



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

**Department of
Environmental Quality**

Kimberly D. Shelley
Executive Director

DIVISION OF WATER QUALITY
John K. Mackey, P.E.
Director

Water Quality Board
Steven K. Earley, Chair
James Webb, Vice Chair
Carly Castle
Michela Harris
Joseph Havasi
Trevor Heaton
Michael D. Luers
Kimberly D. Shelley
John K. Mackey
Executive Secretary

**Utah Water Quality Board Meeting
MASOB
195 North 1950 West
Salt Lake City, UT 84116
Via [Zoom](#)**

*May 24, 2023
Board Meeting Begins at 8:30 am*

AGENDA

Water Quality Board Meeting – Roll Call

A. Minutes:

Approval of Minutes – April 26, 2023 Water Quality Board Meeting.....Steven Earley

B. Executive Secretary’s Report.....John Mackey

C. Other

- 1. Financial Status Report.....Adriana Hernandez
- 2. Kane County Water Conservancy- Authorization of Supplemental Funding Skyler Davies
- 3. Wastewater Operator Certification Program 2022 Annual Report to the Board Brian Lamar

D. Public Comment Period

E. Meeting Adjournment

**Next Meeting
June 28 2023 at 8:30 am**

**MASOB & Via [Zoom](#)
195 North 1950 West
Salt Lake City, UT 84116**

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Larene Wyss, Office of Human resources, at (801) 536-4281, TDD (801) 536-4284, or by email at lwys@utah.gov at least five working days prior to the scheduled meeting.



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MINUTES

**UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
UTAH WATER QUALITY BOARD**

MASOB
and
Via Zoom

March 22, 2023
8:30 am Meeting

UTAH WATER QUALITY BOARD MEMBERS PRESENT

Steven Earley
Carly Castle
Joe Havasi
Trevor Heaton
Mike Luers
Mike Luers
Excused
Michela Harris
James Webb

DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT

John Mackey	Leanna Littler-Woolf
Emily Cantón	Robert Beers
Ken Hoffman	Adriana Hernandez
Clanci Hawks	Alex Heppner
Glen Lischeske	Lonnie Shull
Julian Carroll	Beth Wondimu
Jeff Studenka	Skyler Davies

OTHERS PRESENT & ONLINE

Haley Sousa Utah Attorney General's Office
Julianna Slurzberg Utah Attorney General's Office
Chris Anderson
Soren Simonsen Joran River Commission
Jessie Wilson
Ben Cory
Ted Mickleson
Craig Giles
Conner Kenzler
Mario
Chris Anderson
Melissa Reynolds
S. Boardbent

Mr. Earley called the Meeting to order at 8:30 AM.

ROLL CALL

Mr. Earley took roll call for the members of the Board.

APPROVAL OF MINUTES OF MARCH 22, 2023 BOARD MEETING

Motion: Mr. Trevor moved to approve the minutes of the March 22, 2023 Board meeting.

Mr. Havasi seconded the motion. The motion passed unanimously.

EXECUTIVE SECRETARY REPORT

Mr. Mackey addressed the Board regarding the following.

- WEAU Conference: Staff attended 3.5 days of technical training, peer & stakeholder networking, Op Challenge team representing DWQ.
- April 20, 2023 Earth Day, staff service on Jordan River cleanup sponsored by JR Commission.
- Flooding Reports, DEQ Webpage info includes permitting, fact sheets and general info and links.
Kim Shelley's service project for DEQ was sandbagging with the Lt. Governor and Mayor Kafusi.
- WOTUS preliminary injunction granted, enjoined the government from implementing 2023 WOTUS in 24 states including Utah.
- Clean Water Needs Survey completed. Utah finds among 190 facilities a need of \$8.6 billion dollars.

- GSL Wildlife (fish, waterfowl eggs, & invertebrates) Selenium results conclude that the GSL waterfowl are protected under the current standard.
- DWQ Monitoring team is gearing up for next season of state-wide water quality and habitat monitoring. Jordan River will be the next basin of intensive monitoring.
- Notification of \$13.3 Million grant funding by 2023 Legislature for Graveyard Wash Water Reuse Reservoir in Washington County.
- Introduced Adriana Hernandez, DWQ's new Contracts Analyst.

OTHER

Financial Status Report: Ms. Cantón presented the financial status report to the Board as indicated in the packet.

Grantsville City – Design Advance: Mr. Lischeske presented the Grantsville City request for a Design Advance.

Grantsville City is a community with a current population of approximately 13,547. While the City is still considered a small town, it is experiencing substantial growth and is estimated to have a population of over 45,000 in the next 20 years. The City owns and operates its own wastewater system, including wastewater treatment.

The current Grantsville City wastewater treatment plant (WWTP) consists of a pump station, headworks building (screening and grit removal), aerated and storage lagoons, and disinfection. Though the existing WWTP is designed to treat up to 1.5 Million Gallons per Day (MGD) it is limited in its actual capacity due to its limited ability to meet the more stringent effluent nutrient requirements (phosphorus) implemented in the 2019 permit. The average daily flows to the WWTP are 0.86 MGD with peak day flows at 0.95 MGD and have been as high as 1.39 MGD. WWTP improvements and expansion is necessary to meet the nutrient requirements and accommodate future growth.

The City's preferred alternative is to upgrade to a new 3 MGD (average daily flow), 7 MGD (peak hourly flows), fine bubble diffuser activated sludge plant. This is expected to successfully, and most cost effectively, meet the treatment performance objective for the next 20 years. The design will also include future expansion capabilities. It is anticipated that the treatment facilities will include a new headworks building, anaerobic basins, anoxic basins, fine bubble diffuser aeration basins, blower equipment building, secondary clarifiers, and tertiary equipment to meet Type I reuse requirements. While a few locations were considered in the study, the preferred location for the new treatment facility is near the existing WWTP on City owned property which better accommodates connection to the existing infrastructure and future use of existing facilities for reuse storage.

The community has been setting aside funding for the project, but to align with the timing of the permit requirements for phosphorus, the need to begin design for the project is immediate and cannot be completely covered by collected funds at this time. Funding that has been set aside will be used during the engineering phase and is listed below in the Cost Estimate.

The City is also conducting a sewer rate and impact fee study, which includes the cost for the new treatment plant. This should be completed by the time construction funding is needed which will allow them to repay the debt service.

The estimated cost for design services is \$1,485,000, including \$1,450,000 for consulting services and \$35,000 additional for Administration and Legal services. The City will provide a local contribution of \$485,000, bringing the total amount requested from the board to \$1,000,000.

Motion: Mr. Luers moved to authorize the Grantsville City Design Advance in the amount of \$300,000 with the following special conditions:

- 1. The Division of Water Quality must approve the engineering agreement and plan of design before the advance will be executed.**
- 2. The Design Advance must be expeditiously repaid to the Board once long-term project financing has been secured.**
- 3. The City must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).**
- 4. As part of the facility planning, the City must complete a Water Conservation and Management Plan.**

Mr. Havasi seconded the motion. The motion passed unanimously.

Spring City – Design Advance: Mr. Hoffman presented the Spring City request for a Design Advance.

Spring City has approximately 438 sewer connections on the collection system. This includes 426 residential, 4 commercial, 7 institutional, and 1 City connection. The City sewer collection system was installed in the 1990's, when most of the homes were located in the western two thirds of the City limits. Since the 1990's nearly all of the growth in the city has extended to the east and to the north parts of the City. The planning growth rate is 1.5%, which would result in 6 to 7 new homes per year for the next 5 years.

Most homes that have been built since that time were more than 300 feet away from existing sewer line. The number of homes is estimated to be approximately 30 to 40. These homes have installed septic tanks but they are currently existing in an area that would benefit from sewer connection. The City is concerned about the increasing number of septic tanks and their potential impact on the City's groundwater source. Spring City intends to extend the existing sewer collection system in order to service all homes within the city limits. Existing homes that are currently on septic tanks will be encouraged to connect to sewer, and all new homes within city limits will be required to connect to the sewer collection system.

The project will extend the sewer collection system to 700 East and 950 North. A new interceptor pipeline will connect the extensions on the north end of the system to the lagoons. This interceptor line will include a creek crossing, highway crossing, and will likely involve the construction of deep sewer (greater than or equal to 12 feet of depth) for a portion of the alignment west of the highway. A new interceptor line will run from 950 N to the sewer lagoons. The interceptor line will take the sewage from the extended area to the lagoons for treatment. The improvements will consist of approximately 25,200 feet of new sewer pipe and new manholes.

The City has completed a Wastewater Improvements Preliminary Engineering Report (PER) in November 2022, prepared by Sunrise Engineering. The PER provided an overview of the system and options for extending the collection system. This report provides the more detailed evaluation of the system and the feasibility of the collection system improvements.

The total cost of the project is estimated at \$5,063,200. Spring City has applied to USDA-RD requesting \$4,674,200 in construction funding to complete the project. The City is requesting \$289,000 from the Water Quality Board to fund design work. In addition, a local share of \$100,000 will be for design phase to have sufficient funds to cover the full extent of the preconstruction costs.

The City is proposing to construct an extension of the sewer collection system. The City proposes the following items: install approximately 21,000 liner feet of 8-inch pvc sewer lines, install approximately 4,165 liner feet of 10-inch pvc sewer lines, install 63 manhole of 48-inch, and install new interceptor sewer.

Spring City (the City) is requesting a \$289,000 design advance to cover pre-construction costs related to extension of the sewer collection system project. Six Alternatives were evaluated by the city. The recommended alternative is No. 3, which is the sewer collection system to 950 North and 700 East providing connectivity within 300 feet of properties within City limit and constructing a new interceptor line from 950 N to the lagoons.

Motion: Mr. Luers moved to authorize the Spring City Design Advance in the amount of \$289,000 with the following special conditions:

- 1. The Division of Water Quality must approve the engineering agreement and plan of design before the advance will be executed.**
- 2. The Design Advance must be expeditiously repaid to the Board once long-term project financing has been secured.**
- 3. The City must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).**
- 4. As part of the facility planning, the City must complete a Water Conservation and Management Plan as indicated in the packet.**

Mr. Heaton seconded the motion. The motion passed unanimously.

PUBLIC COMMENTS

Soren Simonsen with the Jordan River Commission made a public comment to thank DEQ for their assistance with the Jordan River cleanup project. In addition, he thanked Paul Burnett and Sandy Wingert of the Division of Water Quality for their work in assisting with the Big Bend nonpoint source project and the application for the American the Beautiful grant.

MEETING ADJOURNMENT

Motion: Mr. Havasi moved to adjourn the meeting.

Mr. Heaton seconded the motion. The motion passed unanimously.

**Next Meeting – May 24, 2023
Meeting begins at 8:30 am**

**In-Person
MASOB
195 North 1950 West
Salt Lake City, UT 84116**

**Via Zoom
<https://us02web.zoom.us/j/7074990271>**

Steven Earley, Chair
Utah Water Quality Board

LOAN FUNDS FINANCIAL STATUS REPORT MAY 2023

UTAH WASTEWATER LOAN FUND (UWLF)	State Fiscal Year 2023	State Fiscal Year 2024	State Fiscal Year 2025	State Fiscal Year 2026	State Fiscal Year 2027	State Fiscal Year 2028
Funds Available						
UWLF	\$ 28,639,176	\$ 13,434,526	\$ 15,619,382	\$ 17,701,312	\$ 19,443,360	\$ 20,800,397
Sales Tax Revenue		\$ 3,587,500	\$ 3,587,500	\$ 3,587,500	\$ 3,587,500	\$ 3,587,500
Loan Repayments (5260)	\$ 200,000	\$ 2,473,791	\$ 2,808,235	\$ 2,655,353	\$ 2,270,341	\$ 2,298,785
Total Funds Available	\$ 28,839,176	\$ 19,495,817	\$ 22,015,117	\$ 23,944,165	\$ 25,301,202	\$ 26,686,682
General Obligations						
State Match Transfers Base Cap Grant	\$ (1,219,200)	\$ (780,000)	\$ -	\$ -	\$ -	\$ -
State Match Transfers Gen. Supplemental Grant	\$ (937,800)	\$ -	\$ -	\$ -	\$ -	\$ -
State Match Transfers Gen. Supplemental Grant (est)		\$ (1,029,435)	\$ (2,246,805)	\$ (2,433,805)	\$ (2,433,805)	
State Match Reserve for Historic Cap Grant Values		\$ (368,400)	\$ (368,400)	\$ (368,400)	\$ (368,400)	\$ (368,400)
DWQ Administrative Expenses	\$ (424,650)	\$ (1,698,600)	\$ (1,698,600)	\$ (1,698,600)	\$ (1,698,600)	\$ (1,698,600)
Project Obligations						
South Salt Lake City (B)	\$ (4,891,000)	\$ -	\$ -	\$ -	\$ -	\$ -
South Salt Lake City (C)	\$ (982,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Loan Authorizations						
Spanish Fork	\$ (4,500,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Hanksville	\$ (350,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Long Valley	\$ (220,000)					
Lewiston	\$ (400,000)					
Grantsville	\$ (1,000,000)					
Planned Projects						
* Kane County	\$ (480,000)					
Total Obligations	\$ (15,404,650)	\$ (3,876,435)	\$ (4,313,805)	\$ (4,500,805)	\$ (4,500,805)	\$ (2,067,000)
UWLF Remaining Loan Balance	\$ 13,434,526	\$ 15,619,382	\$ 17,701,312	\$ 19,443,360	\$ 20,800,397	\$ 24,619,682

HARDSHIP GRANT FUNDS FINANCIAL STATUS REPORT MAY 2023

HARDSHIP GRANT FUNDS (HGF)	State Fiscal Year 2023	State Fiscal Year 2024	State Fiscal Year 2025	State Fiscal Year 2026	State Fiscal Year 2027	State Fiscal Year 2028
Funds Available						
Beginning Balance		\$ 1,304,555	\$ 1,641,856	\$ 1,892,964	\$ 2,058,277	\$ 2,133,926
Federal HGF Beginning Balance (5250)	\$ 3,318,325	\$ -	\$ -	\$ -	\$ -	\$ -
State HGF Beginning Balance (5265)	\$ 3,732,449	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Earnings at 5.0063%	\$ 58,837	\$ 6,263	\$ 7,882	\$ 9,088	\$ 9,881	\$ 10,245
UWLF Interest Earnings at 5.0063%	\$ 238,961	\$ 64,496	\$ 74,986	\$ 84,980	\$ 93,344	\$ 99,859
Hardship Grant Assessments (5255)	\$ -	\$ 969,300	\$ 892,769	\$ 817,302	\$ 739,827	\$ 684,802
Interest Payments - (5260)	\$ -	\$ 297,241	\$ 275,471	\$ 253,943	\$ 232,597	\$ 216,154
Advance Repayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Funds Available	\$ 7,348,571	\$ 2,641,856	\$ 2,892,964	\$ 3,058,277	\$ 3,133,926	\$ 3,144,986
Financial Assistance Project Obligations						
Big Water-Planning Grant	\$ (52,500)	\$ -	\$ -	\$ -	\$ -	\$ -
Delta - Design Grant	\$ (200,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Delta - Short Term Loan	\$ (200,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Dutch John - Planning	\$ (95,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Dutch John - HGF Loan	\$ (60,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Eagle Mountain City - Construction Grant	\$ (510,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Elwood - Planning	\$ (18,200)	\$ -	\$ -	\$ -	\$ -	\$ -
Hanksville - Design	\$ (104,600)	\$ -	\$ -	\$ -	\$ -	\$ -
Hinckley Hardship Planning Grant	\$ (15,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Grantsville - Design Advance	\$ (300,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Kanab City Planning Advance	\$ (29,800)	\$ -	\$ -	\$ -	\$ -	\$ -
Lewiston City - Design and Construction	\$ (460,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Lewiston City - De-Obligation	\$ 460,000	\$ -	\$ -	\$ -	\$ -	\$ -
Long Valley - Design	\$ (103,700)	\$ -	\$ -	\$ -	\$ -	\$ -
Millville City - Construction	\$ (1,000,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Spanish Fork - Hardship Grant	\$ (500,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Spring City - Design Advance	\$ (289,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Stockton - Planning	\$ (20,000)	\$ -	\$ -	\$ -	\$ -	\$ -
Non-Point Source/Hardship Grant Obligations						
McKees ARDL interest-rate buy down	\$ (55,261)	\$ -	\$ -	\$ -	\$ -	\$ -
Munk Dairy ARDL interest-rate buy down	\$ (16,017)	\$ -	\$ -	\$ -	\$ -	\$ -
(FY12) Utah Department of Agriculture	\$ (172,270)	\$ -	\$ -	\$ -	\$ -	\$ -
(FY15) DEQ - Ammonia Criteria Study	\$ (27,242)	\$ -	\$ -	\$ -	\$ -	\$ -
(FY17) DEQ - Utah Lake Water Quality Study	\$ (348,301)	\$ -	\$ -	\$ -	\$ -	\$ -
(FY23) DEQ Davis County Health Department	\$ (105,313)	\$ -	\$ -	\$ -	\$ -	\$ -
USU - Historic Trophic State/Nutrient Concentrations Paleo	\$ (25,141)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2018 - Remaining Payments	\$ (7,100)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2019 - Remaining Payments	\$ (88,688)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2020 - Remaining Payments	\$ (173,111)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2021 - Remaining Payments	\$ (138,044)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2022 - Remaining Payments	\$ (621,140)	\$ -	\$ -	\$ -	\$ -	\$ -
FY 2023 - Remaining Payments	\$ (768,586)	\$ -	\$ -	\$ -	\$ -	\$ -
Future NPS Annual Allocations		\$ (1,000,000)	\$ (1,000,000)	\$ (1,000,000)	\$ (1,000,000)	\$ (1,000,000)
Planned Projects						
Total Obligations	\$ (6,044,016)	\$ (1,000,000)	\$ (1,000,000)	\$ (1,000,000)	\$ (1,000,000)	\$ (1,000,000)
HGF Unobligated Funds	\$ 1,304,555	\$ 1,641,856	\$ 1,892,964	\$ 2,058,277	\$ 2,133,926	\$ 2,144,986



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TO: Water Quality Board

THROUGH: John K. Mackey, P.E.

FROM: Skyler C. Davies, P.E.

DATE: May 24, 2023

SUBJECT: Kane County Water Conservancy District Duck Creek Sewer Project
Authorization of Supplemental Funding

APPLICANTS REQUEST

The Kane County Water Conservancy District is requesting \$480,000 of supplemental funding to remove material from the primary cell of the Duck Creek lagoon and reline it. In addition, these funds will cover a budget shortfall that was not discovered until late in the original collections and lagoon project. Staff estimates \$30,000 in legal and loan origination fees if a bond is authorized, bringing the required loan amount to \$510,000.

BACKGROUND

On August 22, 2018, the Water Quality Board (Board) authorized a loan of \$1 million at 0% interest and a hardship grant of \$2.997 million for Kane County Water Conservancy District (District) for design and construction of a new wastewater system. The Staff feasibility report that was provided to the Board at the time is included as Attachment 1 for reference. The total estimated cost at that time was \$4.414 million which included a culinary water project estimated at \$417,000 requiring that they obtain separate funding for the \$417,000, which at the time was included in the project but has since separated into a standalone project with funding from other sources. On July 22, 2020, the project was Reauthorized with a total funding package of \$1 million at 0% interest and a hardship grant of \$3.997 million. The staff feasibility memo for reauthorization that was presented at the July 2020 meeting is included as Attachment 2 for reference. Since that time the majority of the project is complete with some punch list items remaining on the collection system.

The District is before the Board today to request additional funding needed to remove excess material and reline a lagoon cell. The needed upgrades were not apparent at the time of the initial request as the cell had water in it hiding the condition of the cell. There is also a request for some funding to cover cost overruns from the initial project that are a result of a misunderstanding of available funds, that was discovered toward the end of the project.

PROJECT DESCRIPTION

The original project was for the construction of the Duck Creek collection system; the purchase of the Duck Creek Lagoons and property from the US Forest Service (USFS); and upgrades to the treatment facility that were necessary to connect and provide effective sewer service to the town. This project is further described in Attachment 1 and 2 Board Packets for August 2018 and June 2020, respectively. This project incurred \$110,000 in cost overruns.

The additional project includes improvements to a lagoon cell consisting of removal of vegetation, biosolids, original liner, excavation and relining of the cell with a clay liner.

COST OVERRUN FUNDING NEED

It is anticipated that it will be significantly less expensive and easier to complete within the tight timeline, if they are able to have the existing contractor complete the work rather than bid it separately. Additionally, due to an extended construction schedule partially due to weather, and supply chain conditions there have been some unforeseen change orders as well as increase construction management costs. Exacerbating this issue was a misunderstanding related to local contribution of \$207,000 that was meant for the Water Project but when the projects were separated it remained as a budget item in the wastewater project spreadsheet, this created a perceived contingency that was not actually available, and was not caught until the majority of Board funds were disbursed. This has resulted in a budget shortfall of \$110,000 for the original project.

LAGOON RELINING PROJECT NEED

The additional funding will allow the District to reline the pond while it is still empty, prior to the sewer building up to the point where both lagoons are needed later in the year. The need for the pond relining was only identified recently, as some customers were added during phase 1, the water year was significantly higher than anticipated, and additional material was discovered in the lagoon once it dried out. As such the District is concerned about maxing out the capacity of the lagoons much earlier than anticipated if this work is not undertaken.

To explain the additional material in the lagoons: The District had a recent conversation with the USFS in which they learned that the USFS placed several inches of base in the bottom of the lagoon on top of the liner. This not only took up part of the design volume, but also facilitated the growth of reeds in the pond, taking up more volume and adding bio loading. The reeds tend to accumulate material in the wind and waves, taking up additional volume. The District is requesting funds to assist in removing this material from the lagoon to restore volume and capacity. Once the system is in full operation, expected with the summer tourism rush later this year, both lagoons will be utilized and the opportunity to clean and reline the pond will be lost until an additional pond can be constructed.

COST ESTIMATE

TABLE 1-PROJECT COST ESTIMATE		
Item	Description	5/2023 Budget
1	Overage Costs for Original Project	\$110,000
2	Lagoon Upgrades	\$259,600
3	Lagoon Upgrade Contingency	\$52,721
4	Lagoon Engineering, CMS, Bidding and Negotiating	\$57,679
5	*Legal/Bonding if Loan is Authorized	\$30,000
	Needed Funding Funded if as a Loan	\$510,000

*This was added by staff and is needed if the project is authorized as a loan, if it is authorized as a grant, the authorized amount could be reduced by this amount.

FINANCIAL BURDEN ANALYSIS

The District has a current user rate of \$60 per month for residential and \$90 per month for commercial for the first 1,000 gallons with a progressive surcharge for every 1,000 over the included 1,000 gallons ranging from \$0.50 to \$1.50/1,000 gallons. As the current MAGI is \$29,800 for Duck Creek Village the current rate results in a minimum charge of 2.4% of MAGI $((\$60 * 12) / \$29,800)$. A financial burden analysis was not conducted for this project for two reasons.

1. This is supplemental funding and the original analysis was based on limited financial information for a new area with limited connections requiring a high user rate, with an indication by the District that \$1 million was all they could afford to finance.
2. The information necessary for a financial burden analysis is not available on the census website for this area, and information that might be available for adjacent areas does not account for the unique circumstances in the area.

STAFF DISCUSSION OF GRANT FUNDS

Currently, the Board requires projects for construction funding apply by June 30. These projects are introduced during the August Board meeting, a Finance Committee meeting is held in September, and authorizations are made during the October Board meeting. A second application date for construction funding is identified as December 31, if balances remain available for the current fiscal year. Staff believes it is important for the program to allow for funding recipients to reappear in front of the Board if financial issues come up during a project. However, staff is concerned about requests for additional funding, particularly for grant consideration, appearing outside of the annual application period. Staff position is all available FY23 construction grant funds were awarded during October 2022. Based on this, **staff recommends grant funds not be considered for construction projects outside of this June’s annual funding application process.** This is not a recommendation relating to the District’s project or funding request but a reflection of funding requests being prioritized during the August Board meeting.

STAFF COMMENTS

This project was bid and constructed without Clean Water State Revolving Fund (CWSRF) requirements and thus must be funded with Utah Wastewater Loan Funds (UWLF) or Hardship Grant Funds (HGF). Staff sees four options for evaluation:

1. Authorize the entire amount as loan. Due to the special nature of this project staff would recommend 0% interest loan for 30 years.
2. Authorize a mix of HGF and UWLF. (An example of such a deal would be \$110,000 as hardship grant for the overage costs and \$400,000 as 0% interest 30-year loan for the lagoon relining project.)
3. Fully fund the request as HGF.
4. Require the District to come back during the annual funding application process and appear in October if they wish to have the project funded as grant.

Due to the desire to utilize the current contractor Option 4 is not feasible. Due to the limited balances in the HGF fund staff believes Option 3 is not feasible. Considering the fact that the request is coming outside of the normal funding schedule staff recommends that the funding be authorized as loan. However, staff has included a draft motion for Option 2 if the Board wishes to supplement the funding with additional grant funds.

STAFF RECOMMENDATIONS

Option 1: Utah Wastewater Loan Funds

Staff recommends the Board Authorize funding to Kane County Water Conservation District in the amount of **\$510,000 as a loan at an interest rate of 0 percent repayable over 30 years under the following special conditions:**

1. The District must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).
2. The District must develop, commit to adopt, and implement a capital asset management plan that is consistent with currently public noticed requirements of Utah Administrative Code (UAC) R317-3-101.
3. The District must complete a Water Conservation and Management Plan.

Option 2: Hardship Grant Funds

The Board Authorize funding to Kane County Water Conservation District (District) in the amount of **\$XX0,000 as a hardship grant under the following special conditions:**

1. The District must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).

KCWCD Duck Creek Supplemental Funding Authorization

May 24, 2023

Page 5

2. The District must develop, commit to adopt, and implement a capital asset management plan that is consistent with currently public noticed requirements of UAC R317-3-101.
3. The District must complete a Water Conservation and Management Plan.

DWQ-2023-006487

File: SRF KCWCD Duck Creek, Planning, Section

Date Received: May 17, 2018
Date to be presented to the WQB: August 22, 2018

WATER QUALITY BOARD
FEASIBILITY REPORT FOR WASTEWATER COLLECTION & TREATMENT
PROJECT

AUTHORIZATION

APPLICANT: Kane County Water Conservancy District
725 E. Kaneplex Drive
Kanab, Utah 84741
Telephone: 435-644-3997

PRESIDING OFFICIAL: Mike Noel, Executive Director

CONTACT PERSON: Amanda Buhler, Office Manager

TREASURER: Mike Kenner, Board Member

CONSULTING ENGINEER: Joe Phillips, P.E.
Sunrise Engineering
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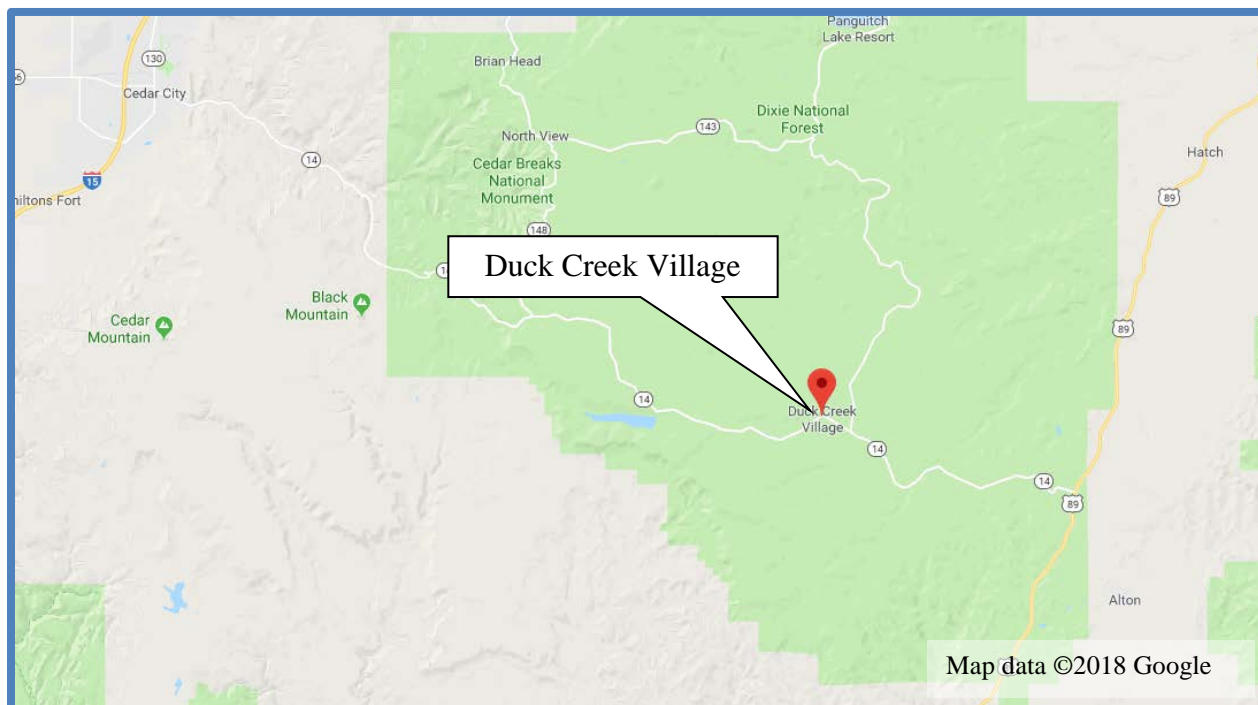
APPLICANT'S REQUEST

Kane County Water Conservancy District (the District) requests **financial assistance in the amount of \$3,997,000** including a **\$759,500 Design Advance**; this also includes the previously authorized **\$203,000 in property acquisition costs advance** that was approved in the June 27, 2018 Water Quality Board meeting. This funding will be used for the construction of the collection system, the purchase of the Forest Service lagoons and property, and upgrades to the treatment facility that are necessary to connect and provide effective sewer service to the town.

The applicant has stated that the most they can afford to repay is a \$1,000,000 loan, based on 30 year 0% interest terms.

APPLICANT'S LOCATION

Duck Creek is an unincorporated community in Kane County located on the edge of Cedar Mountain, approximately 30 miles east of Cedar City.



[Figure 1]

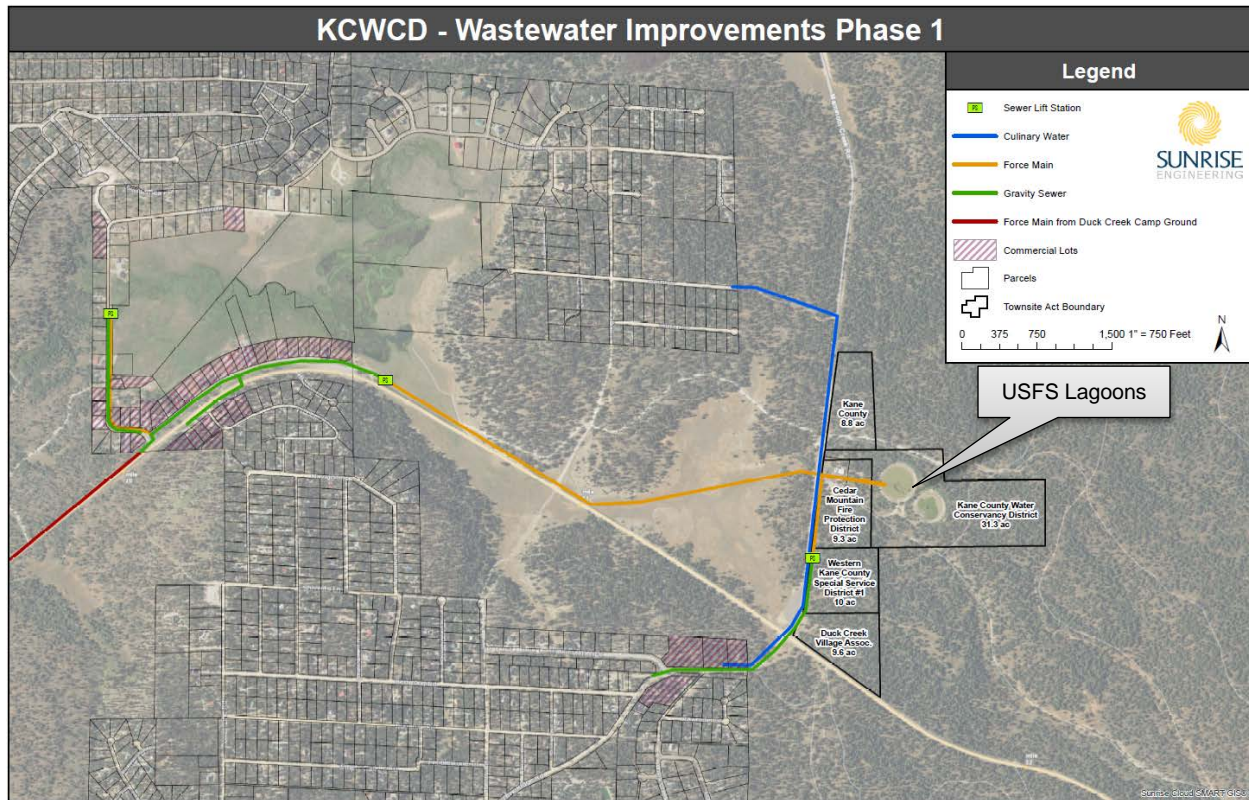
BACKGROUND

In 2007, the District commissioned a Wastewater Planning Study that documented significant risk to ground and surface waters from failing onsite systems in the Duck Creek area. Of particular concern is the “valley area” near Duck Creek Village [Figure 2] where high ground water levels frequently cause the onsite systems in the area to become inundated with water. This high groundwater limits the ability of the soils to provide adequate absorption and treatment. Surfacing septage has occurred on numerous occasions, creating a risk to public health and water quality. The recommended alternative in the 2007 study was to purchase the nearby wastewater lagoon facility that services the Duck Creek campground and extend service to the Duck Creek area. The lagoon system is located within the Dixie National Forest and is owned and operated by the USFS.

On May 1, 2013 the Water Quality Board authorized a planning grant of \$173,000 to assist the District in funding a Townsite Act application. The Townsite Act process is one of only two mechanisms to purchase property from the United States Department of Agriculture Forest Service (USFS); the other mechanism is Congressional Action.

On June 27, 2018 the project was introduced to the Water Quality Board and the Board

authorized an advance of \$203,000 to purchase land that contains the USDA Forest Service lagoons. Since that meeting, more accurate information on the number of ERU's being served has been obtained and is included in the cost model provided in Appendix 1.



[Figure 2]

ALTERNATIVES

The District thoroughly explored alternatives to address the onsite wastewater system problem in the Duck Creek area. They investigated constructing various mechanical treatment plants but the issue of effluent disposal in this area is unusually complicated. The District evaluated several alternative treatment and collection systems including:

Collection System Alternatives

- Alternative 1 - Gravity Collection with Lift Stations
- Alternative 2 - Pressurized Effluent Sewer System
- Alternative 3 - Pressurized Grinder Pump Sewer System

Treatment System Alternatives

- Alternative A - Total Containment Lagoon Treatment
- Alternative B - SBR Treatment with Rapid Infiltration Basin (RIB) Disposal
- Alternative C - SBR Treatment with Injection Well Disposal

The above alternatives were analyzed in the Facility Plan and the preferred alternative - Collection System Alternative 1 and Treatment System Alternative B – was identified. Due to high costs, a phased implementation approach was developed. The first phase consists of purchasing the existing lagoon facility and constructing a sewer collection and transmission system that will connect most of the businesses in Duck Creek. Several residences are reasonably close to the proposed alignment and could be connected in the near future. Additionally, the lagoons will be improved to bring them into compliance with DWQ standards. This phase will establish a collection system backbone to which other customers can be connected as it becomes feasible. As connections are added and the lagoons treatment capacity is reached, Phase 2 of the project would be implemented wherein the lagoons would be replaced with SBR treatment system and RIB disposal.

PROJECT DESCRIPTION

The Duck Creek Wastewater Project, Phase 1, represents the project phase that will most directly address the identified surface and groundwater contamination concerns in the Duck Creek area of Cedar Mountain, Kane County, Utah.

The Phase 1 project accomplishes multiple critical steps in establishing an overall wastewater solution in the Duck Creek area, including:

- I. The project is in the process of transferring the existing Duck Creek Campground wastewater lagoon site from the USFS into the ownership of Kane County Water Conservancy District. The site will serve as the treatment facility for the Phase 1 project and as the treatment site for future phases that could ultimately serve the Duck Creek, Strawberry Creek, Swains Creek, and Zion View Estates areas, all now on septic systems.
- II. The project will establish a new public wastewater utility service in the area that will be sponsored and administered by the Kane County Water Conservancy District. Operational and maintenance capacity will be initiated and developed through operation of the Phase 1 project.
- III. The project will establish a “backbone” infrastructure system and a “rate base” that will develop operational and financial capacity upon which future expansion can be built as need and feasibility occur.
- IV. The project will establish key alignment rights-of-way in the form of Special Use Permits issued by the USFS for the Phase 1 project and future expansions expected to become necessary in the Duck Creek valley.
- V. The Phase 1 project eliminates septic tank use by the commercial entities in Duck Creek Village; these on-site treatment units are considered to be the greatest threat to surface and groundwater quality in the Duck Creek area.
- VI. The project converts the USFS from a wastewater system operator to a wastewater system customer.
- VII. The Phase 1 project capitalizes on the current support of the commercial property owners to participate in the development of a wastewater treatment solution at Duck Creek.
- VIII. The Phase 1 project capitalizes on the current intent of the USFS to dispose the lagoon site through the Townsite Act process and to issue Special Use Permits for the necessary

infrastructure improvements.

- IX. The project establishes a wastewater treatment solution for future governmental services at Duck Creek, including the Townsite parcels reserved for Kane County, Cedar Mountain Fire Protection District, Western Kane County SSD #1, and the Duck Creek Village Association, and potentially the future Duck Creek Town.

The Phase 1 project includes as primary infrastructure components approximately 7,500 linear feet of 8-inch and 10-inch gravity sewer main, 7,000 linear feet of 6-inch and 8-inch force main, two secondary and one primary lift stations, basic lagoon site improvements, 40 gravity and pressurized sewer connections, power and SCADA improvements necessary to operate the wastewater system, and other miscellaneous appurtenances typical of a wastewater system installation in an alpine environment. Professional and incidental costs include those related to planning and environmental updates, mapping and survey efforts, design, bidding, construction administration, financing the project, and establishing the wastewater utility administratively. Also included in the project is the effort to finalize the Townsite Act process which transfers and subdivides the Townsite parcel disposed by the Forest Service.

IMPLEMENTATION SCHEDULE:

Introduction to WQB for Funding:	June 27, 2018
To WQB for Funding Authorization:	August 22, 2018
Begin Construction	2019
Complete Construction:	2021

POSITION ON PROJECT PRIORITY LIST:

The project is currently ranked 7th of 7 projects.

COST ESTIMATE:

Engineering (Design & CMS)	\$	688,000
Construction	\$	3,002,000
Contingency (~ 15%)	\$	451,000
Property Purchase	\$	203,000
Legal & Bonding	\$	30,000
Loan Origination (1% of Loan)	\$	40,000
Total	\$	4,414,000

COST SHARING:

<u>Funding Request</u>	<u>Cost Sharing</u>
Local Contribution (Culinary Water Portion of Project)	\$417,000
WQB Loan (0% 30 Years)	\$1,000,000
WQB (Requested as Grant)	\$2,997,000
Total	\$4,414,000

STAFF COMMENTS

A cost model is included as Appendix 1. The model indicates that the applicant will exceed 1.4% of MAGI with operation and maintenance costs alone. However, this phase of the project primarily serves businesses, which makes it difficult to rely on the normal affordability criteria alone. As such the recommendation is based on the District's indication that proposed commercial rate payers are "willing-to-pay" a maximum loan of \$1,000,000, based on a 0% 30 year term. A \$1,000,000 loan commits the District to significant repayments that are well above normal affordability standards. Staff believes this level of commitment should motivate the District to continue the phased approach of connecting additional customers as it becomes feasible, to provide broader water quality protection and to help support loan repayments.

Staff recognizes that there are water quality and human health concerns that this project would address. There have been failed septic systems in the area, and a sewer will provide a long term solution.

The O&M budget in the cost model indicates the anticipated O&M costs to operate the wastewater system. The budget is based on a similarly sized entity. To minimize the operation budget for this system, the District plans to utilize existing resources and staff to economize. The District estimated this will reduce the operation and maintenance costs for the wastewater system by about \$36,800 per year. This reduction in cost is indicated in the cost model as Shared Utility Labor & Overhead Savings as a negative \$36,783 per year.

STAFF RECOMMENDATION

Staff recommends that the Water Quality Board Authorize Kane County Water Conservancy District's requests **for a loan in the amount of \$1,000,000 at an interest rate of 0% repayable over 30 years and a grant in the amount of \$2,997,000 including a \$759,500 Design Advance, and the previously authorized \$203,000 in property acquisition costs advance** subject to these special conditions:

1. The District must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).
2. As part of the facility planning, the District must complete a Water Conservation and Management Plan.
3. The District must pursue and retain additional funding necessary to fully implement the project.
4. The District must provide a Plan of Operation consistent with R317-101-3 Q.
5. As part of its Plan of Operations, the District must develop and implement an asset management program that is consistent with EPA's Fiscal Sustainability Plan guidance.
6. The District must consult the Division of Water Quality prior to disposing any of the land purchased with Water Quality Board funding.

eDocs: DWQ-2018-008072

File: SRF- KCWCD Duck Creek, Administration, Section 1

KCWCD Duck Creek
Introduction
June 27, 2018
Appendix 1

WATER QUALITY BOARD STATIC COST MODEL								
Duck Creek Sewer System Project								
Project Costs				Current Customer Base & User Charges				
Legal/Bonding		30,000			Residential ERUs			5
DWQ Loan Origination Fee		40,000			Comercial ERUs			104
Engineering (Design & CMS)		688,000			Haul-In Disposal ERUs			3
Construction		3,002,000			Forest Service ERUs			39
Contingency (~15%)		451,000			Total ERUs			151
Property Obtainment		203,000						
Total Project Cost:		4,414,000			MAGI (Duck Creek 2016 household):			25,344
					1.4% MAGI Sewer Bill:			\$29.57
Project Funding								
Applicant Contribution		417,000			Existing O&M expenses Treatment & Collection			\$0
WQB Funding		3,997,000			New O&M expenses Treatment & Collectiocn	\$		76,495.00
Total Project Cost:		4,414,000			Shared Utility Labor & Overhead Savings	\$		(36,783.00)
					Net New O&M Expenses	\$		39,712.00
Funding Conditions								
Loan Repayment Term:		30						
Reserve Funding Period:		6						
ESTIMATED COST OF SEWER SERVICE								
WQB Grant Amount	WQB Loan Amount	WQB Loan Interest Rate	WQB Loan Debt Service	WQB Loan Reserve	Annual Sewer O&M Cost	Total Annual Sewer Cost	Monthly Sewer Cost/ERU	Sewer Cost as a % of MAGI
\$ 3,997,000	\$ -	0.00%	\$0	\$ -	\$ 39,712	\$ 39,712	21.92	1.04%
\$ 3,500,000	\$ 397,000	0.00%	\$13,233	\$ 3,308	\$ 39,712	\$ 56,254	31.05	1.47%
\$ 2,997,000	\$ 1,000,000	0.00%	\$33,333	\$ 8,333	\$ 39,712	\$ 81,379	44.91	2.13%
\$ 2,737,945	\$ 1,259,055	0.00%	\$41,969	\$ 10,492	\$ 39,712	\$ 92,173	50.87	2.41%
\$ 1,998,500	\$ 1,998,500	0.00%	\$66,617	\$ 16,654	\$ 39,712	\$ 122,983	67.87	3.21%
\$ 1,998,500	\$ 1,998,500	0.00%	\$66,617	\$ 16,654	\$ 39,712	\$ 122,983	67.87	3.21%
\$ 1,868,000	\$ 2,129,000	0.00%	\$70,967	\$ 17,742	\$ 39,712	\$ 128,420	70.87	3.36%
\$ 1,530,851	\$ 2,466,149	0.00%	\$82,205	\$ 20,551	\$ 39,712	\$ 142,468	78.62	3.72%
\$ -	\$ 3,997,000	0.00%	\$133,233	\$ 33,308	\$ 39,712	\$ 206,254	113.83	5.39%



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Dr. Erica Brown Gaddis
Executive Secretary

TO: Water Quality Board

THROUGH: Erica Brown Gaddis, PhD

FROM: Skyler C. Davies, P.E.

DATE: June 24, 2020

SUBJECT: Kane County Water Conservancy District Duck Creek Sewer Project Reauthorization Request Memo

On August 22, 2018 the Water Quality Board authorized a loan of \$1 Million at 0% interest and a hardship grant of \$2,997,000 to the Kane County Water Conservancy District (the District) for design and construction of a new wastewater system. The total estimated project cost at that time was \$4.414 million, which included a culinary water project estimated at \$417,000 that would be constructed with alternative financing. The culinary water project is now funded and will be managed as a separate project. The proposed sewer project will build the backbone of sewer works needed by the District, enabling future phases to connect more of the community to the sewerage system.

Due to cost increases the District **is requesting that the hardship grant be increased to \$3,997,000, and that the loan remain at \$1 Million.** The project also includes abandonment of septic tanks and laterals on private property which are not eligible for SRF funding. This will require the District to seek separate funding for this part of the project which is identified in the cost model as being paid for with a "Market Loan" and a parcel connection fee, which is being charged to each connection.

The original \$4.414 million estimated cost was based on a planning level estimate which included construction costs of about \$3 Million and a 15% contingency of about \$0.45 Million. KCWCD conducted a bid opening, the second week of April 2020, for the project for which they received several bids from general contractors; the low bid came in at \$4,034,001.06. With the higher than estimated construction bid, the overall project costs are now estimated to be \$5,446,000. The project costs include \$460,000 for converting existing residents from septic systems to sewer connections, costs that will be funded separately by the district. A comparison of project costs is provided Table 1:

TABLE 1-PROJECT COSTS COMPARISON

Item	Description	8/2018 Budget	6/2020 Budget
1	Legal/Bonding	\$30,000	\$34,500
2	DWQ Loan Origination Fee	\$40,000	\$20,000
3	Engineering (Design & CMS)	\$688,000	\$732,500
4	Construction	\$2,585,000	\$4,034,001
5	Culinary Water System Improvements (Funding and Project Separated from DWQ project)	\$417,000	Separate Project
6	Garkane Connection	In Construction	\$110,700
7	Contingency	\$451,000	\$367,013
8	Property Procurement	\$203,000	\$158,720
Total Project Costs		\$4,414,000	\$5,457,434

As the Board is aware, construction costs began increasing in Utah in 2017, due to a new statewide growth period. The construction labor market has continued to drive costs higher since 2018, primarily driven by a continued shortage of skilled labor. Materials cost have also increased and the proposed construction is more complex than was anticipated at the planning level.

The April 2018 authorization for the project was a \$1 million loan at 0% for 30 years and \$2,997,000 grant. The District has the same concerns regarding affordability as they did at the time of the authorization. The staff comments from the August 2018 memo are largely the same today, as was stated in that feasibility report.

A cost model is included as Appendix 1. The model indicates that the applicant will exceed 1.4% of MAGI with operation and maintenance costs alone. However, this phase of the project primarily serves businesses, which makes it difficult to rely on the normal affordability criteria alone. As such the recommendation is based on the District’s indication that the commercial rate payers are “willing-to-pay” a maximum loan of \$1,000,000, based on a 0% 30 year term. A \$1,000,000 loan commits the District to significant repayments that are well above normal affordability standards. Staff believes this level of commitment encourages the District to continue the phased approach of connecting additional customers as it becomes feasible, to provide broader water quality protection and to help support loan repayments.

This project addresses ongoing water quality and human health concerns. There have been failed septic systems in the village area that will receive service, and the proposed sewerage system will provide a long term solution for the areas of shallow ground water and will support broader sewer service availability in the future.

Table 2 below shows the comparison between the authorized funding sources, and the proposed funding sources.

TABLE 2-PROJECT FUNDING COMPARISON			
Item	Description	8/2018 Budget	6/2020 Budget
1	KCWCD Financing (for culinary water project, since separated into standalone project)	\$417,000	NA
1	KCWCD Financing (for Septic Tank Abandonment and Connection on Private Property)	Not Identified in 2018 Budget	\$377,934
2	WQB Funding Grant	\$2,997,000	\$3,997,000
3	WQB Funding Loan	\$1,000,000	\$1,000,000
4	Private Parcel Connection		\$82,500
5	Total Project Costs	\$4,414,000	\$5,457,434

It should be noted that due to the separate financing of the septic tank abandonment and the laterals on private property that the District will be required to increase rates above those anticipated in the previous authorization, even without an increase in the loan amount from the Water Quality Board.

The original Feasibility Report is included as Attachment 2.

Taking into account the high cost of sewer service per connection, staff recommends the Board reauthorize funding to Kane County Water Conservation District of \$1,000,000 loan for 30 years at 0 percent and a hardship grant of \$3,997,000 with the same special conditions as the original authorization.

Attachment 2 –August 2018 Authorization KCWCD Feasibility Memo

**WATER QUALITY BOARD STATIC COST MODEL
 KCWCD-Duck Creek Sewer System Project**

Project Costs		Current Customer Base & User Charges		Number	ERC
Legal/Bonding	34,500	Residential Connections		5	5
*DWQ Loan Origination Fee	20,000	Comercial Connections		31	104
Engineering (Design & CMS)	732,500	Forest Service Connection		1	39
Construction	4,034,001	Total Connections		37	148
Contingency (~11%)	367,013				
Property Obtainment	158,720	MAGI (Duck Creek 2018 household):			30,800
Garkane Connection	110,700	1.4% MAGI Sewer Bill:			\$35.93
Total Project Cost:	5,457,434				
* Loan origination fee could be reduced to 10,000 if Board authorizes as requestd.					
Project Funding		Funding Conditions			
KCWCD Financing (Septic Tank Abandonment/Lateral on P.P.)	\$377,934	Existing O&M expenses Treatment & Collection			\$0
KCWCD Local Share (Parcel Connection Fees)	\$82,500	New O&M expenses Treatment & Collectioen			\$ 40,978.00
WQB Funding	4,997,000	Net New O&M Expenses			\$ 40,978.00
Total Project Cost:	\$5,457,434	Loan Repayment Term:			30
		Reserve Funding Period:			6

ESTIMATED COST OF SEWER SERVICE

WQB Grant Amount	WQB Loan Amount	WQB Loan Interest Rate	WQB Loan Debt Service	WQB Loan Reserve	Market Loan Amount	Market Loan Interest Rate	Market Loan Debt Serv	Annual Sewer O&M Cost	Total Annual Sewer Cost	Monthly Sewer Cost/ERU	Sewer Cost as a % of MAGI
\$ 2,997,000	\$ 1,000,000	0.00%	\$33,333	\$ 8,333	\$ 622,066	4.00%	\$ 35,974	\$ 40,978	\$ 118,619	66.79	2.60%
\$ 3,997,000	\$ 1,000,000	0.00%	\$33,333	\$ 8,333	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 104,501	58.84	2.29%
\$ 3,750,000	\$ 1,247,000	0.00%	\$41,567	\$ 10,392	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 114,792	64.64	2.52%
\$ 3,700,000	\$ 1,297,000	0.00%	\$43,233	\$ 10,808	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 116,876	65.81	2.56%
\$ 3,500,000	\$ 1,497,000	0.00%	\$49,900	\$ 12,475	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 125,209	70.50	2.75%
\$ 3,300,000	\$ 1,697,000	0.00%	\$56,567	\$ 14,142	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 133,542	75.19	2.93%
\$ 3,200,000	\$ 1,797,000	0.00%	\$59,900	\$ 14,975	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 137,709	77.54	3.02%
\$ 2,997,000	\$ 2,000,000	0.00%	\$66,667	\$ 16,667	\$ 377,934	4.00%	\$ 21,856	\$ 40,978	\$ 146,167	82.30	3.21%



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Executive Secretary

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: John K. Mackey
Division Director

FROM: Judy Etherington
Wastewater Certification Program Coordinator

DATE: May 23, 2023

SUBJECT: Presentation of the Utah Wastewater Operator Certification Program 2022 Annual Report to the Water Quality Board

The Utah Water Quality Board has requested a yearly report of the wastewater operator certification program activities. The Utah Wastewater Operator Certification Program 2022 Annual Report is being presented by Mr. Brian Lamar, who currently serves as Vice-Chair of the Wastewater Operator Certification Council. The information contained within the attached report is for the 2022 calendar year.

JKM:JAE:cjh

Enclosure: Utah Wastewater Operator Certification Council 2022 Annual Report

P:\WQ\CERTIFICATION\OPCERTANNUALREPORTS\2022ARPT\WWOCC2022ANNUALREPORTMEMOTOWQB.DOCX
FILE: WWOCC/ANNUAL REPORT 2022 (DWQ-2023-006821)

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Larene Wyss, Office of Human resources, at (801) 536-4281, TDD (801) 536-4284, or by email at lwyss@utah.gov at least five working days prior to the scheduled meeting.

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WVOCC 2011 Appointment Recommendation Memo
January 11, 2011
Page 2



UTAH DEPARTMENT of
**ENVIRONMENTAL
QUALITY**

Utah Wastewater Operator Certification Program 2022 Annual Report

Waterfowl on East Canyon Creek

Protected by Snyderville Basin Water Reclamation District



Photo courtesy of Chad Burrell

Prepared by
The Division of Water Quality

May 2023

UTAH WASTEWATER OPERATOR CERTIFICATION PROGRAM 2022 ANNUAL REPORT

Prepared by

Judy Etherington

Wastewater Operator Certification Program Coordinator

Utah Department of Environmental Quality

Division of Water Quality

195 North 1950 West

Salt Lake City, UT 84116

Presented to the Water Quality Board on May 24, 2023

by the Utah Wastewater Operator Certification Council

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Introduction

In March of 1991, following over 20 years of voluntary certification, wastewater works operator certification became mandatory. Wastewater operator certification is administered by the Division of Water Quality under rules adopted by the Utah Water Quality Board. The Board established the Utah Wastewater Operator Certification Council to provide guidance and stakeholder involvement in the program. During 2014, the Board adopted major revisions to Rule R317-10 that incorporated changes required by Senate Bill 21 (2012 General Session) which changed the duties and responsibilities of the environmental boards, their executive secretaries, and division directors. In response to those changes, the Board approved a revision of the rule that organizes the Utah Wastewater Operator Certification Council with members appointed by the Board to work in an advisory capacity to the director of the Division of Water Quality for the certification program.

THE UTAH WASTEWATER OPERATOR CERTIFICATION COUNCIL

On January 31, 2022, the terms of three council members expired. During the January 2022 Utah Water Quality Board meeting, the Board approved reappointments of Giles Demke, Brian Lamar, and Blaine Shipley to fill the vacancies for the next 3-year term. The Council members serving during 2022 were:

Chad Burrell, Chair, represented certified wastewater treatment operators. He is the Operations and Safety Manager for Snyderville Basin Water Reclamation District and is certified as both a Grade IV Wastewater Treatment Operator and Grade IV Collection Operator. His term expires January 31, 2024.

Brian Lamar, Vice-chair, represented certified wastewater treatment operators. He currently works at North Davis Sewer District and is certified as a Grade IV Wastewater Treatment Operator, Grade IV Collections Operator, and Grade II Biosolids Land Application Operator. His term expires January 31, 2025.

Giles Demke, represented the management of municipal wastewater systems. He is the Facility Manager at the Orem City Water Reclamation Facility and is certified as a Grade IV Wastewater Treatment Operator. His term expires January 31, 2025.

Phil Harold represented vocational training. He is the wastewater circuit rider for the Rural Water Association of Utah and is certified as both restricted Grade II Collection Operator and restricted Small Lagoon System Operator. His term expires January 31, 2023.

Rob Jaterka represented certified wastewater collection operators. He is the District Inspector for Magna Water District and is certified as both a Grade IV Collection Operator and Grade I Wastewater Treatment Operator. His term expires January 31, 2024.

Blaine Shipley, represented certified wastewater collection operators. He is employed as Plant Superintendent for Price River Water Improvement District and is certified as both a Grade IV Collection Operator and Grade IV Wastewater Treatment Operator. His term expires January 31, 2025.

Dr. Jennifer Weidhaas represented Utah universities. She is an Associate Professor in the Department of Civil and Environmental Engineering at the University of Utah who teaches and does research in wastewater treatment and waterborne pathogen detection. Her term expires January 31, 2023.

The council held three meetings during the year to evaluate requests for continuing education courses, consider reciprocity requests, plan for administering exams, review exam scores and comment forms, and discuss ways to improve the certification program. All meetings continued to include participants using teleconferencing platforms, and most communications with the program coordinator were done virtually—striving for majority consensus before any actions were taken.

Examinations

The Divisions of Water Quality continued to maintain membership as a certifying authority with the Association of Boards of Certification (ABC) which re-branded as Water Professionals International (WPI) at its annual meeting in January 2022. Since 1972, Water Professionals International has been the central water industry authority that ensures that women and men in the industry are prepared to meet the standards that their communities can trust in through our testing and certification services headquartered in Urbandale, Iowa. The role of WPI is to provide examination services to the Utah Wastewater Operator Certification program, which includes exam development, scoring, and compilation of exam results. A contract for exam services between ABC (WPI) and the Division of Water Quality is in effect for state fiscal years 2019-23. Exams were offered in conjunction with the Rural Water Association of Utah's Annual and Fall Conferences. The regularly scheduled Spring and Fall exams were held in multiple locations. All sessions used the standard paper-based format (PBT).

The registration and attendance of the 2022 exam sessions are shown in Table 1. These totals include the traditional mandatory exams, as well as the voluntary ones that are provided by WPI, but are not required by Utah's certification program.

Table 1 - 2022 Exam Registration and Attendance

	Spring Exam Sessions		Fall Exam Sessions		
	March	April	September	November	
Locations	St. George (in conjunction with RWAU Annual Conference)	Bluffdale (SVSD)	Layton (in conjunction with RWAU Fall Conference)	Bluffdale (SVSD)	
		Ogden (CWSID)		Ogden (CWSID)	
		Price (SEUHD)		Provo (HCH)	
		Provo (UTHJB)		Richfield (CUHD)	
		Salt Lake (DEQ)		Salt Lake (DEQ)	
		St. George (ACSSD)		St. George (ACSSD)	
		Vernal (TriCo HD)			
	Applications Received	98	243	127	227
	Total Scored*	97	239	123	221

* Some individuals did not show up to take the exams at that time, but may have rescheduled for a future session using the previously ordered booklet.

EXAMINATION PROCEDURES

Exam sessions were proctored by members of DWQ staff, DEQ District Engineers, current Council members, or other individuals delegated by Council members.

All examinations, regardless of grade, consist of 100 scored questions using a multiple-choice format. Answer sheets for PBT format are shipped to WPI for scoring. WPI compiles the results for each session and returns them to DWQ by electronic format for recording in the database and dissemination to the examinees. Each examinee is provided an individual statistical report, and variations of summary reports showing the cumulative results of the general areas detailed in the need-to-know criteria for all Utah examinees taking the same test during that session. Current WPI exams use a cut score of 70 for passing an exam.

EXAM CONTENT

The exams administered in 2022 were compiled from WPI's data bank, including the Small Lagoon System exam, which is a customized exam using questions from the same data bank, but developed with 50 Wastewater Treatment I and 50 Collection I items to meet the need of smaller wastewater systems in Utah. The wastewater treatment and collection exams are "WPI 2019 standardized" exams which meet ISO 17024 standard to ensure the validity, reliability, and legal defensibility of the certification exams. Exam questions are reviewed by WPI's technical committees on a regular basis to ensure applicability to current wastewater technologies and processes. The Collection and Wastewater Treatment exams also have ten unscored, unidentified questions that are being pre-tested to see whether they would be good questions to use in future exams.

Three voluntary classifications of wastewater related certifications were again offered in 2022. They include Biosolids Land Applier Grades I - II, Wastewater Laboratory Analyst Grades I - IV, and Plant Maintenance Technologist Grades I - III. Mandatory exams include Collections Grades I - IV, Wastewater Treatment Grade I - IV, and Small Lagoons System Grade I. Cumulative Totals for the 2022 mandatory wastewater exam classifications are shown in Table 2.

Table 2 - Cumulative 2022 Exam Scores (Mandatory)

Exam-Grade	Total Examinees	High Score	Low Score	#Pass (≥70%)	Pass %
C-I	38	92	56	25	66
C-II	117	89	37	42	36
C-III	50	89	44	15	30
C-IV	115	87	41	34	30
SLS-I	22	88	55	15	68
T-I	82	91	32	24	29
T-II	77	85	32	25	32
T-III	46	79	35	6	13
T-IV*	109	79	35	13	12
Totals	656			199	30

*Note: The Wastewater Treatment Grade IV exam booklets printed for the April session were missing one page of three questions. Those who failed were allowed to take an exam later in the year at no cost. Those who scored within 3 points of the passing score were allowed to take the missing questions in an online format to attempt to pass. The totals shown in the table include those amended scores.

This is the third year using the 2019 version standardized exams that are based on the same need-to-know criteria as the previous 2017 version. As predicted by WPI, the overall passing rates may dip when the new forms are introduced, but without any prerequisites for testing, there is really no basis for comparison. Table 3 shows overall passing rates for mandatory exams for the past four years. The note for Table 2 explains the steps taken by DWQ staff when one set of exam booklets were misprinted without the minimum 100 scored questions. This was the first time that it has happened and WPI has taken steps to better verify the accuracy of the printed booklets prior to shipping them to us.

Table 3 - Passing Rate Comparison for Mandatory Exams for 2019 through 2022

Exam-Grade	2019 Pass %	2020 Pass %	2021 Pass %	2022 Pass %
C-I	62	59	48	66
C-II	46	35	43	36
C-III	24	21	5	30
C-IV	20	26	30	30
SLS-I	71	52	71	68

Exam-Grade	2019 Pass %	2020 Pass %	2021 Pass %	2022 Pass %
T-I	23	30	29	29
T-II	26	25	25	32
T-III	13	6	18	13
T-IV	19	13	12	12
Overall	29	27	27	30

EXAMINATION REVIEW

No further changes have been made to the certification rule since it was amended January 24, 2018, removing the option of a post-exam review of actual questions and answers by the examinees. The rule still provides the opportunity for the Council to review the questions, along with the WPI accepted answers, for any questions for which a comment form was submitted during the testing sessions. This provides an opportunity for the Council to respond directly to the examinee's comment and also evaluate whether a recommendation should be made to WPI regarding the validity of the question in future exams. Responses from the Council to the comments received are sent to the individuals following the review. In a few instances, the Council requested clarification or further review of the question item by WPI. Each individual was previously provided a statistical breakdown of their proficiency in the areas of testing as described in the published need-to-know criteria. The examinee, as well as those assisting them in their exam preparations, are able to use those results to focus study efforts for future testing opportunities.

Training

COOPERATION WITH TRAINING PROVIDERS

During 2022, more modifications were made to most of the certification-related training classes offered through cooperative efforts with the Rural Water Association of Utah or the Water Environment Association of Utah so that they could be delivered in-person, virtually, or in a dual format. Division of Water Quality staff and Certification Council members participated as instructors and presenters at conferences, seminars, and training sessions which provided training to wastewater personnel. The objective of these training opportunities was to facilitate compliance with UPDES permits, review subject matter in preparation for operator examinations, and earn required continuing education credits for renewals.

Some council members and staff also continue supporting the Utah Water and Wastewater Training Coalition providing a centralized calendar of seminars and training to make it easier for water and wastewater professionals to find local training and continuing education for their respective fields. The council continues to support participation in an “on-line” calendar format. This calendar has facilitated the communication and coordination between the members of the Coalition as well as the operators. Division of Water Quality staff and representatives of the member organizations maintain their respective calendar information. Members of the Coalition are: Division of Drinking Water, Division of Water Quality, American Water Works Association, Water Environment Association of Utah, Rural Water Association of Utah, American Backflow Prevention Association, and Rural Community Assistance Corporation.

Individual wastewater facility owners and managers continue to provide updated training for their personnel either “in house” or using professional training and assistance providers, including U. S. Environmental Protection Agency resources. Training is often conducted through virtual meeting platforms, as well as in person, allowing interactive participation by all. Dedication and ingenuity were definitely observed while meeting compliance, certification, and safety requirements. The majority of those not renewing particular certifications were no longer in the industry due to retirement or change of employment, or had advanced to a higher certification and no longer needed to maintain the lower one.

Renewal and Compliance

Wastewater Operator Certifications may be valid for up to three years. Certifications will expire on December 31st of the expiration year unless they have been renewed. Continuing education during the three-year period prior to the expiration date, in wastewater-related subject matter, is a prerequisite for renewal. The number of credits required is dependent upon the grade of certification being renewed. Reinstatement of the certificate is also allowed within the year following expiration, provided that the operator has earned the required training credits prior to the certificate's expiration. All publicly-owned wastewater works are required to have adequately certified individuals "in charge" of both the wastewater treatment and collection systems as specified in Rule R317-10 Certification of Wastewater Works Operators. The statistics in Table 3 represent the certification actions taken during 2022 to comply with various aspects of the certification rule.

Table 4 - Certification Actions for 2022

Action	Number
Number of "new operators" added to wastewater certification database during 2022	147
Certificates expired December 31, 2021– Changed to Inactive after 2022	77
Certificates expired 2021, reinstated prior to December 31, 2022 deadline	33
Certificates expired 2021, reinstated with "Change in Status" prior to December 31, 2022 deadline	2
"Change in Status" certificates issued for current certifications	19
Certificates expiring December 31, 2022 – notices mailed January 2022	584
Certificates expiring December 31, 2022 – notices mailed August 2022	476
Certificates expiring 2022 renewals received prior to December 31, 2022	368
Certificates expiring 2022, renewed along with "Change in Status" requests	17
Early renewals for certificates expiring after 2022	6
Early renewal with "Change in Status" for certificates expiring after 2022	4
Certificates issued by "reciprocity" (equivalent certification from another state)	3
Issued Letter-of-Intent to issue certificate by "reciprocity"	0
Number of "reciprocity" requests denied in 2022 (previous certificate was expired)	1
Number of "active" individuals in database (participated in certification within last 3 years)	1,770
Number of certified wastewater operators as of January 1, 2023(all categories)	1,340
Number of certified "treatment" operators	525
WW Treatment Grade I	124
WW Treatment Grade II	148
WW Treatment Grade III	48
WW Treatment Grade IV	244
Number of certified "collection" operators	897
Collection Grade I	108
Collection Grade II	285
Collection Grade III	82
Collection Grade IV	465
Number of certified "small lagoon system" operators	135
Total number of current wastewater operator certifications as of January 1, 2023	1,729
Number of operators holding two classes of certifications, but not more than two during 2022	255
Number of operators holding three classes of certifications	32
Total number of current voluntary certifications (Biosolids Land Applier, WW Laboratory, Plant Maintenance)	91
Total number of publicly owned wastewater collection systems	196

Action	Number
Municipal Collection Class I systems	95
Municipal Collection Class II systems	50
Municipal Collection Class III systems	29
Municipal Collection Class IV systems	22
Total number of publicly owned wastewater treatment facilities	123
Municipal Treatment Class I facilities	73
Municipal Treatment Class II facilities	9
Municipal Treatment Class III facilities	23
Municipal Treatment Class IV facilities	18
Municipal Small Lagoon System I facilities (combination Treatment I & Collection I included in the above numbers)	63

As an alternative to employing a certified operator as Direct Responsible Charge (DRC), the owner of a municipal wastewater system may choose to contract with an individual or another entity with an appropriately certified operator to meet the certification requirement. New contracts to meet the requirements for Direct Responsible Charge (DRC) operators were submitted and approved during 2022 for Henefer Town and Emigration Improvement District. Other contracts are in place for Canyon Land Improvement District, Little Mountain Service Area, Mexican Hat Special Service District, Mountain Sewer (AKA Ski Lake SSD), Oakley City, and Wolf Creek Water and Sewer Improvement District.

One system, Elk Ridge City, has exceeded the one-year grace period after losing the DRC operator. Some employees have tested unsuccessfully during the grace period, and one is scheduled to test during the next session.

Certification Council Meetings

There were three Council meetings held during 2022. The following items may be of special note:

- The Council members discussed the consistently low exam scores, but also noted that WEAU and individual facilities are being more aggressive in providing wastewater-specific training to operators. Although the training isn't directly geared towards passing exams, it should help operators better understand the many different facets of wastewater collection and treatment processes.
- Following a couple of exam sessions, a QR Code linked to a brief online survey was distributed with the expectation that some people would share details of how they prepared for the exam. Council then discussed the results at a meeting, and repeated the effort in a modified format for another session. However, there weren't very many people who participated.
- As different facilities lose and gain new operators, Council members offered to meet with new managers and operators to help them better understand what is expected of them so that the systems can remain in compliance with permit requirements.
- The testing schedule was able to return to single sessions at each location since COVID-19 protocols were no longer necessary. However, due to the large number of applicants for some locations, some were asked to change to other locations that still had seating available.
- Applications were received from operators requesting reciprocal certificates. Their previous certificates were issued from Idaho, North Carolina, Nevada, and California. All requests were approved with either a certificate issued or a letter of intent.
- Accommodations were made by council members and staff to administer a couple exams orally in conjunction with regular testing dates.
- The Council invited a representative of WPI to attend a meeting virtually to respond to comments from a Council member and others about the exam development process and what steps are being taken to address concerns that have been submitted to WPI. Details are available in the minutes for the August meeting.
- The Council meetings were conducted both in person and virtually to accommodate meeting limitations due to COVID-19 protocols. It allowed for discussion of the necessary agenda items, but also reduced travel for the participants. There was a quorum present at each meeting.
- Discussions between the Division of Water Quality and Rural Water Association of Utah about the future of testing opportunities on a more frequent basis have not progressed due to the insufficiencies in the current certification tracking database, and the association's move to a new campus. The Division is pursuing new tracking database options, but has also had staff changes that slowed that process.