoping people hear us and have a heart to see our community and see they get modern electricity," King said.

Utah Diné Bikéyah said it was also raising funds from the public. Anyone interested in donating can contribute to the group and designate it for Westwater.

EPA will regulate two toxic chemicals in drinking water

By MICHAEL CASEY Associated Press

Feb 20, 2020

https://www.hickoryrecord.com/news/national/epa-will-regulate-two-toxic-chemicals-in-drinking-water/article_5999aa2e-85eb-52bf-b9a5-ee6009e4c9f3.html

CONCORD, N.H. (AP) — The Environmental Protection Agency announced Thursday that it plans to regulate two nonstick and stain-resistant compounds in the drinking water amid growing concerns the chemicals found in everything from pizza boxes to carpet pose a health hazard.

The agency is targeting a class of chemicals known as perfluoroalkyl and polyfluoroalkyl substances, or PFAS. It will regulate the compounds, PFOA and PFOS, which are among the oldest chemicals in this class and have been phased out in the United States. It also plans to research whether other PFAS chemicals will be added to the list.

Until now, the agency has come under fire from environmentalists for only setting a nonbinding health threshold of 70 parts per trillion for PFOA and PFOS in drinking water. Several states have responded by setting their own PFAS limits for drinking water that are far tougher than the federal guidance.

“The U.S. leads the world in providing access to safe drinking water for its citizens, thanks in part to EPA’s implementation of the Safe Drinking Water Act,” Acting EPA Administrator Andrew Wheeler said in a statement. “Under President Trump’s leadership, EPA is following through on its commitment in the Action Plan to evaluate PFOA and PFOS under this Act.”

The move comes as the chemicals are increasingly turning up in public drinking water systems, private wells, sludge from wastewater treatment plants and even food. Military installations that use PFAS-laden firefighting foam and businesses that work with PFAS are two big sources of water contamination.

Known as “forever chemicals” because they persist in the environment, the compounds have also been linked to a growing list of health problems.

Federal studies of people heavily exposed to the compounds have found links between high blood levels of older kinds of PFAS and a range of health problems, including liver issues, low birth weights, and testicular and kidney cancer.

Environmentalists welcomed the move but argued it should have come much sooner.

“It’s decades too late but it’s better late than never," Scott Faber, Environmental Working Group's senior vice president for government affairs, said in a statement. "It could still take years — if ever — for EPA to issue a final standard. But it’s a step in the right the direction, and it would not have happened but for a bipartisan sense of outrage.”

Mindi Messmer, co-founder of the New Hampshire Safe Water Alliance, which pushed for tough PFAS drinking water standards in the state, said the EPA announcement falls far short of what is needed to protect public health.

“EPA needs to move quickly to prevent chronic disease by halting the use of the entire class of these industrial toxins until they are proven safe,” Messmer said in a statement. “Every single day, these chemicals continue to contaminate the air and water ... EPA needs to reevaluate the science, not the politics or corporate interests, to move expeditiously to protect public health.”

Utah Valley snow packs in good shape

By Genelle Pugmire Daily Herald

Feb 22, 2020

https://www.heraldextra.com/news/local/central/orem/utah-valley-snow-packs-in-good-shape/article_af47c299-7598-56a1-a13a-4dc386bfcc74.html

When it comes to water, sewers and storm water, Orem is in good shape as it gets closer to spring.

Chris Tschirki, Orem Public Works director, said current snowpacks in the water sheds and the reservoirs from which Orem gets a portion of its water are all looking good.

The first capture of water for Orem is the Jordanelle Reservoir. Tschirki said reports out this week show Jordanelle is at 85% capacity. The second capture is Deer Creek Reservoir, which is at 95% capacity. The third is Utah Lake, which is at 100% capacity.

“We are actually managing releasing water (from Utah Lake), so there is no compromising homes,” Tschirki said. “We are in a fortunate position. We have two large reservoirs where releases can be controlled. It’s the sudden snow melts that are a concern.”

Snow melts usually begin the last part of April and snow is completely gone by the first week of June, according to Tschirki. Too hot of a spring could send snow down faster than wanted.

The soil moisture is lower than average, which means water is going in the ground rather than down the river, which is a good thing, Tschirki added.

While many eyes are fixed on the mountain snow, there are still water issues in Orem and throughout the valley as a whole. There are a number of capital improvement projects that remain on hold until city coffers have the revenue needed to address the projects.

Five years ago, Orem City Council voted to use the pay-as-you go method to care for infrastructure upgrades, but there are projects that need attention, Tschirki said. The city is now looking at bonding for some projects and at other financing options.

“We have to pay-as-you-go for water utility projects,” Tschirki said. “There are $15 million in projects and it is taking years building up money as a result of that.”

One of the projects is replacing water meters with advanced metering infrastructure, or AMI.

“There is about 20% of the infrastructure in place,” Tschirki said. The technology in the new meters allows both the customer and the city to do daily readings on water usage.

“It helps us to control water use more wisely and adds to water conservation,” Tschirki said.

Tschirki will brief the City Council on Tuesday and get feedback from them. He is hoping to accelerate the project.

“This is needed today,” he said.

As for the five- and seven-year plans on utility fee increases, Tschirki said it is on hold this year and there will be no increases.

“We are working in a holding pattern,” he said. “It makes sense to bond for projects that will help multiple generations for some 100 years. You don’t just put the money on the backs of people today.”

Rate increases staring in 2016. Storm water fees were to increase over five years. This is the fifth and final year for those increases. Water and sewer are set for seven years of increases.

Orem’s waste water treatment plant is in line for 2024 regulations set by that state that allow for only one milligram per liter of phosphorous. Tschirki said this year they would be working on a waste water treatment plant master plan that would look at further regulations that may be coming in the next decade.

While there are major projects to take care of, Tschirki said there are water line breaks every week.

“We have an aging infrastructure and we are actively replacing water lines,” Tschirki said.

As for the CIPs yet to be done, Tschirki said, “We’re at the beginning of something really good in Orem.”

Colorado River Flows Are Diminishing. What Does That Mean For The Lake Powell Pipeline?

By DAVID FUCHS • FEB 21, 2020

https://www.kuer.org/post/colorado-river-flows-are-diminishing-what-does-mean-lake-powell-pipeline#stream/0

ST. GEORGE — Warming temperatures are causing diminishing flows for the Colorado River, according to a new study published Thursday.

The report, authored by Paul Milly and Krista Dunne of the U.S. Geological Survey and published in Science, suggests that climate change could lead to a 20% to 30% decrease in the river's flow by the middle of the century.

The analysis comes in the midst of Utah's latest effort to develop the Lake Powell Pipeline. The project would transport water from the reservoir to serve as a second water source for the fast-growing communities in the southwest corner of the state. For over a decade, Utah lawmakers have pushed the pipeline, which is currently under review by the Bureau of Reclamation.

The study builds on a growing body of research that shows the relationship between higher temperatures and less water in the Colorado River Basin, said Brad Udall, a senior water and climate researcher at Colorado State University.

"That means that any new diversion in the river and any existing diversions are going to have to figure out how to use less water," he said. "What's particularly concerning to me about the Lake Powell Pipeline is that the way the Colorado River Compact works is that Johnny Come Lately diversions put the whole system at risk."

Udall was referring to the 1922 agreement — often called "The Law of the River" — that divides the river's flow between the upper-basin states of Colorado, New Mexico, Utah and Wyoming and the lower-basin states of Nevada, Arizona and California.

The risk Udall warned of is a scenario in which water levels across the basin drop so low that the upper-basin states are not able to deliver the agreed upon amount to the lower basin. This would trigger the first-ever "compact call" and result in unprecedented reductions across the entire system.

"How one would address the equities of this no one knows. How one would actually implement this no one knows," he said. "So that's the great unknown that makes people very nervous."

Utah has long argued it is only using a fraction of the water afforded to it under the compact. And local water officials like Zachary Renstrom, deputy general manager of the Washington County Water Conservancy District, say that climate change is why they need the project now.

He says that his county — which is projected to triple in population by 2065 — depends solely on the Virgin River, which is even more vulnerable to climate change.

"Having a community based upon one small desert tributary of the Colorado River makes me extremely worried," he said.

Conservancy district officials acknowledge that climate change is affecting the Colorado River basin. But they contend that the river is still the most reliable source of water available and has sufficient water for the project, according to models created by the Bureau of Reclamation.

The bureau became the lead agency reviewing the project in October, after Utah withdrew its application from the Federal Energy Regulatory Commission. It is currently preparing a draft environmental impact statement for the pipeline, which is scheduled for release this summer.

Project manager Rick Baxter told KUER that the statement will address potential impacts of climate change.

> *Correction 2/21/20 1:09 p.m. MT: A previous version of this story misstated Brad Udall's university.*
> *Clarification 2/28/20 5:59 p.m. MT: This story was changed to clarify that the Lake Powell Pipeline would create a second source of culinary water in Southwest Utah.*

Increased nitrate makes tap water dangerous for infants in Moroni, officials warn

By Lauren Bennett, KSL.com | Posted - Feb. 26, 2020 at 3:25 p.m.

https://www.ksl.com/article/46722682/increased-nitrate-makes-tap-water-dangerous-for-infants-in-moroni-officials-warn

MORONI — Infants 6 months old and younger should not drink tap water in Moroni due to high levels of nitrate B, city officials said on Wednesday.

That means tap water should not be used to make baby formula until further notice.

A mechanical failure caused the increased levels of nitrate, making the drinking water "a serious health concern for infants less than 6 months old," officials said.

Bottled water should be used for infants instead — boiling the water will not reduce the nitrate levels. Residents should not boil the water as it will make the nitrate levels concentrated and even more dangerous.

Bottled water provided by the city can be picked up at Moroni City Hall, 80 S. 200 West.

The water is only a health concern for babies; anyone over the age of 6 months can drink tap water. However, residents with health issues should consult with a doctor about drinking water with increased nitrate levels.

City officials said they are "working around the clock to repair the broken source" and will let residents know immediately when levels are restored to normal.

Residents looking for more information on the water situation can contact Carol Haskins with Moroni City at 435-436-8359 or the Utah Division of Drinking Water at 801-560-8456.

Moroni City residents warned not to give infants drinking water due to high levels of nitrates

Posted: Feb 26, 2020 / 03:55 PM MST **/ Updated:** Feb 26, 2020 / 05:43 PM MST

MORONI CITY (ABC4 News) – Utah Department of Environmental Quality issued a "do not drink" order for users in the Moroni City Water System Wednesday.

DEQ officials said due to a mechanical failure to one of the two sources serving Moroni City, the water contains high levels of nitrate.

"Nitrate in drinking water is a serious health concern for infants less than six months old," officials said in a statement.

Residents are warned **not to give the water to infants**. Officials said infants drinking water with high levels of nitrates could become seriously ill and if untreated, they may die. Symptoms include shortness of breath and blue baby syndrome.

According to the CDC, blue baby syndrome is when a baby's skin turns a bluish color, particularly around the eyes and mouth due to a lack of oxygen.

"Symptoms in infants can develop rapidly with health deteriorating over a period of days."

Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.

Residents are warned **not to boil** the water. Officials said boiling, freezing, filtering or letting water stand does not reduce the nitrate level. They said excessive boiling may even make nitrates more concentrated because they remain behind when the water evaporates.

Adults and children older than six months are OK to drink the tap water. Officials said nitrate is a concern for infants because infants can't process nitrates in the same way adults can.

Moroni City crews are working to repair the broken source. City officials will announce with the nitrate levels are below the limit and safe for infants. The city says it is working with state and county agencies to correct this problem.

Inside a giant tunnel through the Wasatch Front, the 'backbone' of Northern Utah's water system

By MEGAN OLSEN Standard-Examiner

Feb 26, 2020

https://www.standard.net/news/local/inside-a-giant-tunnel-through-the-wasatch-front-the-backbone/article_1d7c1aae-ac9e-5f02-9187-c2416f67b08c.html

MORGAN COUNTY — Once a decade, a major tunnel through the Wasatch Front that brings water to Northern Utah is shut down for maintenance.

The Gateway Tunnel, called “the tunnel” by Weber Basin Water Conservancy District staff, is an integral part of the water system in the region, said Darren Hess, assistant general manager of the district.

“The importance of this system to the Wasatch Front is significant,” Hess said. “ ... I think it’s important to stress ... how critical this infrastructure is for us, and that’s why we need to take it down from time to time and maintain it to ensure that it’s going to work properly for many years to come.”

The tunnel was built in the 1950s and is still going strong, Hess said. With the right maintenance, it could last another 100 years.

It’s 94 inches in diameter — almost 8 feet wide, Hess said. It runs for 3.3 miles through the mountain on the south side of Weber Canyon, starting on the east side of the mountain near Mountain Green in Morgan County and exiting near Weber Basin Job Corps, on the south side of the canyon’s mouth in northern Davis County.

The water is then split into two aqueducts, one running about 5 miles north into Weber County and a larger aqueduct running south to Davis County. The Davis aqueduct runs 21 miles, all the way to North Salt Lake, supplying some of the refineries in that area.

“That’s basically the backbone of the water that’s delivered ... along the Wasatch Front, both Weber and Davis aqueducts,” Hess said.

At this time of year, when the tunnel is not shut down, water flows through it at a rate of 50-80 cubic feet per second (cfs), which translates to about 25,000 gallons per minute, Hess said. In the summer, the flow increases to as much as 350 cfs, about 160,000 gallons per minute.

A basketball is about a cubic foot, Hess said, so another way to understand this rate is to envision 350 basketballs running into or out of the tunnel every second. The tunnel can accommodate up to 435 cfs, though it usually runs at about 350-360, Hess said.

During the summer, about 280 of those water basketballs run from the tunnel into Davis' aqueduct, and 65-70 run into Weber's.

The tunnel is shut down only once a decade because that's all that's required to complete necessary maintenance, Hess said. The aqueducts are shut down every two to three years.

While the tunnel and aqueducts are shut down, the district pumps water from 22 deep groundwater wells in Wasatch Front communities, most of them in South Weber and Layton, Hess said. These wells are connected to the water distribution system and are typically used to supplement the water supply during the summer, he said.

The system's reliance on these wells is another reason why the tunnel is not shut down very often.

"If our pumps go down, we don't have any water for the whole Wasatch Front — Davis and Weber counties would be out of water," Hess said. "... It's a risk. It's a big risk."

Kaysville City, for example, receives 100% of its water from the district.

If the pumps failed, the district would need to stop maintenance immediately and send water through the tunnel, Hess said.

During this year's maintenance, the primary goal is to install a large gate on the Davis aqueduct. Right now, maintenance on the southern portion of the aqueduct requires the entire aqueduct to be shut down, Hess said. The new gate will allow water from the Davis aqueduct to still flow to a treatment plant in Layton while stopping the flow to the portion of the aqueduct south of the gate.

Because they wanted to install this gate, and the tunnel was also due for maintenance, they decided to do all of it at once, Hess said.

The district also has plans to replace a stretch of the Davis aqueduct that runs over a fault, changing its location and putting in new technology that will help it withstand an earthquake, said Chris Hogge, power and irrigation manager for the district. The new gate will also help with the completion of that project, he said.

Unlike the Davis aqueduct, the tunnel is deep enough in the mountain that it would fare well in an earthquake, Hess said.

As part of regular maintenance, district staff will do a full inspection of the tunnel, looking for abnormalities in the tunnel's concrete lining, like cracks or excess water seepage, Hess said. The district is also replacing guard gate valves where water is delivered off the Davis aqueduct, he said.

On Wednesday afternoon, staff were repairing cracks along the empty canal that usually carries water from the Weber River to the tunnel's entrance on the mountain's east side.

This maintenance is what has allowed the system to successfully function for 60 years, Hess said.

While the story of crumbling infrastructure across the United States is a common one, the story of the Gateway Tunnel and its two aqueduct offshoots is one of longevity.

"People ... don't see the infrastructure under the ground that's delivering all the water necessarily, and so transportation a lot of times is at the forefront of their thoughts because it impacts them most directly," Hess said. "I mean, how often is the water shut off at your house? You know, not very often. ... We build a system that is fairly reliable."

State health department says water is safe from coronavirus, no need to stockpile water

By MEGAN OLSEN Standard-Examiner

Mar 8, 2020

https://www.standard.net/news/health-care/state-health-department-says-water-is-safe-from-coronavirus-no/article_54c2c323-fd10-56fb-ad93-86fb2397a52b.html

SALT LAKE CITY — The water coming out of your tap has been treated so it's free of the novel coronavirus, state officials say.

"Drinking water treatment and disinfection has effectively protected Utah's population for many decades. These protections will safeguard residents against drinking-water-borne viral infections — including coronavirus," says Marie Owens, Director of Utah Department of Environmental Quality's Division of Drinking Water, in a DEQ press release.

Special treatment practices aren't necessary to kill the novel coronavirus. The methods already used by water treatment plants are enough to kill the virus should it enter the water system, according to Jared Mendenhall, spokesperson for Utah Department of Environmental Quality.

"Chlorine is used to disinfect the water from bacteria and viruses," Mendenhall said. "... These types of viruses are very susceptible to being treated with chlorine ... and we chlorinate to a level that address pathogens that are much more resistant than coronaviruses."

Trace amounts of chlorine are left in tap water, he said, but that's an indication that the treatment was effective because the viruses and bacteria absorb the chlorine.

"You want to see a trace amount of chlorine at the tap," Mendenhall said. "So if you were to ... test the tap (water) and there was no chlorine, that would be an indication that you had multiple pathogens that exhausted the chlorine supply before it made it to the tap."

Drinking water from the tap is safe, he said, and drinking water providers are ensuring all treatment practices are working.

"You don't need to worry about rushing out and getting a bunch of drinking water," Mendenhall said. "Your tap is going to be just fine."

High nitrate level reported in Moroni City water

Ray LaFollette The Pyramid

Mar 5, 2020

MORONI—Moroni City announced that there is an unsafe level of nitrate B in the city water system in Moroni Feb. 26, and has advised that residents should not give city tap water to any infants under six months of age or use it to make infant formula.

Until this issue is resolved, bottled water will be available from 8 a.m.-4 p.m., at the Moroni City Community Center, 80 South 200 West.

Due to a mechanical failure to one-of-two water sources serving Moroni City the city water has an excessive amount of nitrate in it. According to a notice posted by Moroni City, the nitrate standard, or maximum contaminant level (MCL) is 10 parts per milligram.

What to do

1.) Do not give the water to infants. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die.

Symptoms include shortness of breath and blue baby syndrome. Blue baby syndrome is indicated by blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.

2.) Water, juice and formula for children under six months of age should not be prepared with the city tap water. Bottled water or other water low in nitrates should be used for infants until further notice.

3.) Do not boil the water. Boiling, freezing, filtering or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.

4.) Adults and children older than six months can drink the tap water. Nitrate is a concern for infants because they can’t process nitrates in the same way adults can. However, if you are pregnant or have specific health concerns, you may wish to consult a doctor.

What is being done

Nitrate in drinking water can come from natural, industrial or agricultural sources, septic systems and run-off. Moroni City is working with state and county agencies to correct the problem and will make an announcement when the amount of nitrate is again below the limit and safe for infants.

The city is working around the clock to repair the broken source. Prior to ending the “Do not drink” order, Moroni City will take water samples to ensure the drinking water meets state and federal health standards.

For more information, call Moroni City Hall at (435) 436-8359 or call the Utah Division of Drinking Water at (801) 560-8456.

SLC Department of Public Utilities reassures residents COVID-19 does not affect drinking water

By

Gephardt Daily Staff

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March 4, 2020

SALT LAKE CITY, Utah, March 4, 2020 (Gephardt Daily) — The Salt Lake City Department of Public Utilities is reassuring the residents that depend on its supply that the coronavirus outbreak does not affect drinking water.

A news release from the department said the following:

“People may react to news of the COVID-19 (coronavirus) by purchasing large quantities of bottled water. While our city recommends keeping a four-day supply of bottled water for an emergency kit in case of a natural disaster, it is not necessary to purchase bottled water to prepare for COVID-19. Salt Lake City drinking water from the tap is safe, reliable, economical, and meets or exceeds all federal and state safe drinking water standards.”

The department serves more than 360,000 residents with drinking water, the news release said.

“We want to assure them that the drinking water supply is safe. It is vital to emphasize that data from the Centers for Disease Control, and both the Utah and Salt Lake County Health Departments have determined the virus is transmitted by air and spread person-to-person. There is no data to suggest water-borne transmission.”

The department said it intends to act transparently and communicate in a timely way with the public in the event of a disruption or compromise in water supply or distribution, the news release said.

“But this is not the case with COVID-19,” the news release said. “Even in the event of a large, local outbreak of the virus, our water, sewer, and stormwater systems would remain operational. This is due to proactive continuity of operations planning.”

Can You Get Coronavirus from Drinking Tap Water?

By **Stephanie Dube Dwilson**

Updated Mar 15, 2020 at 8:30am

https://heavy.com/news/2020/03/can-you-get-coronavirus-from-drinking-tap-water/

s coronavirus cases spread across the United States, more and more people are wondering how you can catch COVID-19. Is drinking tap water safe? Can you catch coronavirus from the water? The good news is that experts say no, you can't get coronavirus from your water because COVID-19 has not been detected in drinking water supplies. Read on for more details.

The EPA, CDC, & WHO Say Drinking Water Is Safe Because COVID-19 Is Susceptible to Disinfectants Used for Public Water

The EPA has released information specifically addressing the question of coronavirus and drinking water. The EPA notes the following:

The COVID-19 virus has not been detected in drinking-water supplies. Based on current evidence, the risk to water supplies is low. Americans can continue to use and drink water from their tap as usual."

The EPA's regulations require treating public water systems in a way that prevents viruses from contaminating drinking water. According to the EPA, COVID-19 is "particularly susceptible" to their disinfection standards and treatments.These findings and recommendations relate specifically to city drinking water. If you have a well, for example, then you might want to speak with an expert about filtration and disinfectant options.

The World Health Organization (WHO) has also noted that COVID-19 hasn't been detected in drinking water. "Based on current evidence the risk to water supplies is low." The virus is spread mostly through close contact. This also means that you don't need to boil your drinking water as a precaution.

The EPA further notes: "EPA recommends that Americans continue to use and drink tap water as usual. According to the CDC, washing your hands often with soap and water for at least 20 seconds helps prevent the spread of COVID-19."

The CDC notes the same: "The COVID-19 virus has not been detected in drinking water. Conventional water treatment methods that use filtration and disinfection, such as those in most municipal drinking water systems, should remove or inactivate the virus that causes COVID-19."

Local Water Providers Share the Same Good News

You can also find lots of information online from your specific water provider. Here are some examples.

According to Helix Water District, coronavirus can be disinfected with ozone, chlorine, and other types of treatments used for tap water. Water providers frequently test and monitor their treatments to ensure everything is safe and running smoothly.

Colorado has also said that the state's drinking supply is safe, Colorado Independent reported. The state's laws require disinfectants for viruses, including chlorine bleach, peracetic acid, and inactivation via UV irradiation. Colorado issued a fact sheet about water and wastewater here.

San Jose Water also noted that they are monitoring advisories. Their water comes from groundwater from wells, surface water from reservoirs, and imported water from three treatment plants.

They noted:

According the World Health Organization (WHO) and the American Water Works Association (AWWA), current treatment methods used by San Jose Water in our surface water treatment plants as well as purchased treated water from Valley Water are sufficient to disinfect water for contaminants, including COVID-19. Groundwater sources would not be sources for COVID-19 and existing required testing throughout our distribution system requires a chlorine residual to ensure water is clean and safe for consumption."

Utah has also said its water is safe and you don't need to stock up on bottled water, Standard-Examiner reported. Marie Owens, Director of Utah Department of Environmental Quality's Division of Drinking Water, told the Examiner: "Drinking water treatment and disinfection has effectively protected Utah's population for many decades. These protections will safeguard residents against drinking-water-borne viral infections — including coronavirus."

Methods already in place are enough to kill coronavirus in the tap water, the Examiner noted. Special measures aren't needed.

CalWater also posted a notice on its website that tap water is safe. Their site reads:

Your tap water is safe from coronavirus (COVID-19), according to the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC). The safeguards we have always taken to protect water quality are effective to keep it safe from viruses, including COVID-19. We are also taking steps to keep our customers and employees safe. In addition to encouraging frequent and thorough hand-washing, covering coughs and sneezes, and avoiding close contact with others, we are taking steps to prevent any disruption in our service. While you

may be stocking up on emergency supplies in case you need to stay home, please know that you do NOT need to worry about your tap water."

The EPA also notes that there's no evidence that COVID-19 can be transmitted through sewage systems either, even without wastewater treatment. Wastewater treatment does involve treating viruses and pathogens, including COVID-19, which is susceptible to wastewater disinfection.

Coronavirus shopping: State, feds say no need for rush on bottled water supplies

By Amy Joi O'Donoghue, KSL | Posted - Mar. 17, 2020 at 6:44 a.m.

https://www.ksl.com/article/46730978/coronavirus-shopping-state-feds-say-no-need-for-rush-on-bottled-water-supplies

SALT LAKE CITY — The U.S. Environmental Protection Agency, Utah drinking water regulators and public delivery systems are reassuring residents that water from the tap is safe to drink, even as crowds scramble to stock up on bottled water supplies amid the coronavirus pandemic.

Conventional water treatment and disinfection removes any viruses like COVID-19 and boiling water is not necessary, according to government officials.

The EPA has released an online document to answer questions the public might have, including information from the World Health Organization that risk to drinking water supplies is low.

“Drinking water treatment and disinfection has effectively protected Utah’s population for many decades. These protections will safeguard residents against drinking-water-borne viral infections — including coronavirus,” said Marie Owens, director of the Utah Department of Environmental Quality’s Division of Drinking Water.

The Central Utah Water Conservancy District also said it has put a plan in place to ensure water deliveries are not reduced should there be diminished staffing or a reduced availability of chemical supplies.

“It is part of Central Utah’s mission to plan for the future, including plans for emergency situations and unforeseen circumstances,” said Gene Shawcroft, the district’s general manager.

The Salt Lake City Department of Public Utilities has information on its website to advise customers. While it is best practice, for example, to have a four-day supply of water on hand in the event of a natural disaster, the department said it is not necessary to stockpile water due to the coronavirus.

The department added there is no data to suggest any incidences of water-borne transmission.

“Even in the event of a large, local outbreak of the virus, our water, sewer and stormwater systems would remain operational. This is due to proactive continuity of operations planning,” the department said.

Due to a proclamation issued last week by Salt Lake City Mayor Erin Mendenhall, the department will not suspend water service due to nonpayment as the city continues to battle the outbreak.

Drinking water systems and wastewater systems are completely separate, but the coronavirus could present a challenge for sewage treatment plants.

With the shortage of toilet paper, there may be some consequences to treatment plants if there is an influx of paper towels, flushable wipes — which really aren't flushable — and facial tissue, which has a soft and silky surface that makes them harder to dissolve.

Flushing those items could result in expensive home repairs and costly fixes to treatment plants.

The Wasatch Front Water Quality Council, in fact, brought the issue to the attention of the state Legislature even before the coronavirus outbreak.

Council members urged caution through its "Toilets Are Not Trash Cans" campaign, asserting it could be a $3 million problem of clogged lines and ruined pumps at treatment facilities throughout the state.

Jill Jones, manager of the Central Davis Sewer District, said she is concerned that as people turn to other products in light of the toilet paper shortage, there could be stinky, and unhealthy, consequences.

"Just remember the last thing you want is to have sewer backup in your home if you start flushing these things down the toilet," she said.

"We are concerned about it."

Utah's snowpack and water supply in good shape as March winds down

'Cold and wet, that's what we want.'

Posted: 12:34 PM, Mar 26, 2020

Updated: 12:34 PM, Mar 26, 2020

By: Scott McKane

https://www.fox13now.com/news/local-news/utahs-snowpack-and-water-supply-in-good-shape-as-march-winds-down

SALT LAKE CITY — There is good news regarding Utah's snowpack and the water supply.

Overall things are looking pretty good according to State Hydrologist Brian McInerney, and the current storm will only help.

"Cold and wet" McInerney said. "That's what we want."

From the Bear River drainage in northern Utah down to the Virgin River in southern Utah and everywhere in between, river flows and snow packs are very close to if not well above 100 percent.

McInerney says that's due to three distinct weather patterns that began late last year.

First, in November and December heavy rain and mountain snow in southern Utah.

Then several winter storms which hammered northern Utah in January and February and now, more storms in southern Utah.

McInerney says so far so good but like any hydrologist, he'd like to see some more precipitation.

"We need more snow and we need more wet weather during the spring but it's doable, it's OK," he said. "And then when you take the next step and you look at where we are with our reservoirs, they're in really great shape. We had a fabulous run off year last year even though we had a hot summer, we're still doing quite well reservoir wise so the overall water picture is pretty good."

The only thing that could spoil this is an extended period of warm weather this spring.

That would not only cause an early runoff but it would also mean the ground underneath all that snow pack wouldn't get thoroughly saturated.

“If you get a cold wet spring, you get a much more efficient runoff,"McInerney said.

We are due to have some warm weather this weekend, statewide, but based on everything he’s seeing, McInerney says it does not appear to be a long term pattern.

Solar-powered cisterns bring running water to Navajo homes

By

Jean Lotus

MARCH 30, 2020 / 2:55 AM

https://www.upi.com/Top_News/US/2020/03/30/Solar-powered-cisterns-bring-running-water-to-Navajo-homes/5611585248696/?ur3=1

DENVER, March 30 (UPI) -- More than 300 families on the Navajo Nation reservation have fresh running-water systems for the first time, provided for free, and a non-profit group hopes its delivery model can expand to other remote Navajo households in New Mexico, Arizona and Utah.

The Navajo Water Project installs complete water systems, funded by donations, for households across the Navajo Nation. School bus drivers in their off-hours deliver free water monthly by truck to the new solar-powered cistern systems.

The project is run by parent organization DigDeep, a California-based water and sanitation non-profit.

Of the Navajo Nation's 174,000 reservation residents, more than 52,200, or 30 percent live without running water and sanitation services, according to the Navajo Nation.

"Grandmas and grandpas have taught us how to get water from a livestock well, and boil that and run it through a Bluebird flour bag," said Cindy Howe, the organization's project manager in Thoreau, N.M. "That's how we grew up."

It costs Navajo Water Project about $4,500 and takes 24 hours to hook up families to water. Technicians install a 1,200-gallon cistern and pump, powered by a solar panel. They then plumb a sink and water heater in the home.

Solar energy also can power a bank of LED lights and USB ports for charging devices if the home has no electricity.

"Even myself, I get choked up when I see a person getting water for the first time in their home," Howe said.

'They're so happy'

"The look on their faces, whether it's a grandma or a small child -- they're so happy. It's been promised and promised and promised, and sometimes they still don't believe it's going to happen," she said.

Water is purchased from the reservation's Navajo Tribal Utilities Authority or acquired from refurbished community wells that may have been contaminated formerly or were no longer used.

Cisterns are filled by a delivery truck service.

"School bus drivers have a big chunk of free time between routes," said George McGraw, parent organization DigDeep's executive director. "They drive a water truck, pick up water at access points and then deliver it on their routes."

The organization also cleaned up and re-plumbed the water system at Navajo Nation's only special-needs school in St. Michaels, Ariz.

This year, the Navajo Water Project plans to install 300 more cistern systems from offices in Thoreau, Navajo Mountain, Utah and Dilkon, Ariz.

Building infrastructure, including miles-long water lines, to plumb remote homes could cost hundreds of thousands of dollars, which could never be recouped by the water utility authority, McGraw said.

Larger-scale solar cistern and delivery systems could help remote reservation residents get running water access, he said.

Living without running water is a way of life for many of the residents of the Navajo Nation, residents said.

"We do have elderly still tied to the land in remote areas who don't want to move to homes that are available with all the modern essentials," Navajo Mountain Chapter President Hank Stevens said. About 800 residents straddle the state line between San Juan County, Utah and Navajo County, Ariz.

No indoor plumbing

Arizona and New Mexico are among the states with the highest number of people living without indoor plumbing, according to U.S. Census American Community Survey.

Race is the greatest predictor of having no access to running water, an October 2019 report from DigDeep and the U.S. Water Initiative said.

Native Americans are more than 19 times more likely to live without indoor plumbing, and African Americans and Latino residents are twice as likely to live without it, the report said.

"Nationally, there has been economic disinvestment and lower tax bases in these communities," McGraw said. "The vast majority have never had infrastructure, and their communities were either deliberately or inadvertently sidelined in the past when that infrastructure was being built."

Some residents of the Navajo Nation travel hundreds of miles each month to buy bottled water and reuse water several times, the report found.

Some elderly members practice extreme water conservation, using 3 to 4 gallons of water per day, while the average U.S. resident uses 88 gallons. Some families favor processed food that doesn't require using fresh water, the report said.

"Some people are homebound, and they're having a hard enough time getting water for basic consumption needs," said Zoe Roller, senior program manager at the Oakland, Calif.-based U.S. Water Alliance, a water access non-profit.

Local wells also can be contaminated with uranium and other toxins like arsenic, Roller said.

"That's even more urgent now when health depends on basic hygiene like frequent hand-washing," Roller said.

Water Watch: Checking in on current conditions, conservation efforts in Utah

By Jonathan F. Parry

Apr 9, 2020

https://www.standard.net/news/environment/water-watch-checking-in-on-current-conditions-conservation-efforts-in-utah/article_2d2c7310-e5d9-56e3-8f7b-322492828990.html

Snow, particularly in our state, is truly the lifeblood of our quality of life — and our economy. It makes up a majority of the water supply we receive for the year. Without it, we wouldn't have enough stored to get through the hot summer months.

As is always the case, we entered last winter wondering, "How are we doing? How's the snowpack? Are the reservoirs going to fill?"

Weber Basin Water Conservancy District provides water to a service area with a population quickly approaching 700,000 residents located in Davis, Weber, Morgan, Summit and part of Box Elder counties. The District is committed to protecting our existing water resources, using them wisely and providing for the future.

Our district delivers over 74 billion gallons of water a year and have granted over $600,000 in water conservation rebates. We performed over 20,000 water quality tests in 2019. The value of the facilities we manage has been estimated at $3.7 billion.

In our area, my colleagues and I are grateful each day for the foresight of water managers that preceded us into the early part of the last century. With the best information available, they planned for future water needs and oversaw the construction of storage reservoirs we manage today, including Willard Bay, Pineview, Causey, Lost Creek, East Canyon, Rockport, and Smith & Morehouse.

These reservoirs provide us the ability to store snowmelt runoff for delivery of water to our customers throughout the irrigation season as well as the ability to weather drought conditions over multiple years.

At the end of March, the Bear River region snow water equivalent percent of average was 110%, down from 117% at this time a year ago. In the Weber/Ogden region it was at 99% as opposed to 131% in 2019. So far, this winter has been just about average for our area.

At the end of March, Willard Bay was 93% full, Pineview 65% and Causey 79%. Other reservoirs such as Lost Creek were at 80%, East Canyon 91%, and Rockport 78%.

Current projections lead us to believe that these reservoirs will most likely fill this season.

Having said that, the efficient and sustainable use of this limited resource remains a focus of our district.

In order to accommodate growth, be prepared for whatever climate may become the new norm, and continue to develop more sustainable water use, we all need to be constantly looking for ways to eliminate wasteful watering habits and encourage the efficient use of our water.

At our facility in Layton at 2837 E. Highway 193, we have a Learning Garden that is open to the public. Plus, we offer classes throughout the spring and summer that teach the principles of water-wise landscaping. With the current environment, many of these classes are now being offered online. Details can be found on our website at https://weberbasin.com/Conservation/LearningGarden.

The district continues to offer rebates for a variety of conservation programs and products; see our webpage for additional details.

Finally, we would like to take a moment and assure the public of the safety of your drinking water and the confidence we have in being able to continue to deliver safe, reliable water even during this pandemic. Our staff consists of dedicated individuals who understand their role in ensuring the public's safety. We look forward to a continued productive relationship with those we serve.

Provo digging into area aquifer systems with pilot projects

By Genelle Pugmire Daily Herald

Apr 8, 2020

Living in a high desert, water is sometimes scarce. But it's always a priority as the population grows.

For that reason Provo Public Works is running five studies on the city's aquifers that feed into the wells where the majority of the city's drinking water comes from.

"This is a pretty significant undertaking," said Dave Decker, director of Public Works. "It is critical for our future."

The studies vary in length of time but are all important to recharging the wells.

The Aquifer Storage and Recovery (ASR) project began with preliminary work about two months ago and could extend as far out as seven years, Decker said.

"The aquifer tracking efforts by our public works department show a steady decline in groundwater levels, with the levels dropping 1-2 feet consistently each year in most locations, with other monitoring locations showing significantly greater declines," said Nicole Martin, city spokeswoman.

Aquifers are best thought of as huge storehouses of water underground, Martin said.

"Groundwater is one of our most valuable resources, but not all of it is usable or accessible," Martin said. "The void spaces in the rocks below the Earth's surface can be filled with water. When these water-bearing rock areas readily transmit water to wells and springs, it is called an aquifer."

Martin added, "Just as we can pump water out of an aquifer with wells, water can also be added to the aquifer, known as recharging. The recharging process occurs naturally through precipitation and snow melt in the mountains and foothills. It can also be augmented through man-made efforts."

Decker noted that it can take years for water to travel through an aquifer to a well.

The studies are happening now because Decker said it's the right thing to do for the future.

“We’ve had two or three years with good snowpack, and I feel not wasting an opportunity to save the water is important,” Decker said.

Decker said the city is in good shape right now. However, there is a decline in the amount of water in the wells.

“The aquifer tracking efforts by our public works department show a steady decline in groundwater levels, with the levels dropping 1-2 feet consistently each year in most locations, with other monitoring locations showing significantly greater declines,” Martin said.

The five test projects are in optimal locations to determine if the city can replenish the aquifer in a sustainable fashion without adversely affecting it in any way.

Martin said the data gathered during the spring testing period will provide the basis for a state grant request to continue aquifer replenishment on a more permanent basis.

ASR pilot projects are or will be installed at the following locations:

Rock Canyon

Riverview Park

5600 North adjacent to Provo River

3950 North between Canyon Road and Timpview Drive

South of 4800 North on the east side of University Avenue

The one in Rock Canyon was set up about two months ago. Drilling will start next week at Riverview Park.

There is little to no community impact, with most being completely unaware the project is even taking place, Martin said.

“Some of it varies from 100 to several hundred feet deep, with each well taking approximately two weeks to drill,” Martin said. “During this brief construction time, residents would see a drill rig, but upon completion the only visible signs would be an above-ground pipe approximately 10-inch in diameter and 3-4 feet high.”

Decker added the city has worked mostly with state agencies on the preliminary work so they can qualify to get licensing needed to do the whole project.

“We’ve worked with the Department of Water Quality, Department of Drinking Water and the Department of Water Rights,” Decker said.

“Several different strategies for recharging the aquifer are being investigated,” Martin said. “Infiltration basins, pipelines and pump stations will need to be constructed. Every effort is being made to make elements of the project aesthetically pleasing and environmentally friendly.”

Next week residents will be able to see water running in Rock Canyon. It is a test being done with drinking water going down the stream bed, Decker said.

When the snow melt begins, it will be normal for the spring runoff to do it naturally. This way Public Works can see the difference between the two.

Magna tap water under a boil order — because of a dead raccoon

By Sean P. Means

・Published: 3 days ago
Updated: 3 days ago

https://www.sltrib.com/news/2020/04/09/magna-tap-water-under/

Residents of Magna will have to boil their tap water for the next 24 to 48 hours, after a dead raccoon was found in a municipal water tank.

Residents of the town west of Salt Lake City are being told by the Magna Water District not to drink directly from the tap, and to boil tap water before drinking it.

The raccoon was found Wednesday by divers inspecting one of Magna's eight water tanks, Terry Pollock, the water district's general manager, said Thursday.

The tank, which holds 500,000 gallons, was taken offline immediately, Pollock said. The tank has been drained, and is being cleaned and disinfected, he said.

The tank serves water for Magna's northwest corner, Pollock said. But the whole town will receive the boil order, Pollock said, based on guidance from experts at the state's Division of Drinking Water in the Utah Department of Environmental Quality.

The water will be tested for the next day or two, and when health officials are confident there is no contamination, the boil order will be lifted, Pollock said.

The district believes a contractor working on the tank in the last week or two may have left a portal open, Pollock said, which allowed the raccoon to get inside. The raccoon had not shown signs of decomposition.

The Magna district has eight tanks, with a total capacity of 17 million gallons of water, Pollock said.

Greg Schulz, administrator for Magna Township, said he would be issuing an alert to residents informing them of the boil order. The alert will appear on the township's webpage, and residents will also receive an automated phone call.

Free bottled water for residents under Magna boil order

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by McKenzie Stauffer

Friday, April 10th 2020

https://kutv.com/news/local/free-bottled-water-for-residents-under-magna-boil-order

(KUTV) — UPDATE: (April 10, 11:14 a.m.) -- The boil order has been lifted, according to Magna Water District.

(KUTV) -- Residents affected by a boil order in Magna can get free bottled water on Friday.

The boil order went into effect on Thursday after a raccoon was found inside a water storage tank, Magna Water District said.

Smith's Food and Drug is supplying the 38,000 bottles, which are available for pick up between 9 a.m. and 4 p.m.

"We are absolutely overwhelmed with gratitude for Smith's that they were able to respond with such a large quantity on such short notice of the high demand water bottles," a press release stated.

The Magna Water District office is located at 8885 W. 3500 S. in Magna. Access to the office is being detoured from 3500 South to 3100 South because of road construction.

"From 3100 South turn south on 8950 West which turns into 8920 West and that will get you to 3500 South right in front of the main office," the district advised.

A total of 12 water bottles will be given per vehicle.

Officials told 2News they hope to lift the order by the weekend.

For those who are unable to pick up water bottles because of health issues or other limitations, please call the Magna Water District at 801-250-2118. Alternate arrangements may be made.

For more information about the boil order, visit magnawater.com.

New analysis confirms harmful ‘forever chemicals’ at Utah military bases

By Amy Joi O'Donoghue, KSL | Posted - Apr. 12, 2020 at 3:33 p.m.

https://www.ksl.com/article/46740893/new-analysis-confirms-harmful-forever-chemicals-at-utah-military-bases

SALT LAKE CITY — A new analysis confirms drinking water or groundwater contamination at 328 installations across the country that have levels of “forever chemicals” that never break down and pose health risks.

Three of those incidences of contamination were confirmed in Utah including at Hill Air Force Base, Camp Williams and the Salt Lake City International Airport.

The Environmental Working Group pulled Department of Defense records and other documents that led them to suspect 678 installations in total may have a problem with PFAS, which are man-made chemicals used in everyday materials to repel oil, water, grease and stains.

Examples include water repelling clothing, grease resistant food packaging such as pizza boxes and fast food bags, and stain resistant carpet.

While these water samples may be confined to groundwater, the organization emphasized concerns over the adequacy of treatment for private wells and noncommunity providers that deliver water to a variety of facilities that include campgrounds.

Another four sites in Utah — all military — are suspected of having levels of forever chemicals because of the Pentagon’s use of a particular type of firefighting foam.

In a video conference hosted by the nonprofit advocacy organization, Rep. Dan Kildee, D-Michigan, detailed the need to take more action to protect communities and military service members from exposure to forever chemicals.

“These are really dangerous to human health and we ought to act as a nation to protect people from them,” said Kildee, who co-chairs a congressional bipartisan task force formed to address the issue of contamination, especially in the military community.

Kildee said he asked for and was able to get the Department of Defense inspector general to conduct a probe of forever chemicals, but that investigation has likely been delayed due to the spread of coronavirus.

He and members of Congress sent a letter Thursday to the chairman of the House Armed Services Committee and its ranking member asking provisions of the PFAS Action Act be incorporated in to this year's National Defense Authorization Act.

Some of the provisions include more funding for remediation at contaminated sites, requiring the EPA to develop a drinking water standard for certain types of the chemicals in two years, and blood testing for defense department personnel and their dependents.

Last year, the defense spending package included the requirement for active duty military firefighters to have their blood tested, which Kildee said is a good first step but not enough.

The letter also asks that the defense department step up its disposal of firefighting foam that contains the forever chemicals.

"Because service members are disproportionately exposed to PFAS, Congress should take steps to limit needless PFAS exposures," the letter read.

Scott Faber, the Environmental Working Group's senior vice president of government affairs, asserted the defense department has been slow to act even though the agency has known about the risk of forever chemicals for decades.

Growing public awareness of the group of chemicals, however, is helping drive federal and state action to minimize exposure and clean up contaminated sites, Killdee said.

The U.S. Environmental Protection Agency has set an advisory level for forever chemicals at 70 parts per trillion, and some states are seeking to invoke their own standards.

In October 2018, the Utah Department of Environmental Quality formed a working group to address forever chemicals.

Testing of drinking water systems in Utah showed no levels of the chemicals above the EPA standard and there is no history of the chemicals being manufactured in Utah, according to the agency.

Kane County does an about-face, pulls out of Lake Powell pipeline project

By Brian Maffly · Published: 6 days ago Updated: 6 days ago

https://www.sltrib.com/news/environment/2020/04/16/kane-county-does-an-about/

For the past decade, Kane County leaders have argued that their southern Utah community will need water piped from the Colorado River to meet future needs, but the local water district abruptly announced Thursday it was pulling out of the costly Lake Powell pipeline project, leaving Washington County as the only remaining recipient of the water.

The controversial project would divert 86,000 acre-feet of water a year from the chronically depleted Lake Powell into a 143-mile pipeline terminating in a reservoir near St. George. Along the way, the billion-dollar pipeline was to offload 4,000 acre-feet in Johnson Canyon east of Kanab.

But now the Kane County Water Conservancy District has decided it didn't have a "foreseeable need" for the water after reviewing the county's projected population growth and available water resources, according to a release posted Thursday.

"We continue to support the Lake Powell pipeline and consider it absolutely essential to the future of southwestern Utah," said Mike Noel, the district's general manager and the retired Kanab state lawmaker who has long championed the project.

Zach Frankel, executive director of the Utah Rivers Council, and other critics have long pointed to Kane County's ample groundwater supplies as evidence that there was not much need for the project, which would be financed by Utah taxpayers and tap an already over-allocated Colorado River. More than $25 million has been spent on environmental reviews, with a new one underway by the U.S. Bureau of Reclamation, which assumed federal oversight of the project after the Federal Energy Regulatory Commission withdrew.

Kane's pullout eliminates the need to construct a 10-mile pipe to direct the county's share of the water to a spot hardly a mile from Noel's extensive ranch properties in Johnson Canyon.

The project has shrunk substantially from its original version, first unveiled in 2006 legislation. Last year, the Utah Division of Water Resources removed the hydroelectric generation components, which would have enlarged the project's costs and environmental footprint. Iron County, another original participant, exited years ago, citing the high cost of delivering the water all the way to Cedar City.

But state officials, pointing to the mushrooming growth in and around St. George, maintained there is still a need for the pipeline.

Is Magna's water supply in danger with all of these earthquake aftershocks?

by: Tracy Smith

Posted: Apr 16, 2020 / 03:44 PM MDT / Updated: Apr 16, 2020 / 03:44 PM MDT

https://www.abc4.com/news/local-news/is-magnas-water-supply-in-danger-with-all-of-these-earthquake-aftershocks/

MAGNA, Utah (ABC4 News) – A large earthquake rattled Utah the morning of March 18th, now a month later we still feel aftershocks.

With all of the shaking going on, is the water supply in Magna in any danger? Nerves are a little frayed after the boil order from last week when a raccoon was found in a water tank.

ABC4 News spoke with Clint Dilley, Magna Water District Engineer.

He said there are a few things people should understand. He explained approximately 85% of Magna's water is pumped from groundwater, the other comes from the Jordan Water District. Ten years ago a new water treatment plant was built for the supply, so Magna water as traditionally mentioned no longer exists. They have much better water quality now, with 50% of the mineral content gone from the water.

Is there a danger of water contamination if the Kennecott tailings pond was breached by the earthquake?

Although anything can happen, the most likely answer is no.

If there is a breach the tailings pond is designed to move towards the Great Salt Lake. If a failure happened the tailings pond is outside of the recharging area it should not be a problem.

The tailings pond has been in operation since 1905 through several ownerships of the mining facility. Rio Tinto is the current owner.

According to documents found online by ABC4 News, during the last decade, Rio Tinto has put significant effort to make the tailings pond area safer, more durable during tectonic episodes like the earthquake we just had and the subsequent aftershocks.

Twenty-four years ago an environmental study on the tailings pond was completed. Since then massive efforts have gone into making the area safe and cleaning up the environment. You can read the document below ABC4 News found at health.utah.gov

Dilley said that he did not have an active dam failure model for the area, but one is on file at the Division of Dam Safety. Rio Tinto is required to provide the flood model info.

According to online documents, over the last few years, Rio Tinto has made a significant investment in making the pond safer and mitigating environmental damage. Wildlife species have returned to living around the edges of the area, according to the tailings document you can download above 5700 acres have been reclaimed.

A spokesperson for Kennecott said in a written statement to ABC4 News:

"Inspections and data from the extensive geotechnical monitoring system for our tailings facilities have confirmed there has been no impact from the aftershocks this week. Kennecott's tailings facilities are being actively monitored and managed, under a plan reviewed and endorsed by a panel of independent geotechnical experts and Utah's dam regulatory authorities. An extensive state of the art monitoring network is being used with multiple layers of protection, including more than 400 piezometers continually monitoring pore pressure in the embankment, accelerometers which monitor seismic movement, and InSar satellite technology."

The document below goes into extreme detail about the monitoring of the tailings pond.

Magna, Rio Tinto, and the State of Utah have worked together for years, knowing they were in a place vulnerable to earthquakes and tectonic shifts. Although anything can happen, everyone has worked hard to try to keep the community water and the community itself as safe as possible from an accident with the tailings pond.

Reservoirs brimming but drought lurking

By Peter Aleshire Special to the Independent

Apr 21, 2020 Updated Apr 21, 2020

https://www.wmicentral.com/news/arizona_news/reservoirs-brimming-but-drought-lurking/article_0e118ac2-8f1e-5983-8426-13b962d71049.html

ARIZONA — Arizona's reservoirs are brimming for the first time in years, despite a bad snow year and the return of drought across much of the west.

Drought never did release its grip on the long-suffering Navajo Reservation, where emergency relief efforts caused by the high number of COVID-19 cases on the reservation now include water deliveries to many isolated households.

Nonetheless, Arizona's reservoirs are brimming – thanks to an early snow melt.

Last week Roosevelt Lake was 99 percent full, a total of some 1.6 million acre-feet.

Moreover, the three other reservoirs on the Salt River were also 94 to 98 percent full and the two reservoirs on the Verde River were 98 to 100 percent full.

In fact, the Salt River Project (SRP) this week was releasing some 1,000 cubic feet per second over its Granite Reef dam, water it had no room for in its brimming chain of reservoirs.

SRP on April 7 started pumping water out of the C.C. Cragin Reservoir for release into the East Verde River. The reservoir's 100 percent full with 15,000 acre-feet and has been spilling water into Clear Creek for a month. The gush of clear, cold water hit the East Verde just in time to provide perfect conditions for the first-ever stocking of native Gila Trout into that stream.

Brimming from recent rains, streams in the White Mountains and Rim Country were mostly still running at above average levels.

Tonto Creek at Roosevelt was running at 91 cubic feet per second, about 169 percent of normal for this time of year.

The Verde River at Tangle was running at 300 cubic feet per second, about 115 percent of normal.

Only the Salt River was lagging. It's 1,000 cubic feet per second amounted to just 75 percent of normal – reflecting the early melting of a mediocre snowpack in the White Mountains.

So that all sounds great? Right?

Lots of water, reservoirs brimming. What's to worry?

Actually, the brimming reservoirs reflect the return on hundreds of millions of dollars in investment in a water storage system that can withstand years of drought at a stretch.

In truth, the snow pack throughout the West came in well below normal in many areas – and we could face an unusually dry spring, according to the US Weather Service.

Much of the Navajo Nation remains locked in drought. The reservation has a lethal cluster of COVID-19 cases, with 1,197 cases and 44 deaths as of April 18. The water shortages that have dried up wells and water collection systems have compounded the misery – making even routine hand-washing difficult for many people. Part of the emergency relief efforts include water deliveries in areas were people remain locked down by "stay-at-home" orders and a death rate from the virus that's two or three times worse than the rest of the state.

Across the west, a relatively dry winter and forecasts for a dry spring continue to cause problems.

A bone-dry February and a relatively dry March erased many of the gains delivered by a couple of wet, widespread storms in December and January.

"The Salt River basin in Arizona and the Upper Gila River basin that straddles the Arizona New-Mexico border are both at 29 percent" of normal snow pack moisture, according to the National Integrated Drought Information System. "This is partially due to warmer temperatures with recent storms and rain in the mountains driving warm snow drought conditions. These lower latitude locations also reach peak snowpack earlier in the season and late March is already the melt season."

The US Weather Service has even developed a new monitoring system called "Snow Drought," which measures both the snowpack and the speed with which it melts away. The snowpack in the mountainous West plays a crucial role in forest health, runoff, water storage and wildfire patterns – releasing the winter moisture stored as snow gradually melts instead in a damaging flood. By that measure, much of the west remains in a snow drought.

The report noted that the snow basins in south-central Arizona and New Mexico saw the greatest percentage declines in the west when it comes to snowpack moisture.

Washington, Idaho and Oregon were drier than normal in March, while cooler than normal temperatures help protect the snowpack in the Pacific Northwest. California was slipping back into drought in February, but several big March storms came to the rescue producing "modest improvements."

As a result of the rapid melting of the winter's middling snowpack, northern California, Nevada, Oregon, Washington, Utah, southern Colorado and northern New Mexico all now register as somewhere between "abnormally dry" and "severe drought." In Arizona, that includes most of northern Apache, Navajo and Coconino counties.

Fortunately, conditions remain “normal” for the first time in years in the rest of Arizona, with full reservoirs.

Of course, that could pose a problem.

The winter rains and the March showers did produce enough moisture for a bumper crop of grasses. So if April and May turn hot and dry, the grasses will provide perfect tinder for an early start to the wildfire season.

But worry about that later.

For the moment, savor the full reservoirs and the gushing streams.

So long as you pack your mask if you leave the house.

Why did Kane County pull out of the Lake Powell pipeline? Turns out, it doesn't need more water.

By Brian Maffly

・Published: 5 hours ago
Updated: 5 hours ago

https://www.sltrib.com/news/environment/2020/04/23/why-did-kane-county-pull/

For several years, a poster has hung at Kanab's City Hall, warning that Kane County would exhaust its existing water sources by 2020 without an infusion from the proposed Lake Powell pipeline.

The Kane County Water Conservancy District's participation in that controversial water project would cost its customers alone at least $35 million. But the investment would pay for itself, district general manager Mike Noel has argued for nearly two decades, through the economic development and tourism revenues the water would support.

"The fact that we [the Kane water district] need this water project is absolutely true. It's essential. It's one of the most important projects in the state because of the growth that's occurring in southern Utah," Noel, then a Republican Utah House member, told a legislative panel in 2017. "Having this additional 4,000 acre-feet come in, that's absolutely needed."

With the arrival of 2020, however, the district has not run out of water. In fact, it now concedes its current groundwater sources could be sufficient to meet its needs as far out as 2060.

So, in a surprise about-face this month, Kane County "opted" to withdraw from the proposed $1 billion-plus pipeline across southern Utah and northern Arizona that would move 86,000 acre-feet of Colorado River water 140 miles, from Lake Powell, through Kane County, to fast-growing St. George.

This decision "was made after further review of [Kane] County's projected population growth and available water supply, which indicated the county did not currently have a foreseeable need for the water," said the April 16 announcement by the Utah Division of Water Resources, the pipeline's sponsoring agency.

That's a 180-degree reversal of what Noel, the pipeline's leading cheerleader, and state water honchos have been asserting for two decades?

“Current water development projects underway in Kane County will only supply water until about 2020,” states the poster, which was produced by the state and put up Kanab’s City Hall. “Even if current water availability is taken into account, as well as water conservation efforts, the Lake Powell pipeline will still be needed to ensure that Kane County residents will have access to an adequate water supply.”

To critics such as Zach Frankel, executive director of the Utah Rivers Council, that poster demonstrates that pipeline proponents have been misleading the public all along.

“You refuse to acknowledge the basis of our criticism. The project documents themselves demonstrate you don’t need the water,” Frankel told Noel at a district board meeting last week. “Participation in the Lake Powell pipeline will have real and serious financial consequences for the citizens of Kane County.”

The district’s sudden reversal raises a number of questions about why a tiny rural Utah water district, which barely existed when the pipeline first was envisioned in the mid-1990s, got entangled in the massive project and who will cover its share of the costs incurred to date. The state has spent $36.6 million on studies and planning.

Under the 2006 legislation authorizing the pipeline, the recipient water districts — initially Washington, Iron and Kane counties — are on the hook to pay back all the project’s costs, which would be financed by Utah taxpayers.

Now, only Washington County remains.

In an interview Wednesday, Noel explained his district’s continued participation would have bogged down the pipeline’s ongoing permitting process, which is expected to reach a major milestone in June, when the U.S. Bureau of Reclamation releases a draft environmental impact statement.

“We have an opportunity to be involved again. We would go through another NEPA [National Environmental Policy Act] process. That is a decision a future board would have to make,” he said. If the need arises in the future, he added, Kane easily could tap into the pipeline where it passes through midway between Lake Powell and St. George.

“My position is that if people need water, I’m there to provide it,” Noel said. “If I have a pipeline coming through my canyon and I can take some of the water at the headwaters of our system, I would be a fool not to get involved with that.”

The project’s permitting history under NEPA has followed a complicated path with lots of twists and turns. Until last year the review was overseen by the Federal Energy Regulatory Commission because of the pipeline’s power-generation components, which later were dropped. That agency decided that it lacked appropriate jurisdiction because the project was not a true

energy project but rather a water-delivery system, prompting Utah water officials to enlist the Bureau of Reclamation.

“As part of our obligation as the lead federal agency on a NEPA project, it is our job to look at and vet data so we can work though the purpose and need for the project,” said Rick Baxter, a Reclamation program manager overseeing the analysis. “As we walked through that process, we found what seemed to be some discrepancies. Is there truly a need for this project? So we put it back on [Kane] County.”

A short time later, on April 10, the bureau received a reply letter signed by Noel, indicating the Kane district would pull out rather than defend its water-need projections.

The district did not publicly announce the withdrawal until six days later, when the Utah Division of Water Resources put out a news release three hours before the water district’s board was scheduled to meet. At that meeting, Noel explained his decision by simply reading the release, which provided little basis for the district’s reversal.

The board members did not ask a single question, according to an audio recording of the meeting. But Frankel, the longtime pipeline critic who joined the meeting by phone, pressed Noel for details.

Noel said he still believes Kane County will need the water someday — just not now.

“We didn’t anticipate needing that water for at least 20 years, but we will need it the next 50 years. It’s not in the foreseeable future, but it’s still in our plans to use that water. The decision was not to give up our water rights,” Noel said. “The decision was to take ourselves out of the project, which saves us $1.3 million of the cost of the EIS at this point. It was an easy decision to make.”

Noel said the bureau insisted on using population projections developed by the University of Utah’s Kem C. Gardner Policy Institute instead of those from Utah water officials.

Under long-term estimates Gardner released in 2018, Kane’s population was forecast to grow by 4,175 residents or 57% by 2065, while Washington County’s population was expected to swell by 229% to 509,000. Population projections for Kane County suggest, pipeline critics say, that existing sources can cover its future water needs.

Noel complained that Gardner’s projections covered only full-time residents, so they don’t account for all county’s water needs, including second-home owners and tourist accommodations.

In the interview, he said 4 million tourists pass through the county each year, transient-room tax receipts have tripled in recent years, and two new RV parks are coming on line. The county could have up to 9,000 overnight guests, effectively doubling its population at times.

Frankel has long argued that both Kane and Washington counties can meet the needs of their growing populations if they embrace conservation and convert agricultural water to municipal use, thus avoiding a costly, environmentally destructive project. At last week's meeting, he accused Noel of misleading the public about his county's need for new water sources.

"You want water so you can go river boating. I have to get water for people to live. That's what this water project is about," Noel shot back. "Right now, we have pulled out of the EIS. We think Washington County needs it sooner than we do, but we are going to need that water in the future. It's going to go through, and we will get the Lake Powell pipeline, and the yellow dog will bark and the caravan will go on, thank you very much."

Frankel's response: "Mike Noel has been deceptive for 15 years. Why should we believe his lies now? To believe anything he has to say today is pure folly."

Supreme Court says Clean Water Act applies to some groundwater pollution

By Ariane de Vogue, CNN Supreme Court Reporter

Updated 1:35 PM ET, Thu April 23, 2020

https://www.cnn.com/2020/04/23/politics/supreme-court-clean-water-act-maui/index.html

Washington (CNN) The Supreme Court on Thursday ruled that the Clean Water Act requires the federal government to regulate some groundwater pollutants that find their way into navigable waters such as oceans, rivers and streams.

The 6-3 opinion penned by Justice Stephen Breyer is a middle ground position that rejects the Trump administration's push for lesser regulation, but wipes away a lower court ruling which would have required more permits under the law.

"It makes clear that the Clean Water Act requires a permit for at least some, and potentially a lot of, groundwater pollution," said Steve Vladeck, CNN Supreme Court analyst and professor at the University of Texas School of Law.

The case centered on a once-pristine reef in Maui, Hawaii, that environmental groups say has been devastated by pollutants from a wastewater reclamation facility.

At oral arguments, several of the justices were sympathetic to environmental concerns, but also seemed concerned with the breadth of a lower court opinion that could force large counties and even single family homeowners to acquire expensive and burdensome permits under the law.

The law requires those who discharge pollutants into navigable waters from pipes or wells to obtain a federal permit. But the question presented here was whether such permits are also required for pollution that travels some distance from the pipe or well through groundwater and makes its way into navigable water.

The County of Maui owns and operates four wells at the Lahaina Wastewater Reclamation Facility, the principal wastewater treatment plant for West Maui. The wells receive approximately 4 million gallons of sewage per day from a collection system that serves about 40,000 people. The sewage is treated and either sold for irrigation purposes or injected into the wells for disposal. Some of the treated wastewater in the wells eventually reaches the ocean.

Chief Justice John Roberts and Justices Ruth Bader Ginsburg, Sonia Sotomayor, Elena Kagan and Brett Kavanaugh joined Breyer in the majority. Justices Clarence Thomas, Samuel Alito and Neil Gorsuch dissented.

"Compared to the argument that it does not require permits for any groundwater pollution, which the county and the three dissenting justices all argued, this result will both empower the federal government to more aggressively regulate such pollution and allow private parties to sue when that regulation fails," Vladeck said.

After a challenge from environmental groups, the 9th US Circuit Court of Appeals held that the county violated the Clean Water Act because it hadn't obtained proper permits. The court said that the law applied to pollutants from the well that had made its way to the ocean via groundwater.

In his opinion, Breyer said that standard was too broad and would require permitting in "surprising, even bizarre circumstances." He said it would even include pollutants carried to the navigable waters on a "bird's feathers, or, to mention more mundane instances, the 100 year migration of pollutants through 250 miles of groundwater to a river."

At oral arguments, Elbert Lin, a lawyer for the county, told the justices that the appeals court opinion was so broad it would force the county and its taxpayers to face massive liability and fines. A permit, Lin argued, may be required for pollutants that travel through a well or pipe into the Pacific Ocean, but a permit should not be required for pollutants that travel through groundwater and end up in the ocean.

David L. Henkin, a lawyer for the group Earthjustice, praised the court's ruling.

"The Supreme Court has rejected the Trump administration's effort to blow a big hole in the Clean Water Act's protections for rivers, lakes and oceans," he said in a statement. "We are glad the Court has recognized the importance of protecting clean water for all Americans."

A new test

In sending the case back down to the lower court, Breyer articulated a new test. He said that permits will be required for the discharge of pollutants that reach navigable waters via groundwater if the discharge is either "direct" or the "functional equivalent" of direct from the source.

He said that such a test would scale back on a lower court's previous ruling but would be "significantly broader" than the "extreme" position of the county and the federal government, which argued for the requirement of no such permits.

Breyer said that while the county and the government said requiring permits for discharges of pollution through groundwater into navigable waters would "vastly expand the scope" of the Clean Water Act, that, in reality, the EPA has applied such permits to "some (but not all)" such discharges for "over 30 years."

"In that time we have seen no evidence of unmanageable expansion," Breyer wrote.

Breyer added that in returning the case to the lower court, "We expect that district judges will exercise their discretion mindful, as we are, of the complexities inherent to the context of indirect discharges through groundwater, so as to calibrate the Act's penalties when, for example, a party could reasonably have that that a permit was not required."

In his own dissent, Alito was critical of the majority, saying that instead of interpreting the text of the Clean Water Act the court had "devised its own legal rules."

He said by insisting that a permit is required for direct discharges as well as their "the functional equivalent," the majority settled on a rule "that provides no clear guidance and invites arbitrary and inconsistent application."

"Just what is the 'functional equivalent' of a direct discharge?" Alito asked.

"Entities like water treatment authorities that need to know whether they must get a permit are left to guess how this nebulous standard will be applied," he said.

Utah fears lack of boat inspections due to coronavirus could put other lakes at risk of quagga infestations

By Brian Maffly

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Lake Powell boaters are among the most heavily monitored water recreationists in the West because their crafts are potential vectors for invasive mussels infesting Utah's largest lake.

In an effort to avoid spread of the coronavirus, however, federal and state officials were not fully inspecting or decontaminating boats that have come off the lake since early April. That move paused Utah's main defense against the spread of quagga mussels just as boating season shifts into gear.

These uninspected boats could pose a threat to Flaming Gorge National Recreation Area and other lakes if contaminated vessels move quagga mussels from Lake Powell into a new body of water.

Nearly 1,000 boats launched onto Lake Powell between April 1 and 6, when the ramps closed to any new launches, according to the Utah Division of Wildlife Resources. The agency is requiring owners of boats that came off the lake without being inspected to keep them in dry storage for at least 30 days before launching in another Utah lake, but officials acknowledge enforcement could be difficult.

"A certain part of our program depends on the boating public voluntarily complying," said Nathan Owens, who runs DWR's aquatic invasive species program. "We can't be everywhere all at once."

With the warming weather and growing enthusiasm for fishing, Utah lakes that remain open for boating are expected to see greater use in coming weeks.

"We are seeing much higher boating traffic at our local reservoirs than we normally would," Owens said. "Part of it is people have cabin fever, and they want to go out. ... People have fewer options for places to go, so they all go to the same place."

It takes just one boat

The Green River, backed up behind Flaming Gorge Dam, is one of those places. Meanwhile, Lake Powell is largely closed to boating, while nearly all Utah state parks that access reservoirs are open to everyone. Summit County's Echo and Rockport state parks remain open to only in-county residents.

Native to the Caspian Sea, quagga and its cousin, the zebra mussel, are invaders introduced in the Great Lakes decades ago from freighters discharging their ballast tanks in North American waters. Cementing themselves in vast colonies onto any hard surfaces, these tiny mollusks disrupt ecosystems and damage infrastructure wherever they get established. Recreational boaters helped move them westward. They appeared in Lake Mead and Lake Powell several years ago.

Coordinating with counterparts in neighboring states, Utah wildlife officials have gone to great lengths to keep quagga mussels confined to Powell, where they are proliferating. Those efforts have so far been successful, but it would take just one contaminated boat to unleash the quagga contagion on Flaming Gorge, Bear Lake or other bodies of water used for fishing and recreation. Because they have no natural checks on their populations, quagga mussels cannot be removed after they are established.

"Once the footprint of quagga infestation has been expanded," said former Salt Lake Tribune reporter Brett Prettyman of Trout Unlimited, "it exponentially increases the availability of it to spread even further,"

During the April 1-6 period, when inspections were suspended at Lake Powell, DWR officers recorded bow numbers of boats leaving without being inspected or decontaminated, according to Owens. Those numbers were entered into a database that officials could check when examining boats seeking to launch elsewhere.

"All were encouraged to drain their boats of all water," Owens said. "That would eliminate 90% of the risk."

Boaters will be subject to citations if they try launching before the 30-day wait, warned DWR spokeswoman Faith Heaton Jolley.

"We were informing boaters as they came off Powell," she said. "Everyone has to do their part to prevent the spread of quagga. Everything has gotten more complicated with COVID-19 and social distancing."

'That would be a nightmare'

Under normal circumstances, the National Park Service, along with Utah and Arizona wildlife officials, inspects boats as they are towed from Lake Powell, ensuring their drain plugs are pulled and examining them for adult mussels attached to the hull and larval mussels in water holds. If quagga is found, the boat must either be decontaminated on the spot, using blasts of hot

water, or spend time in dry storage to ensure any mussels are dead before the boat reenters uninfested waters.

“Larval quagga can live in residual water like in ballast tanks for up to 26 to 28 days,” Owens said, “so 30 days should provide enough time to kill anything left in residual water."

Trailered boats approaching ramps at Bear, Flaming Gorge, Deer Creek and other popular lakes are normally inspected and barred from launching if they appear to be carrying quagga.

Flaming Gorge is a particularly difficult lake to defend against a quagga introduction because it stretches over 90 miles with many places to launch boats. Some are developed ramps, but many are informal ramps in remote areas that cannot be staffed with inspectors. This season, Utah and Wyoming inspectors may station themselves on the highways surrounding the lake, so they can contact boaters on their way to the ramps.

“Our law enforcement section is stepping up and providing more invasive-species inspections, especially at the Gorge,” Owens said. “It’s the headwaters to a lot of other reservoirs. If that was infested, you would see the whole Green River infested. You are talking about hundreds of miles. That would be a nightmare for recreation and water infrastructure.”

Candidates for Utah Governor talk water, environment, economy during online forum

BY KELLI PIERCE
APRIL 29, 2020 AT 7:01 PM

https://kslnewsradio.com/1924226/candidates-for-utah-governor-talk-water-environment-economy-during-online-forum/

SALT LAKE CITY – Five candidates vying to be Utah's next governor–four Republicans and one Democrat–outlined their plans for the state during an online forum.

The Envision Utah forum was hosted by KSL's Doug Wright and focused on a variety of topics, including the environment, water, and how to grow opportunities for people living in rural Utah.

Former Governor Jon Huntsman, Jr. (R) addressed Utah's growing population and climate change, saying the state needs to do a better job building up it's water infrastructure. Huntsman believes Utah has a water distribution problem, not a water capacity problem, and pointed to the Colorado River as an example.

"We're limited in taking it because we don't have the right kind of infrastructure, the tunnels and pipelines that we need. Look at what Denver has done. They have outdone us, out-built us in terms of their ability to get water to a city that is well over 5 million people," Huntsman said.

Former Utah Speaker of the House Greg Hughes (R-Draper) believes spreading the economic growth around the state will help air quality, as people will not have to drive as far to get a job.

"You go to Tooele County [and] 80% of their workforce drives between the Oquirrh Mountains and the Great Salt Lake to get into Salt Lake County to find employment. For air quality purposes, we have to see the economic development grow throughout the whole state," Hughes said.

Chris Peterson, a law professor at the University of Utah and the only Democrat in the race, calls climate change the biggest challenge this generation faces.

"In the short term…we need to make sure that Tier 3 gasoline is getting used in a broader spectrum in our vehicles across the state. We need to invest in a faster transition to plug in, hybrid, and electric vehicles. We need to invest more of our infrastructure development dollars into mass transit," Peterson said.

On the topic of education, there was broad support for paying teachers more. Hughes also believes the current pandemic will encourage more families to give home schooling a try, while Huntsman wants to lower costs at colleges and universities by charging less for online-only

classes. Peterson wants to raise taxes on the wealthy to increase per-pupil spending at public schools.

The challenges facing rural Utahns were another topic the candidates talked about.

Former Utah Republican Party Chairman Thomas Wright said rural and tourist areas are worried about climate change impacting the snowpack, which could also hurt their economy. He'd also like the state to do something to get young people to live and work in rural towns, specifically by connecting people to broadband internet.

"There are many counties that never came out of the last recession. They're not experiencing economic growth…We need to make sure that we are connecting to the internet. Why are we building hundreds of millions of dollars of buildings all over the state if we're not connecting rural Utah to the internet? We've seen in this [COVID-19] pandemic how important connectivity is," Wright said.

Current Lt. Governor Spencer Cox (R) agreed with Wright about connectivity, saying it allows people to work from home and brings high paying jobs to rural areas.

"Broadband is the great equalizer. It gives everyone in rural Utah the same opportunities to compete in a world marketplace as those on the Wasatch Front," Cox said.

Cox also pointed out how teleworking has cut costs for the state and increased productivity.

OVERNIGHT ENERGY: Green groups sue over Trump rollback of Obama-era waterway protections | Warren calls for SEC to require climate risk disclosures

BY RACHEL FRAZIN AND REBECCA BEITSCH - 04/29/20 05:47 PM EDT

https://thehill.com/policy/energy-environment/overnights/495355-overnight-energy-green-groups-sue-over-trump-rollback-of

IT TAKES TWO: Two separate coalitions of environmental groups sued the Trump administration on Wednesday, challenging a rollback of protections for the nation's waterways.

The Navigable Waters Protection Rule finalized by the Environmental Protection Agency (EPA) in January limits federal protections for smaller bodies of water, a move critics say risks contamination of larger ones used for drinking water.

"Our nation's majestic waterways depend for their health on the smaller streams and wetlands that filter pollution and protect against flooding, but the Trump administration wants to ignore the science demonstrating that," the Natural Resources Defense Council, which filed a suit on behalf of eight of the groups, said in a statement Wednesday. "This regulation is plainly unlawful. It violates the simple but powerful mandate of the Clean Water Act to protect the integrity of our nation's waters."

The new rule is the final replacement of the Obama-era Waters of the U.S. (WOTUS) rule, which President Trump vowed to dismantle during the 2016 campaign.

WOTUS asserted that the interconnectivity of water required protecting small and even seasonal water bodies caused by snowmelt in order to prevent pollution and pesticides from flowing elsewhere.

Critics argue the new rule eviscerates the protections guaranteed by the decades-old Clean Water Act, not just reversing Obama-era protections but setting the U.S even further back.

So what's the legal argument?

Environmental groups plan to argue in court that the rule ignores scientific studies showing how the health of larger water bodies is dependent on smaller ones while denying protections guaranteed under the Clean Water Act.

"You don’t have to be a rocket scientist to know that pollution dumped upstream flows downstream, but the agencies shut their eyes to science and common sense. That violation of the law is why we’re going to court to protect clean water,” the Southern Environmental Law Center wrote in a release to accompany a separate suit on behalf of 14 environmental groups.

That's a view shared by some affiliated with the EPA. The agency’s independent Science Advisory Board reviewed the rule when it was first proposed, writing in a draft report that “aspects of the proposed rule are in conflict with established science ... and the objectives of the Clean Water Act.”

The EPA wouldn’t comment on the suits directly, but argued the rule “will stand the test of time as it is securely grounded in the text of the Clean Water Act and is supported by legislative history and Supreme Court case law.”

Scrapping WOTUS was part of Trump’s effort to woo farmers, who argued the Obama-era protections subjected huge swaths of land to federal oversight.

Supercharged by climate change, ‘megadrought’ points to drier future in the West

Ian James*, *Arizona Republic *Published 9:00 a.m. MT May 6, 2020 |* ***Updated 1:04 p.m. MT May 6, 2020***

https://www.azcentral.com/story/news/local/arizona-environment/2020/05/06/western-megadrought-centuries-worsened-climate-change-global-warming/3036460001/

Since 2000, the West has been stricken by a dry spell so severe that it ranks among the biggest "megadroughts" of the past 1,200 years. But scientists have found that unlike the decades-long droughts of centuries ago, this one has been supercharged by humanity's heating of the planet.

Researchers analyzed the dry and wet cycles that have swept across western North America over centuries by examining the ancient records inscribed in the growth rings of trees.

Cores extracted from thousands of trees enabled the researchers to reconstruct soil moisture and examine the West’s hydrological history, including long droughts that appear as sets of narrow growth rings running through the wood.

Using data from trees at 1,586 sites across the region, from Montana to northern Mexico, the scientists identified four other intense droughts, in the late 800s, the mid-1100s, the 1200s and the 1500s.

The driest 19-year period struck in the late 1500s, and the second-worst drought of that duration has afflicted the region since 2000.

The research team, led by scientists at Columbia University’s Lamont-Doherty Earth Observatory, also used 31 climate models to estimate the influence of higher temperatures unleashed by climate change from 2000 through 2018.

They found the region’s average temperature during those years was 1.2 degrees Celsius (2.2 degrees Fahrenheit) hotter than it would have been without human-caused warming, and they estimated climate change was responsible for 47% of the drought’s severity.

The scientists concluded that in fueling the drought, global warming has turned what would otherwise have been a relatively moderate event into one of the most severe megadroughts since 800 A.D.

The findings, published April 17 in the journal Science, add to the growing body of research revealing major challenges for the American West as the planet heats up with the burning of fossil fuels.

As temperatures rise, the region is being ravaged by more dangerous heat waves and more intense wildfires. And the hotter, drier conditions of the past two decades offer a preview of how climate change will continue to complicate efforts to manage water in the arid West, where rivers and groundwater basins were already being over-pumped before rising temperatures piled on added pressure.

Speaking about the study in interviews, several academic researchers and managers of water districts said the findings indicate the region must prepare for having less water in the long run, through both dry and wet periods, as hotter temperatures crank up evaporation losses and leave less water flowing in streams and rivers.

Alongside other scientific work, they said, the latest research shows the warming climate is responsible for a large portion of the drought over the past two decades and will continue to have an influence in shrinking the available supplies, even in years with average amounts of rain and snowfall.

“We all should expect to have longer, drier, hotter droughts. That should be what we anticipate in the future and probably not in the too-distant future,” said Connie Woodhouse, a paleoclimatologist at the University of Arizona who wasn’t involved in the study. She said this research, along with work by other scientists, offers a “heads-up” that records of past hydrology can no longer be considered alone without factoring in climate change.

This takeaway applies to water sources all over the West, and it’s increasingly been at the center of discussions about rethinking management of the Colorado River. Long overallocated and taxed by years of hot drought, the river’s largest reservoirs now sit less than half full.

“We need to understand that these warmer temperatures that we're experiencing, and will continue to experience at some level, will make things worse,” Woodhouse said.

Other researchers have said infrastructure and water management systems that were developed during wetter times will have to undergo substantial shifts. They’ve suggested regions across the West will need a host of adaptation efforts tailored to local circumstances, including building new infrastructure, deploying new technologies, and rewriting water policies and rules.

There is still plenty of room to make more progress conserving water on farms, in industries, and in cities, said Margaret Garcia, an Arizona State University professor who focuses on water infrastructure and management.

In most Western states, irrigation for agriculture accounts for 75% or more of total water use. Garcia said farming areas can improve irrigation efficiency or shift to less water-intensive crops, yielding big water savings.

Urban areas have made dramatic conservation gains with more efficient fixtures, Garcia said, and still can conserve more.

Preparing for the effects of higher temperatures will require different strategies depending on the area, Garcia said, such as efforts to reduce water demand, repair leaky pipes, or build more facilities to recycle wastewater for reuse.

“I think it’s something that we all should be conscious of, not panicking about. It’s a slow-moving kind of problem,” Garcia said. “We’ll want to look at our water infrastructure and where there’s opportunities to make it more efficient, to perhaps look at where our vulnerabilities are.”

What’s crucial, she said, is to start thinking about options now, and to have community conversations about how to prepare.

MEGADROUGHT FUELED BY CLIMATE CHANGE

Scientists have discovered that past megadroughts in the West persisted much longer than the current two-decade drought.

The shortest event lasted nearly 30 years, from 1575-1603.

The megadrought in the 1200s was the longest, lasting nearly a century. During this epic drought, the Ancestral Puebloan people, who had farmed and built villages in the Four Corners region, are thought to have abandoned their cliffside homes at Mesa Verde and Chaco Canyon.

The long-lived trees that recorded the ancient droughts included ponderosa pines, Douglas firs, piñon pines and blue oaks, among others.

Park Williams, a climatologist at Columbia and the study’s lead author said he estimates his team used data from more than 30,000 trees. The datasets were compiled over decades by hundreds of other scientists, who extracted wood cores by boring into tree trunks using tools called increment borers.

Analyzing these giant sets of data, Williams and his colleagues were able to reconstruct soil moisture and compare the different droughts. They found that without the effects of human-caused warming, the post-2000 drought still would have been a drought, but it wouldn’t be on par with the megadroughts of centuries ago.

The data also revealed how conditions can flip dramatically between dry and wet. Just before the latest dry spell, the scientists found, the years from 1980 through 1998 saw the wettest 19-year period in at least 1200 years.

In the study, the researchers wrote that natural variability could very well end the drought in the coming years, "and this transition may be underway after a wet 2019." On the other hand, Williams noted that past megadroughts have been punctuated by individual wet years in parts of the region, only to continue.

Much of Arizona had a wet winter, which filled the reservoirs on the Salt and Verde rivers that supply Phoenix.

But looking more broadly across 11 Western states, drought has flared up again over the past year.

As of this week, the U.S. Drought Monitor website shows that 50% of the West, from Washington to New Mexico, is now abnormally dry or experiencing drought conditions. That's a dramatic increase from the same time last year when less than 17% of the region was classified as being dry or in drought.

And when the next big wet period comes, Williams said, it will be important to remember that the region over the long term is still getting drier, as it has been over the past half-century.

"The warming process is really in its infancy," he said. And as temperatures continue to rise, "our sense of what average is, is going to have to change."

How much additional warming occurs, and how much aridification it fuels, will depend to a large degree on how much more planet-warming pollution humanity pumps into the atmosphere in the coming years, Williams said.

"Even though the West is going to dry, the amount of drying that we see in the West in the next 50 years to 100 years is going to be substantially impacted by global carbon emissions today," Williams said. "If we were to make major changes in energy on a global scale today that result in less emissions, then drought would probably not be as bad as it would be otherwise in the second half of the century."

'A HOTTER AND DRIER FUTURE'

A growing number of scientific studies have documented how warmer temperatures caused by accumulating greenhouse gases have begun to affect the western United States.

Scientists have estimated that about half the decline in the Colorado River's flow since 2000 has been due to higher temperatures. Researchers with the U.S. Geological Survey found the river is sensitive to warming and could lose about one-fourth of its flow by 2050 as temperatures continue to climb.

In other research, scientists have found that farmers in parts of the western U.S. who depend on snowmelt runoff to help irrigate crops will likely be hit hard by decreases in snow with climate change and that this could affect food production.

Some researchers have focused on how the shrinking snowpack in the mountains will gradually erode the ability of water managers to use that snowpack in calculating the available water supply each year.

They've found that by mid-century, more than two-thirds of areas in the West that rely on snowmelt runoff will see their ability to predict seasonal drought significantly hampered as the mountains are increasingly denuded of snow.

Alongside these long-term decreases in average snowpack, other signs of drying have emerged. Scientists have determined that the climate dividing line along the 100th meridian — which explorer John Wesley Powell identified in the 1800s as the boundary between the arid plains of the West and the wetter eastern U.S. — has been gradually shifting eastward.

With the science pointing to more drying in the decades to come, some managers of water agencies said the latest research underlines why it's critical to plan for worst-case scenarios.

"The implications of the study are alarming," said Kathryn Sorensen, director of Phoenix's Water Services Department. "Looking forward, this study and others tell us that we can expect surface water availability to diminish over time, perhaps dramatically."

Sorenson's department serves about 1.6 million people, and most of the water comes from rivers.

In an average year, 40% of Phoenix's water comes from the Colorado River, 58% comes from reservoirs on the Salt and Verde rivers, and about 2% comes from groundwater.

For now, much of north Phoenix relies entirely on Colorado River water. City officials are working on projects that include drilling about 15 new wells and building water mains and pump stations to bring in water from areas that draw on the Salt and Verde rivers.

Sorenson said the projects, which will cost about $410 million, will make the system more resilient by enabling Phoenix to move water supplies from different sources throughout its territory. She said the city, which has been "banking" some Colorado River water in aquifers, aims to keep saving its groundwater "as the supply of last resort."

"Facing a hotter and drier future, it is easy to see that future generations will most certainly need it," Sorenson said. "Our plan is to use groundwater only when absolutely necessary, and to recharge our aquifers when possible, so that future generations have a shot at the type of quality of life that we enjoy today."

While Phoenix can draw on various sources of water, other areas of Arizona have fewer options.

In Pinal County, the limited supply of groundwater and shrinking deliveries of Colorado River water have raised questions about the viability of the area's many planned subdivisions.

In Buckeye, officials have been discussing plans for securing more water from elsewhere to enable future growth.

In rural areas of Arizona that rely entirely on groundwater, farmlands have expanded over the past decade and there are no rules in state law limiting well-drilling or pumping. As water levels have dropped, some rural homeowners have been left struggling with the costs when their wells run dry.

Groundwater levels have also been dropping due to heavy pumping in other farming areas, from the southern High Plains to the Central Valley of California. Williams said one reason why the drought since 2000 hasn't inflicted more damage is that many areas have been "leaning really, really hard on groundwater."

"That is by definition unsustainable," Williams said. "So groundwater use is just going to have to change."

A BIT OF GOOD NEWS

One trend that's helped during dry years has been a long-term decrease in water use in many areas, due in part to conservation progress and efficiency improvements. Nationwide figures compiled by the U.S. Geological Survey show that over the past two decades, U.S. water use has fallen dramatically, with total water consumption in 2015 dropping below the amount used in 1970.

Phoenix consumes slightly less water today than it did 20 years ago, even as the population served by its water department has grown by more than 25%.

A similar trend has occurred in California, where conservation efforts and investments in water recycling have helped reduce per-capita water use among the nearly 19 million people whose local water agencies are supplied by the Metropolitan Water District of Southern California.

"Today our demands are so low, much lower than we had planned," said Bill Hasencamp, Metropolitan's manager of Colorado River resources.

Many Californians dialed down their water use during the 2012-2016 drought, when agencies paid homeowners to remove lawns and when state regulators set a goal of shrinking urban water consumption by 25%.

Since then, water demand across the six-county area served by Metropolitan has stayed below pre-drought levels.

Hasencamp said he sees both bad and good news in the latest research.

"I think the good news is, this has been a drier period, but we have survived it without any major issues," Hasencamp said. "In fact, we have not had a shortage on the Colorado River. I mean, if we can go through a megadrought and not have a shortage on the Colorado River, that's a pretty good news story."

The level of Lake Mead, the nation's largest reservoir, has declined dramatically over the past two decades, prompting negotiations that led to the signing of a set of drought-contingency agreements last year.

Under the three-state deal that aims to reduce the risks of Lake Mead falling to critical lows, Arizona and Nevada this year began taking less water from the river. Mexico is participating in the cutbacks under a separate deal, and California has agreed to contribute water at a lower trigger point if the reservoir continues to fall.

Conservation efforts and above-average snowpack in 2019 have helped boost the level of Lake Mead during the past year. The reservoir is now 44% full, its highest level since 2014, but still not high enough to avoid more water cutbacks in Arizona and Nevada next year.

Looking across Metropolitan's different water sources, from the Sacramento River to the Colorado River, all have been at roughly 85% of average during the past two decades, Hasencamp said. "And we know now that we can live with 85% of average because we've been doing it."

What concerns him more than sustained but steady drought are the extreme spikes — the sort of ultra-dry years that could force suppliers to ration water.

In California, Hasencamp said, "the bigger concern than being in a megadrought is that the variation is increasing, and those lows are really low."

'WE HAVE TO LIVE WITH LESS'

Among their strategies, Metropolitan's officials are considering whether to scale up a demonstration water recycling facility and build a full-scale plant that would be among the largest in the country. Officials from the Southern Nevada Water Authority have expressed interest in helping support the project, which could enable the agency to use some of Metropolitan's Colorado River water in exchange.

That sort of exchange wouldn't be allowed under the existing rules. Changing this to allow greater flexibility, Hasencamp said, will be one of Metropolitan's suggestions as water managers across the Colorado River Basin negotiate a new set of rules for potential shortages that will take effect after 2026.

Other opportunities for teaming up on infrastructure could involve the Mexican and U.S. governments, which agreed as part of a 2017 deal to jointly study the possibility of building a desalination plant on the shore of the Sea of Cortez.

As part of the upcoming negotiations, representatives of the seven states that rely on the Colorado River will need to reach a consensus on how to account for the effects of climate change in their planning, Hasencamp said.

For one thing, he said, that will mean no longer using the basin's historic hydrology to project the river's future.

"We know we have to live with less," Hasencamp said. "I'm optimistic that even with population growth and decreasing supplies because of climate change, we'll find a way through it."

The Colorado River and its tributaries provide water for about 40 million people and more than 5 million acres of farmland. The legal framework that divides the river among the seven states and Mexico was established during wetter times nearly a century ago, starting with the 1922 Colorado River Compact.

For now, the river is being managed under temporary drought-contingency plans that were signed last year, one for the Lower Basin states of Arizona, California, Nevada, and the other for the Upper Basin states of Colorado, Wyoming, Utah and New Mexico.

The deals were designed to prop up reservoir levels for seven years, by which time the next set of shortage-sharing rules is due to take effect.

In a report published in November, researchers Anne Castle and John Fleck warned that the Colorado River's water supply could decline so much in the next decade that the ability of the Upper Basin states to meet their legal obligations to downstream users would be in jeopardy.

Given the significant risk of a shortfall, they said, options include negotiating agreements among the states to clarify rules for sharing shortages, and setting up compensated conservation programs "as a hedge against risk."

Castle said she sees the new megadrought research "as one more big yellow highway sign pointing to the conclusion that we need contingency plans and insurance policies to deal with these types of severe drought possibilities."

Castle is a senior fellow at the University of Colorado Law School's Getches-Wilkinson Center for Natural Resources, Energy and the Environment. She previously worked as the Interior Department's assistant secretary for water and science during the Obama administration.

Castle has criticized a proposal to build a 140-mile pipeline to carry water from Lake Powell to southern Utah. The federal Bureau of Reclamation is conducting an environmental review of the proposal.

Castle said the agency ought to look at the risks of building a pipeline that would draw 86,000 acre-feet of water from the reservoir per year — enough to supply roughly 250,000 single-family households.

At a time when the states are focused on finding ways to reduce their demands on the river, Castle said, "how can it make sense to fund a large new diversion and increase overall demand?"

With all the mounting strains on the river, she said, a project like the pipeline will only increase the risks.

Guest opinion: Residents of Utah's West Desert continue their fight for water

By Annette Garland, Contributor May 7, 2020, 4:00pm MDT

https://www.deseret.com/opinion/2020/5/7/21248500/west-desert-utah-nevada-water-lawsuit-pipeline

As Snake Valley celebrates the latest court victory against the Southern Nevada Water Authority, we are not resting on our laurels.

But we are taking time to reflect on what we've achieved and what we still have to do. I've dreaded the thought of seeing bulldozers, pumps and pipes for SNWA in our community. We've fought hard to stop that grim scene from developing. And we must continue to ensure that it never does.

In the beginning, Utah became inextricably tied to the pipeline fight when Las Vegas officials filed for water rights applications across Nevada from its eastern border to its western border in 1989. The aquifer splitting the state line in Snake Valley — along with a federal law that required bistate cooperation and subsequent court rulings — hooked us into this mess.

For so many years we've waged a fight where it felt like we were walking through the desert looking for an oasis — but only finding more sand. We were cast as immovable and uncooperative. But we always knew what the judge recently affirmed: The water SNWA wants doesn't actually exist for the taking.

Gov. Gary Herbert knew the same thing, opting not to sign the bistate compact in 2013.

Every few years, new legal victories gave us the momentum and courage to keep moving forward.

Now, here we are. SNWA is not appealing a devastating court ruling that nullified the agency's water applications in four rural valleys — one of which (Spring Valley) sends water into the Great Salt Lake. However, we have reason to believe that the heart of the Great Basin is still in Vegas' long-term sights.

SNWA still owns and operates a multimillion-dollar ranching operation near the Utah border and maintains 60 billion gallons worth of applications to pump water annually in the desert — about a quarter of which are in Snake Valley and threaten communities like Callao, Garrison and Eskdale, and target resources like the Great Salt Lake, Great Basin National Park and Fish Springs National Wildlife Refuge. An application for a right-of-way with the BLM remains active as well as a stipulated agreement that muzzles federal agencies from speaking up about the destructive nature of the project.

As the years have gone by, more and more scientific analysis shows that pumping Snake Valley would be devastating. Conversely, science has also shown that Las Vegas can get by if it lived within its means, promoted conservation and looked to California for Colorado River collaborations.

SNWA has promised to look at other avenues. But it has not ruled out its rural option. As we move forward, we cannot let our work be snatched from the jaws of victory.

As I reflect on the collective, cross-border efforts of Utahns and Nevadans, I am wishing that water warriors and Snake Valley residents like my late husband, Cecil Garland, and our friends Dean Baker and JoAnne Garrett could see what we've witnessed in the past few weeks.

I look back on events like the August 2005 Water Express Run — where West Desert High School students organized a pipeline-protest run along the Pony Express Trail that started in Baker and ended at the federal building in Salt Lake City. Then there's the many "Water Tours" and Snake Valley Festivals to raise awareness about draining our water supply.

Over the years, so many of us have spent countless hours driving to hearings, gathering at community meetings and reading over complex legal documents. The news about SNWA admitting defeat on Spring, Cave, Dry Lake and Delamar Valleys highlights that the time was well spent.

Locally, our uncanny band of farmers, ranchers, tribes, environmentalists, rural officials and business owners made this possible.

We must remain united. We know Vegas will remain thirsty. We know that water in the nation's driest regions will never be safe. When it comes to protecting water, we know our victories are only temporary while our opponents' victories would last forever.

Annette Garland is on the board of directors of the Great Basin Water Network and owns the Rafter Lazy C Ranch in Callao, Juab County.

New Campaign Urges Utahns To Keep Water Supply Clean

BY DAN SPINDLE, KSL TV
MAY 11, 2020 AT 8:13 AM

https://ksltv.com/437164/water-supply/?

SALT LAKE CITY, Utah – With springtime blossoms and signs of new life everywhere, there are some concerns over the state's water supply.

The experts at Utah State University launched a new website to spread the message that the Beehive State's water quality is everyone's responsibility. However, the name – DontShareUtah.org – might turn some heads.

"The joke is you would never want to share your chewing gum," said Nancy Mesner with watershed sciences at USU. "You wouldn't share your mother-in-law's Facebook page, so let's not share this, also."

Sharing isn't caring in cases where Utahns accidentally share fertilizer, animal waste and other harmful pollutants that enter the water supply after they run off residents' properties.

It's not just farmers who are asked to keep track of their water, either. DontShareUtah.org is geared toward anyone with a backyard chicken coop, anyone with a garden, and anyone with a lawn.

"Nobody intends to pollute," Mesner said. "That's not our intention. So the idea is to help people basically do the right thing by just some simple modifications and behaviors."

Utahns can use the website to learn about how they fit into the mission to clean up the state's water supply. For example, homeowners can take simple steps like using less fertilizer on their lawns. It even has tips on how to store fuel, pesticides and other potentially toxic materials.

For more information, go to DontShareUtah.org.

SMART WATER MONITORING REACH EXTENSION

BY DAN PINNEY

MAY 15, 2020

https://www.wwdmag.com/smart-water/smart-water-monitoring-reach-extension

In our ever-evolving technology landscape, the ability to adapt quickly can be a major asset. This is one reason why water utilities consider making the transition to a smart utility network. The infrastructure enhances water distribution systems with real-time data and allows for expansion as demand grows.

Utilities can also adapt to change at their own speed and add new applications such as leak detection or pressure monitoring with a smart utility network.

Setting the Stage

Park City, Utah, is one of the most popular tourist areas in the U.S. Beyond being a popular ski destination, every January thousands of movie fans flock to the city to check out the best works independent cinema has to offer at the Sundance Film Festival. For the city's water utility, providing effective water service for both residents and tourists can be a major production.

"We have about 8,000 residents in Park City, but it's more like 30,000 with tourism factored in, and it can be much higher when big events come to town," said Park City Water Resources Manager Jason Christensen. "We're constantly punching above our weight in terms of water services."

Staying on the forefront of technology helps Park City's water services team manage the challenging dynamics of bringing water to its ever-fluctuating population. When there is a challenge, the city is not afraid to tap into new resources to solve it.

Up to the Task

With an eye for innovation, Park City has remained committed to driving quality water services to the community. A long-time customer of Sensus, a Xylem brand, the city was an early adopter of smart utility infrastructure, combining smart water meters with real-time remote monitoring capabilities provided by the Sensus FlexNet communication network.

"The smart utility network has been a great investment by the community," Christensen said. "In addition to helping improve efficiency and service for our water customers, it's allowed us to expand the system with new applications."

Park City decided it was time to look deeper into its water distribution data. Christensen and his team sought an affordable solution that could extend the system to combat water loss and help the city proactively respond to issues with water pressure and flow.

“We’ve experienced scenarios where a pipe bursts or a business develops problems with water pressure,” Christensen said. “We want to be able to monitor this type of activity, so we can address issues before they reach crisis mode.”

Park City needed a solution that could connect to its pressure reducing valve (PRV) sites, located on water distribution mains where no power or land-based communications were available. The city decided to conduct a pilot program with the battery-powered Sensus Smart Gateway Sensor Interface to help staff make critical and prompt decisions for customers by remotely monitoring water pressure and flow. The Smart Gateway is a FlexNet-enabled device that is capable of powering and reading up to two analog sensors and two switch-type inputs.

Reaching Farther

As an extension of its smart utility network, Park City installed the Smart Gateway interface at two PRV sites. Soon after deployment, Christensen’s customer service team noticed an issue when the distribution pressure downstream of one of the PRVs began to spike.

“The alarm went off and you could see the failure happening in real-time,” Christensen said. “The issue was resolved without incident, but it was a lesson for us in just how impactful the system could be.”

In addition to helping staff respond quickly to issues, the Smart Gateway solution increases the city’s level of service.

“At these sites, in order to detect a pressure event, we had to rely on either a customer calling in or a field technician visiting the site,” Christensen said. “Now we can detect an issue in close to real time and reduce unnecessary wear and tear on the water system.”

The Journey Continues

Based on the successful pilot, Park City extended PRV monitoring to a total of 26 sites. The city looks forward to using new insights from the data gained in the expansion, such as identifying non-revenue water.

“While the added connectivity enhances operational performance, it will also help us get smarter as a utility,” Christensen said. “As we monitor more sites, we’ll be able to store the data and use it as a resource for ongoing asset management and water loss reduction.”

Christensen and his team see the Smart Gateway solution as a perfect example of their network’s key differentiator.

“With the system, we can implement incremental projects quickly that require less capital and help maximize our return on investment,” Christensen said. “These incremental projects allow us to continue progressing as a smart utility and extend those benefits to the community.”

Key Takeaways

Many utilities can benefit by considering Park City’s efforts in advancing its water distribution system on a step-by-step basis. Meter modernization efforts can kick-start the process for better operational efficiency and cost savings. Then, utilities can add new solutions like pressure monitoring to further improve leak detection and gain better control over their networks.

It is important for any utility to consider aging infrastructure and future growth as well. New technologies create the opportunity for utilities to optimize water management processes, improve customer service and advance increasingly important initiatives like sustainability. It is a win-win for utilities that can stay ahead of the innovation curve as today’s visions become tomorrow’s reality.

EPA decides against limits on drinking water pollutant linked to health risks, especially in children

By **Brady Dennis** and **Juliet Eilperin**

May 14, 2020 at 2:14 p.m. MDT

https://www.washingtonpost.com/climate-environment/2020/05/14/epa-decides-against-limits-drinking-water-pollutant-linked-health-effects/

The Environmental Protection Agency has decided not to limit perchlorate, a chemical that has long been detected in the drinking water of many Americans and linked to potential brain damage in fetuses and newborns and thyroid problems in adults, according to two agency officials briefed on the matter.

They spoke on the condition of anonymity because the decision hasn't been announced.

The move, which comes despite the fact that the EPA faces a court order to establish a national standard for the chemical compound by the end of June, marks the latest shift in a long-running fight over whether to curb the chemical used in rocket fuel.

Under President Barack Obama, the EPA had announced in 2011 that it planned to set the first enforceable limits on perchlorate because of its potential health impacts. Both the Defense Department and military manufacturers have long resisted any restrictions on the chemical, which is also used in fireworks, munitions and other ignition devices. It naturally occurs in some areas, such as parts of the Southwest.

In an email Thursday, EPA spokeswoman Corry Schiermeyer said the agency "has not yet made a final decision" on whether to limit perchlorate in drinking water. "The next step in the process is to send the final action to the Office of Management and Budget for interagency review," she said. "The agency expects to complete this step shortly."

The New York Times first reported the agency's decision.

The EPA also issued a news release Thursday in which Administrator Andrew Wheeler hailed the fact that levels of perchlorate exposure have declined since 2011. Though no federal standards regulating perchlorate levels in drinking water exist, some states have already acted to reduce the amounts in their drinking water systems. California and Massachusetts, for example, have set limits for perchlorate at levels far lower than what the EPA had previously proposed.

“Because of steps that EPA, states and public water systems have taken to identify, monitor and mitigate perchlorate, the levels have decreased in drinking water,” Wheeler said. “This success demonstrates that EPA and states are working together to lead the world in providing safe drinking water to all Americans.”

Environmental advocates were quick to criticize the EPA, saying the failure to institute a national limit on perchlorate in drinking water will leave many Americans vulnerable to potentially harmful health effects.

“It’s a real slap in the face of science, as well as to the court order and the law,” Erik Olson, a water expert at the Natural Resources Defense Council, said in an interview. “It’s a bad precedent on so many levels.”

In a separate blog post on Thursday, Olson said failing to regulate the compound would amount to “a deeply disturbing violation of the agency’s mission.”

Some groups, however, have urged the EPA not to set a federal threshold for perchlorate, saying existing evidence does not warrant it. For instance, in comments last year, both the American Chemistry Council and the American Water Works Association recommended that the EPA withdraw the 2011 determination to impose a national standard.

G. Tracy Mehan III, executive director of government affairs for the water works association, wrote that regulating perchlorate would not present a “meaningful opportunity” to reduce health risks, and that the benefits of such regulation would not justify the costs. “If EPA proceeds,” Mehan wrote, “it will set a troubling precedent and undermine the scientific credibility of the Agency’s regulatory process under the Safe Drinking Water Act.”

Last summer, the EPA sought input on a range of possible limits it was considering on perchlorate in drinking water. The one the agency appeared to favor at the time was a standard of 56 parts per billion — a threshold that public health officials called far too weak, and one that was several times more lenient than the EPA itself had set in a 2009 health advisory.

Even as it sought input on possible regulation last summer, the EPA left open the possibility that it would walk away from the matter, particularly if it determined that the chemical did not occur at levels deemed to present a serious public health risk.

Some health experts pleaded with the agency not to take that approach, including Kyle Yasuda, then-president of the American Academy of Pediatrics. In a letter to the EPA, Yasuda in August urged the agency to adopt the strongest possible curbs on the chemical, based on the “well-established harms of perchlorate ingestion for children.”

“AAP is particularly concerned that EPA is considering withdrawing its 2011 determination to regulate perchlorate, relinquishing national oversight over a chemical with well-established

health risks in drinking water," Yasuda wrote. "This would set a precedent inconsistent with EPA's stated mission to protect public health."

Though the EPA has set legal limits on more than 90 contaminants in drinking water, including lead, arsenic and mercury, a far broader universe of "emerging contaminants" remains unregulated.

The agency has long kept tab on scores of substances that have surfaced in water systems around the country, with the aim of restricting those that endanger public health. But partly because the rules the agency must follow are complicated and contentious, officials have yet to limit any new contaminant for decades. Perchlorate is the only chemical to come close to regulation since the 1990s. Time and again, regulators have backed away.

The last time came on a Friday in 2008, when the Bush administration formally declined to set a drinking-water safety standard for perchlorate. With little fanfare, the agency issued a news release saying it had "conducted extensive review of scientific data related to the health effects of exposure to perchlorate from drinking water and other sources and found that in more than 99 percent of public drinking water systems, perchlorate was not at levels of public health concern."

In that instance, according to documents obtained by The Washington Post at the time, White House officials heavily edited the scientific findings in the EPA's rulemaking documentation.

House to pass water, environmental justice measures

By **KELSEY TAMBORRINO**

05/15/2020 10:00 AM EDT

https://www.politico.com/newsletters/morning-energy/2020/05/15/house-to-pass-water-environmental-justice-measures-787630

The House is slated to vote on its latest coronavirus relief package, H.R. 6800 (116), today. The HEROES Act includes $1.5 billion to help low-income households cover their water bills, as well as a moratorium on utility service shutoffs. It also would provide $50 million for environmental justice grants and another $30 million for Native American tribes to deliver potable water to residents lacking access.

But the package lacks any measures to address climate change or boost clean energy that had been sought by green groups. On Thursday, Democratic leaders released revisions to the $3 trillion bill, as outlined in a manager's amendment, that adds language from Democratic Rep. Paul Tonko's Scientific Integrity Act, H.R. 1709 (116), to protect public scientific research and reports from political and special interests. The provision would require agencies to develop scientific integrity policies and guarantee protections to public scientists.

But while the House is expected to pass the bill today, it faces long odds in the Senate, with Majority Leader Mitch McConnell (R-Ky.) describing it as a "totally unserious effort" on Thursday. The White House also threatened to veto the measure in its current form, calling the measure "more concerned with delivering on longstanding partisan and ideological wishlists than with enhancing the ability of our Nation to deal with the public health and economic challenges we face."

Aluminum may affect lead levels in drinking water

Researchers find aluminum in water could affect lead's solubility -- in certain cases

Date: May 18, 2020

Source: Washington University in St. Louis

https://www.sciencedaily.com/releases/2020/05/200518162633.htm

It is not uncommon to find aluminum in municipal water systems. It's part of a treatment chemical used in some water treatment processes. Recently, however, it has been discovered in lead scale, deposits that form on lead water pipes.

The aluminum presence in pipes is both unsurprising and, in the quantities researchers saw in water pipes, not a health concern, according to Daniel Giammar, the Walter E. Browne Professor of Environmental Engineering in the McKelvey School of Engineering at Washington University in St. Louis. But no one had looked at how it might affect the larger municipal system.

In particular, Giammar wanted to find out, "What is that aluminum doing to the behavior of the lead in the scale?" As long as the lead is bound to the scale, it doesn't enter the water system.

Giammar and a team ran several experiments and found that, in a lab setting, aluminum does have a small but important effect on lead's solubility under certain conditions. Their results were published in late April in *Environmental Science & Technology*.

The experiments were carried out in large part by visiting PhD student Guiwei Li, who was able to complete the work during his brief stay at Washington University before returning to the Chinese Academy of Sciences.

In simplified models, the researchers took a look at how phosphate, aluminum and a combination of the two, affected a strip of lead in a jar of water with a composition close to that of water found in many water systems. The aim: to better understand lead's solubility, or the amount that would dissolve and make its way into the water when impacted by those chemicals.

In the jar in which only aluminum was added, there was no effect on the solubility of the lead strip; lead had dissolved into the water at a concentration of about 100 micrograms per liter.

In the jar in which only phosphate was added, the concentration of lead in the water decreased from about 100 micrograms per liter to less than one.

In the jar in which both aluminum and phosphate were added, the concentration of lead in the water decreased from about 100 micrograms per liter to about 10 micrograms per liter.

Ten micrograms of lead per liter of water is still below drinking water standards, Giammar said, but it's still more lead in the water than was seen in the jar without aluminum. "This tells us what our next experiment should be," he said. His lab will do these experiments with real lead pipes, as they have done in the past.

"This showed us things that were surprising," he said. "Some people would have thought that aluminum wasn't doing anything because it's inert. But then in our work, we saw that it actually affects lead solubility."

Low-Tech Water Wand Finds Contaminated Drinking Water

A cheap, simple device that detects heavy metals could streamline testing

By Rachel Crowell | Scientific American June 2020 Issue

https://www.scientificamerican.com/article/low-tech-water-wand-finds-contaminated-drinking-water/

Municipal water can be contaminated by electronic waste and other sources of heavy metals—but collecting, chemically preserving and transporting samples to laboratories for testing is challenging for remote communities.

To streamline the process, Emily Hanhauser, a mechanical engineer at the Massachusetts Institute of Technology, and her colleagues created a low-tech sample-collection device that costs less than two dollars to make. It consists of a plastic handle tipped by propellerlike attachments made from polymer mesh, which contain small packets of absorbent resin beads that attract heavy metal ions. Users stir the device in water and then blot or air-dry it. Dunking the attachments in an acid solution releases the absorbed ions, which can then be measured.

Unlike possibly contaminated water samples, which are considered hazardous, the device can be safely mailed to testing facilities. It can also yield results after two years of storage, its creators say. In experiments, the tool accurately reflected the amounts of copper, nickel, lead and cadmium added to a variety of water samples, the researchers reported in March in *Environmental Science and Technology*.

A detailed analysis of water quality ideally would be performed near the source, eliminating the need for sample shipping entirely, Hanhauser notes. But existing tools designed for that purpose cannot measure small enough amounts of contaminants, and they often have too much variation in measurement to be useful, she says. Her group's device might be able to provide remote communities and well owners—who in the U.S. are responsible for their own water-quality monitoring—with a feasible alternative to transporting high-volume liquid samples over long distances. A more advanced version of the device could potentially measure large clumps of contaminating metals as well, the researchers add.

“I think this could be a good diagnostic tool because of the low cost, good metal-recovery numbers and superiority over presence/absence tests,” says Siddhartha Roy, an environmental engineer at Virginia Tech, who studies the notorious drinking water in Flint, Mich., and who was not involved with the new study. “I can see superior versions of the device being used following contamination events for specific metals.”

LEAD IN DRINKING WATER CONTAMINATION: A CANARY IN THE MINE

BY RICK BACON

MAY 20, 2020

https://www.wwdmag.com/lead/lead-drinking-water-contamination-canary-mine

Many cities in the U.S. have a lead contamination problem in their drinking water. This represents a serious threat to human health, particularly that of young children for whom it can be the cause of irreversible brain damage

Recent reports of the lead contamination crisis in Newark, New Jersey, and likely the most well-known lead contamination story of Flint, Michigan, in 2015, have revealed that traditional lead monitoring programs lack the ability to: measure the presence of all forms of lead; capture unpredictable changes in water quality that result in lead corrosion; and report the contamination risk before the water is delivered to the customer. Instead, utilities monitor for lead in drinking water by infrequently sampling only a small number of domestic points of use, and then wait for lab results by which time the damage has been done. As has so often been the case, it is the elevated levels of lead in children's blood that triggers an alarm. This is an inefficient and reactive method of addressing the problem.

The drinking water crisis in Flint brought national attention to the fact that many cities struggle to ensure safe water due to lack of funding and aging infrastructure. However, in Newark, the city's lack of real-time, continuous monitoring of lead levels further exacerbated the problem.

While Newark gave out more than 40,000 water filters — even going door-to-door to reach families with lead service lines — unfortunately, the city-distributed water filters failed to address acute lead contamination as samples showed that filtered drinking water had lead levels exceeding 15 parts per billion (ppb), the current federal action level.

Filters can indeed remove lead on an ongoing basis, but when there is a sudden spike in lead in the water, these filters are overwhelmed quickly. Because the distribution system is not monitored in real time and continuously, when that spike happens, filters are rendered ineffective. Even worse, communities and their utilities are not even aware of this until the results of lab testing or children's blood test analyses become available possibly weeks or even months after their exposure.

The Need for a Better Solution

The need for a technology that monitors water quality frequently and in real time, with quick data analysis and results, is abundantly clear.

“It’s time that our communities and public utilities be given an option to act and prevent, rather than react,” said Dr. Vlad Dozortsev, development manager of Trace Metal Instrumentation, who also leads the Aqua Metrology Systems (AMS) Innovation Center in New Jersey. AMS is dedicated to the development and commercialization of solutions for reducing the risk of lead contamination by providing water systems and communities real-time lead monitoring and preventative solutions to protect public health.

“Testing children for lead levels is important and should be done with more frequency,“ Dozortsev added, “but it is still an action that is taken after the problem has already occurred. We should not be using children to serve as detectors of the problem, and we should not be waiting for their test results to alert about elevated lead levels in our drinking water.”

Under the U.S. EPA’s new proposals (See box above), systems are still only required to conduct monitoring every six months at a limited number of customer taps. The new proposals do not go far enough. Put simply, infrequent sampling of homes likely will not capture the moment when corrosion occurs in a distribution system, and if it does, the consumer likely will already have been exposed.

While AMS applauds any efforts to reduce lead in drinking water, Dozortsev and other leaders in the organization strongly believe the focus and dollars should be put toward prevention instead of increased monitoring.

“Current regulations and even the new proposed regulations are still based on traditional lab-based analyses that begin with infrequent sampling and end with results that are provided many days later by which time the damage has been done,” Dozortsev said.

New Technology

AMS has developed a new on-site risk analysis and monitoring system called MetalGuard Lead Alert!. Consumers, water treatment plants and at-risk sites may use this system to be made aware of an increase in the risk of lead poisoning so they can take timely actions to avoid exposure. This solution offers communities real-time, continuous and dynamic water quality assessment of the presence of total lead in buildings or zones exposed to events that are the cause of acute lead contamination, in an aim to reduce the risk of exposure. Other benefits to this technology include fully automated, unattended operation; accuracy down to 1 ppb; 30-minute results for dissolved lead analysis; and 1-hour results for total lead analysis. The system can log data, generate reports and archive results as well. AMS will deploy and full-scale pilot the technology in 2020.

Additionally, the SafeGuard Lead automated lead analyzer can be used in conjunction with or separately from the monitoring system for rapid low-cost analysis. The analyzer, which would work well in homes,

daycares or schools and other at-risk sites for lead contamination, can return results on total lead contamination down to 1 ppb in just 30 minutes after loading a sample.

New EPA Proposals

The U.S. Environmental Protection Agency (EPA) recently proposed regulatory revisions to the National Primar Drinking Water Regulation (NPDWR) for lead and copper under the authority of the Safe Drinking Water Act (SDWA).

The new proposals continue the push for replacing lead water service lines; requireing communities to inventory lead lines; providing corrosion control treatment; following new and improved sampling procedures; and encouraging an increase in communications with residents when water tests at higher than the action level of 15 ppb. The plan also sets a new "lead trigger level" of 10 ppb, which would require water systems to take actions working toward lead reduction at that point. The plan calls for an annual letter to be issued to customers with lea service lines or unknown material, to further promote line replacement, and will also notify these customers of other potential options, including point-of-use lead removal devices.

The Lisle, Illinois-based Water Quality Association (WQA), whose membership is comprised of equipment manufacturers, suppliers, dealers and distributors of water quality improvement products and services, announce its support of the new EPA proposals and encouraged its members and the public to submit comments at regulations.gov.

"WQA applauds efforts to reduce lead in public drinking water wherever possible while standing ready with immediate solutions," the association announced in a statement.

Real-World Application

A utility could use this system to create an environment where every 30 minutes water in a distribution system is monitored long before it gets to the consumer. This water passes over lead components, including service lines, water pipes, pieces of solder, and brass fittings — all of which are sources of lead contamination. As soon as the water chemistry changes — any element of it — that would provoke corrosion in these components, it would send an alarm. It takes two or three days for water to get from the distribution system to the consumer's drinking tap, which is plenty of time for action for these alarms.

Once the system has identified a risk, testing can begin frequently in homes or other at-risk sites to confirm whether or not the risk has materialized. If it has, testing can continue frequently until the risk has passed and the community knows the water is safe to drink again.

"This is a totally new way of predicting deterioration of water quality," Dozortsev said. "The system uses risk analysis, artificial intelligence and predictive analytics to actually warn people ahead of the contaminated water reaching them. In this way, our system acts as a 'canary in the mine' to warn of treatment system failures that put at risk human health but takes action to protect the canary."

The monitoring system and the analyzer also offer municipalities and utilities peace of mind, as they no longer have the burden of manually monitoring increasingly sophisticated treatment systems for which they struggle to recruit and retain the skilled labor required for their supervision and maintenance. They also offer a less expensive alternative to substantial capital investment.

“EPA estimates for lead service line replacement are approximately $30 billion,” Dozortsev said. “Until this investment is made, if ever, consumers will continue to be exposed to the risk of lead poisoning. MetalGuard Lead Alert offers an affordable and reliable real-time lead corrosion risk management system to help reduce the risk of consumers’ exposure to lead contamination.”

The global market for Bottled Water is projected to reach US$307.6 billion by 2025

driven by the growing need to slake the thirst of a growing world population. World population is poised to grow from 7. 8 billion in 2019 to over 9. 8 billion by 2050. In line with this growth, there will be a parallel increase in demand for safe drinking water.

May 21, 2020 00:15 ET | **Source:** ReportLinker

https://www.globenewswire.com/news-release/2020/05/21/2036786/0/en/The-global-market-for-Bottled-Water-is-projected-to-reach-US-307-6-billion-by-2025.html

New York, May 21, 2020 (GLOBE NEWSWIRE) -- Reportlinker.com announces the release of the report "Global Bottled Water Industry"
- **https://www.reportlinker.com/p05817810/?utm_source=GNW**
Per capita consumption of drinking water in the coming years is poised to increase with science based evidence highlighting water's role in health and wellness. Few of the reasons why water is important to human health include its vital role in flushing out waste from the body; regulating body temperature; maintaining brain function; producing saliva; protecting tissues and joints; aids in nutrient absorption and digestion; improves blood oxygen circulation; boosts energy; optimizes cognitive function; helps retain youthful and supple skin. Scientific studies have also shown water's effectiveness in treating medical conditions such as constipation, kidney stones, exercise-induced asthma, urinary tract infection, and hypertension, among others. Against the backdrop of compelling evidence of the benefits of proper hydration, per capita consumption of water is expected to increase between 5 liters to 8 liters per day. Under this scenario, bottled water market is poised to witness strong demand. Bottled water symbolizes a healthful lifestyle and is positioned on the platform of being a convenient, safe and healthy hydration beverage.

- Defined as drinking water packaged in plastic or glass bottles, bottled water offers numerous benefits, with the most important being portability and ability to stay hydrated anytime, anywhere. Stringent labelling regulations are giving consumer confidence in bottled water a boost. New regulations especially in countries like the United States require product/brand identification and traceability to the origin, date and time of bottling to ensure that consumers get safe and wholesome water. In addition to healthiness and purity, bottled water is also growing in demand for their taste and nutritional value. Fortification of drinking water is a key trend driving the nutritional value of water and in turn the demand for bottled water. Manufacturers to enjoy a price premium in this commoditized market are fortifying water with iron and minerals such as Ca, Mg, Fe, and Zn. Fortified mineral water is increasingly becoming the new vehicle for affordable nutrition. Addition of minerals also alters and enhances the taste of water. Given that premiumisation offers a sizable growth opportunity for all types of bottled water, manufacturers

are focusing on new product launches, limited edition innovation, brand redesigns and packaging innovation. For instance, in addition to innovation in mineral bioavailability, manufacturers are also procuring water from newer sources like mountain springs; packaging the same in designer bottles; and launching limited editions of unique shapes of can formats. With global warming and climate change resulting in higher number of weather disasters such as floods, hurricanes and droughts, bottled water is growing in importance and prominence as an emergency source of water when access to drinkable tap water is lost. The United States, China and Europe represent large markets worldwide with a combined share of 60% of the market. China also ranks as the fastest growing market with a CAGR of 10% over the analysis period supported by factors such as poor quality tap-water, increasing health consciousness among the growing middle class population and rise in international tourism.

Health advisory issued after E. coli found in water at Rockport State Park picnic area

By Lauren Bennett, KSL.com | Posted - May. 21, 2020 at 4:32 p.m.

https://www.ksl.com/article/46755938/health-advisory-issued-after-e-coli-found-in-water-at-rockport-state-park-picnic-area

PEOA, Summit County — Visitors are being asked not to get in the water in parts of Rockport State Park after elevated levels of E. coli were found during routine sampling on Monday, water officials announced on Thursday.

A health advisory was issued by Summit County Health Department on Thursday telling patrons to not swim or wade in the water at Pinery Picnic Area, which is where the elevated levels were discovered.

Samples from the area showed levels of E. coli "well above the recreational health advisory threshold," Utah Division of Water Quality officials said in a news release.

Follow up samples taken on Thursday confirm the values continued to exceed the threshold.

Clean water testing vital to billions

By

Aisling Fairweather

on

23rd May 2020

https://www.innovatorsmag.com/clean-water-testing-vital-to-billions/

Biosensors, the next gold standard for water quality testing?

It is something we use daily, and when traces of it are detected on other planets it causes widespread excitement. **Water is at the centre of all life as we know it** and makes up the majority of the planet we call home. Yet clean water is a different story. Even in this age of innovation, when self-driving cars and holidays to space are on the horizon, access to clean water for all is a goal, not a reality. The World Health Organisation (WHO) reported that in 2017 2.2 billion people did not have access to safely managed drinking water, and that contamination of drinking water is approximated to cause 485,000 diarrhoeal deaths annually. The importance of clean water is highlighted even more so in these current times during the **COVID-19** pandemic when the importance of regular and thorough hand washing is driven home.

The WHO highlights the importance of testing drinking water, and determined that fluoride and arsenic are some of the most important contaminants to test for. Traditional testing methods include mass spectrometry and polymerase chain reaction. These techniques need to be executed by trained operators and cannot be completed on-site. Moreover, they are time-consuming and require expensive equipment.

A potential alternative can be found in biosensors. These come in many shapes and forms, although the two most commonly described types are electrochemical and optical biosensors, referring to the transduction method. Biosensors are made up of two main components: a receptor and transducer. The receptor is specific to one particle or organism, for example a contaminant such as *E. coli*. Once the target has bound to the receptor, a change is elicited and a signal generated that a transducer turns into a signal that we can read. It can tell us whether a set threshold has been passed or not, or even provide a quantitative value. This design allows biosensors generally to be faster, simpler and portable, so that testing can be executed on-site and not only by trained technicians. They are also highly sensitive and more affordable.

With these advantages in mind, it will come as no surprise that biosensors have not gone unnoticed. While there are some commercial biosensors available, it is reported that many remain as descriptions in literature. This is not to say there is no market for them; this slow commercialisation is attributed to a number of requirements deemed necessary for this to take

place. These include achieving the lowest possible limits of detection, no need to add reagents, portability, an assay time of seconds or minutes and the ability to identify multiple analytes using one device. Another proposed complication to their commercialisation is the interdisciplinarity of their fabrication. With 69 different biosensors described in literature solely for environmental monitoring in 2017, and with an estimated 200 to 500 companies working on biosensors across all fields in the same year, it seems it is only a matter of time before biosensors become widely commercially available.

While biosensors appear to have a promising outlook, the stability and durability of the receptors need to be improved. In line with these challenges, other technologies are being researched to be combined with biosensors, for instance molecularly imprinted polymers (MIPs) and nanomaterials. MIPs can be thought of as a mould in which the target molecule has been imprinted, forming cavities of a specific shape. They tend to be more robust and have been nicknamed 'plastic antibodies'. Nanomaterials are, as the name suggests, constructed by particles of nanoscale size. What makes them useful is characteristics such as conducting electricity well, adsorbing strongly and the ability for their surfaces to be modified by attaching functional chemical groups.

Aside from biosensors, there are also other technologies that attempt to replace the current methods for monitoring water quality. A research group at MIT, for instance, has developed a cheap device to measure the presence of heavy metals, using resin beads to attract and capture heavy metal ions. Like biosensors, the test can be done on-site and is affordable, however this test currently only measures metals. Another approach described by Højris et al. involves an optical sensor that determines, based on shape and light diffraction, whether particles in water are bacteria or abiotic. Testing time is just 10 minutes, maintenance is low and if changes are detected that may indicate pollution, the device could be auto-triggered to track the occurrence. Once again, however, the sensor currently detects only bacteria.

Water quality testing is not the only field that is benefitting from the development of biosensors. They are being researched for their use in medical applications, pollution measurements and food safety amongst others. The first biosensor was actually described as early as 1962 by Clark and Lyons, to measure blood glucose levels. Since then the biosensor field has developed considerably, expanding into other areas including water quality, that are in need of improved testing devices and involving other technologies to overcome limitations. Testing, of course, is only an initial step – it does not clean water for us. But it can tell us where there is an issue of contamination, so that we can work towards a reality in which everyone has access to clean water, as it should be.

Utah tech company offers solution to food crisis with sustainable water, energy for farms

by Jennifer Weaver

Tuesday, May 26th 2020

https://kutv.com/news/local/utah-tech-company-offers-solution-to-food-crisis-with-sustainable-water-energy-for-farms

(KUTV) — A Utah company has developed a process for water and energy production that doesn't produce carbon and removes solid waste particulates from the air.

Chaac Technologies is able to extract water and power directly from the atmosphere with a patent-pending, environmentally friendly and affordable system for commercial agriculture and farming businesses.

According to a press release, the company is finalizing contracts with 3-plus major agribusiness providers to produce freshwater, electricity, heat, and compressed air for commercial farms and agricultural businesses. When integrated into greenhouse infrastructure, the system can also regulate airflow and temperature to enhance and sustain healthy crop production, the release stated.
Jake Hammock, Chaac Technologies co-founder and CEO, said in a prepared statement:

Our technology removes the utility barriers that prevent farmers and growers from producing the food we need, particularly in areas where it hasn't been feasible or practical before. Our technology draws water from the air to create renewable energy from pneumatic power generation, which could be of vital use in helping to resolve the growing food crisis within the U.S.

The first production is taking place in late 2020. The company anticipates broad market availability in 2021.

Where can it be used?

Chaac's Distributed Grid Utility System is ideal for anyone seeking a sole-source, on-demand utility solution.

Growers can tailor their off-grid technology for multiple uses, such as commercial facilities or agricultural development, the news release stated.

How does it work?

Chaac's states that its patented and patent-pending product compresses ambient air in any location with 40% or higher humidity, and squeezes out the water,, in four steps:

The mechanism forces air into a smaller volume, which increases the pressure and the temperature of the air.

The compressed air grows warmer as the pressure increases.

Lower-temperature ambient air cools the hot compressed air.

Finally, a small decrease in temperature puts the compressed air in a saturated state, allowing full separation of air and water.

A news release states that pure water is now available for use and the excess energy and heat can return to the system or move to the grid. Additionally, commercial and industrial developers could ultimately use the technology to convert buildings and infrastructure into micro-substations that produce added power during water generation process that building owners could move to the grid to save or to sell, the release states.

What's next?

Chaac Technologies is finalizing two significant partnerships to fund the company's next phase. Additional investment opportunities are available to accelerate the ability to bring the technology to market.

"Chaac is taking on two of the major challenges to sufficient generation of food: energy poverty and water scarcity," stated Sam Kimzey, Chaac co-founder and COO, in a press release. "This technology will be a game-changer to support agribusiness in addressing the food supply shortage. It will also support this multi-trillion dollar market in bringing these resources to places that have not had access before."

More Than 50% of US Home Water Tests Exceed Contaminant Health Goal

NEWS PROVIDED BY **SimpleLab, Inc.** May 27, 2020, 07:00 ET

https://www.prnewswire.com/news-releases/more-than-50-of-us-home-water-tests-exceed-contaminant-health-goal-301065749.html

BERKELEY, Calif., May 27, 2020 /PRNewswire/ -- SimpleLab today announced general access to its consumer testing platform where anyone can now obtain fast, easy, and actionable home water testing of more than 500 waterborne contaminants along with unbiased filtration recommendations. The company also announced its first round of funding from Craft Ventures (San Francisco), Spring Point Partners (Washington D.C.), and Mazarine Ventures (Chicago).

"Tap Score Reports empower anyone to diagnose water quality issues and identify solutions for health, taste and plumbing improvements. Report results highlight potential risks and give unbiased suggestions for treatment. So far, results have been surprising," said Johnny Pujol, co-founder/CEO of SimpleLab. "More than 50% of those who've tested have found at least one contaminant above the federal maximum contaminant level goal. Perhaps most importantly, nearly all problems are solved with simple, targeted filtration-- tap water quality can be as good or better than bottled water!"

"We've now been testing water quality directly at residential and commercial taps for two years. Results have uncovered various exposures to health risks and taste issues," continued Pujol. "Along the way, we've also been evaluating the real-world performance of water filtration products."

SimpleLab was founded in 2017 to improve people's lives by providing direct access to cutting-edge environmental testing. Tap Score kits are available from mytapscore.com where consumers choose among preset or custom testing packages. With your order, you receive professional sampling materials, clear instructions and prepaid shipping back to a certified lab. Within 4 days you get your Tap Score Report by email along with unbiased recommendations and online support from professional water treatment engineers.

Pujol added, "Americans have been told bottled water is the antidote to their concerns about tap water. While bottled water may seem like a good idea, it's largely unregulated and contributes to the ongoing single-use plastics pandemic. With personalized testing and filtration advice, your tap water can easily be better than bottled water at a fraction of the cost and environmental impact."

Tap Score gives people the tools to easily measure and dramatically improve the quality of water coming out of their tap. Wirecutter just named Tap Score 'The Best Water Test Kit for Your Home.' For more information, contact press@simplewater.us.