



## State of Utah

GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

## Department of Environmental Quality

L. Scott Baird  
Executive Director

DIVISION OF WATER QUALITY  
Erica Brown Gaddis, PhD  
Director

**Water Quality Board**  
Jennifer Grant, Chair  
Gregg A. Galecki, Vice Chair  
Steven K. Earley  
Brandon Gordon  
Michael D. Luers  
L. Scott Baird  
Emily Niehaus  
James Webb  
Dr. James VanDerslice  
Dr. Erica Brown Gaddis  
Executive Secretary

### Utah Water Quality Board Meeting Via Adobe Connect

*August 26, 2020*  
**Work Meeting Begins at 8:30 am**

#### AGENDA

##### Work Meeting

Introduction to Watershed Protection Section: Impairment to Implementation ..... Jodi Gardberg

##### Water Quality Board Meeting – Roll Call

A. **Electronic Meeting Notice** ..... Jennifer Grant

##### B. Minutes:

**Approval** of Minutes for June 24, 2020 Water Quality Board Meeting ..... Jennifer Grant  
**Approval** of Minutes for July 22, 2020 Water Quality Board Meeting ..... Jennifer Grant

C. **Executive Secretary's Report** ..... Erica Gaddis

##### D. Funding Requests:

1. **Financial** Report ..... Emily Cantón
2. **Salina City** Request for Hardship Planning Advance ..... Beth Wondimu
3. **Spanish Fork** City WRF Introduction ..... Skyler Davis

##### E. Rule Making:

1. **Request** to Adopt Amendment to R317-1-3.2, Compliance with Secondary Treatment Requirements ..... Jennifer Robinson
2. **Request** to Initiate Rule Making for R317-2, Standards of Waters of the State ..... Chris Bittner
3. **Request** to Initiate Rule Making for R317-1-7, Fremont River Total Maximum Daily Load Study ..... Amy Dickey

##### F. Other Business:

1. **Nonpoint** Source Pollution Control Program FY20 Annual Report ..... Jim Bowcutt
2. **2019** MWPP Results Summary ..... Harry Campbell

##### G. Public Comment Period

##### H. Meeting Adjournment

**Next Meeting September 23, 2020**  
**8:30 am**  
**Via Adobe Connect**

DWQ-2020-016146  
Revised 8/25/2020

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](mailto:lwys@utah.gov) at least five working days prior to the scheduled meeting.

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*Executive Secretary*

I, **Jennifer Grant**, Chair of the **Water Quality Board**, have determined that the **August 26<sup>th</sup>, 2020** meeting of the Water Quality Board will be held electronically without an anchor location.

This determination is based on the following facts:

1. Utah is currently dealing with Covid 19, which has been determined to be a pandemic. Covid 19 is extremely contagious and can be deadly to those who contract it, especially those of advanced age and underlying health conditions.
2. The Agency offices are in Salt Lake County, which is currently in the State's orange moderate risk category. This limits the size of public gatherings to fewer than 20 people and requires the wearing of masks and social distancing. People are encouraged to stay in their homes.
3. A vast majority of Agency staff and the members of the Water Quality Board are teleworking to avoid unnecessary contact with others.
4. The Board room is insufficient to allow social distancing and reasonably safe accommodation of the Water Quality Board and the public.
5. The Water Quality Board uses an electronic platform which allows interested parties to view the meeting, hear discussions and provide written comment.

Dated this 25<sup>th</sup> day of August, 2020.

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Jennifer Grant, Chair  
Water Quality Board

DWQ-2020-017422



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Dr. Erica Brown Gaddis  
*Executive Secretary*

### *MINUTES*

### **UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY UTAH WATER QUALITY BOARD Via Adobe Connect**

**June 24, 2020  
8:30 am**

#### **UTAH WATER QUALITY BOARD MEMBERS PRESENT**

Scott Baird	Mike Luers
Steven Earley	Emily Niehaus
Gregg Galecki	James Webb
Brandon Gordon	

Excused: Jennifer Grant  
James VanDerslice

#### **DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT**

Chris Bittner	Ken Hoffman
Emily Cantón	Ben Holcomb
Skyler Davies	Brenda Johnson
Dusty Earley	John Mackey
Judy Etherington	Duncan Nelson
Erica Gaddis	Andrew Pompeo
Jodi Gardberg	Jen Robinson
Dan Griffith	Lonnie Shull
Angela Gunderson	Jeff Studenka
Dan Hall	Beth Wondimu

#### **OTHERS PRESENT**

Sharon Burton	Central Valley
Phil Heck	Central Valley
Lonn Rasmussen	Cottonwood Improvement District
Scott Ericson	EDO
Amanda Buhler	Kane County Water Conservancy District

**OTHERS PRESENT**

Gary Vance	JUB Engineers
Renn Lambert	LimnoTech
Corey Twedt	Millville City
Chad Brown	Millville City
David Hair	Millville City
Kevin Jeppson	Perry City
Shanna Johnson	Perry City
Lee Rawlings	South Valley Water Reclamation
Cory Pierce	Spanish Fork City
Joe Phillips	Sunrise Engineering
Rex Carpenter	
Nate Wallentine	

Mr. Galecki called the Board meeting to order at 8:30 AM and took roll call for the members of the Board and audience.

**APPROVAL OF MINUTES OF APRIL 22, 2020 MEETING**

**Motion:**        **Ms. Niehaus moved to approve the minutes of the April 22, 2020 meeting. Mr. Webb seconded the motion. The motion passed with Mr. Earley abstaining due to his absence at the April 22, 2020 meeting.**

**EXECUTIVE SECRETARY REPORT**

*National Level*

- Dr. Gaddis updated the Board that on June 1, 2020 the EPA finalized the Clean Water Act Section 401 Certification Rule. Utah rules will need to be amended, likely repeal and replace to accommodate the new requirements.
- Dr. Gaddis informed the Board that Waters of the US (WOTUS) rule went into effect on June 22, 2020.

*State Level*

- Dr. Gaddis informed the Board that the legislature recently finished an interim session with a few budget cuts.
- The Harmful Algal Blooms (HABs) funding was not restored.
- Dr. Gaddis spoke about the Utah Leads Together v4 recently released by the Governor. This includes funding for wastewater and drinking water projects.

*Division*

- Dr. Gaddis updated the Board that the majority of Division staff are currently telecommuting due



to the pandemic and the building remains closed to the public and will not reopen until Salt Lake City moves to yellow level.

- Dr. Gaddis informed the Board that Jim Harris has made a decision to take a staff position in the Standards Section as the Great Salt Lake Coordinator. Currently there is recruitment for the Assistant Director position.

#### *Board*

- Dr. Gaddis spoke about upcoming Board items:
  - AFO/CAFO Rule Revisions
  - Storm Water Rule Revisions
  - Kanab Creek TDS site specific standard
  - The Fremont River TMDL is nearly complete
  - COVID-19 in wastewater

#### **SUDWEEKS AWARD PRESENTATION**

Mr. Galecki presented the Sudweeks Award to Lonn Rasmussen, Operations Manager for Cottonwood Improvement District and Sharon Burton, Operations Supervisor for Central Valley Water Reclamation Facility for achievements in the area of wastewater operations.

#### **FUNDING REQUESTS**

**Financial Report:** Ms. Cantón updated the Water Quality Board on the Loan Funds and Hardship Grant Funds, as indicated in the packet.

**Summary of Current Financial Assistance Applications:** Mr. Mackey updated the board on the status of an existing project with Kane County Water Conservancy District – Duck Creek Sewerage System and Treatment Plant Upgrade. Construction bids for the project came in higher than had been estimated and the District is requesting additional support from the Board to complete the project. Mr. Mackey also informed the Board of two new applications:

##### **Spanish Fork City – Construction Assistance Credit Enhancement Agreement**

Spanish Fork City is requesting a grant in the amount of \$3,500,000 to be issued over seven years in \$500,000 annual increments, to enhance the City's credit position in bonding to construct a new \$94.1 Million regional water reclamation facility.

##### **Fairview City – Construction Assistance**

Fairview City is requesting financial assistance in the amount \$2,860,000 to construct a new water reuse system. This project will enable the City to comply with the TBPEL regulation under the “commensurate phosphorus reduction by innovative alternative approach” variance provision of R317-1-3.3.C, through a seasonal offset.

**Perry City Request for Loan Refinancing:** Mr. Mackey presented Perry City's request for loan refinancing to the Board. Perry City is requesting restructuring of their \$11,350,000, 20 year, 3 percent interest loan from the Water Quality Board that was closed on December 16, 2008 for

construction of a new regional wastewater treatment plant. The City requests a replacement loan in the amount of \$7,350,000 with a term of 15 years and an interest rate of 1.5 percent.

**Motion:** Mr. Luers moved to approve the staff recommendations that the Board authorize a replacement loan to Perry City in the amount \$7,350,000 with a term of 15 years, and an interest rate of 2.0 percent, subject to the following special conditions.

1. Perry City must agree to continue to participate annually in the Municipal Wastewater Planning Program (MWPP).
2. Perry City must agree to maintain a minimum debt-to-service ratio of 125 percent for the replacement loan for the life of the loan.
3. Perry City must develop, fund and implement an asset management program consistent with the minimum requirements of EPA's Fiscal Sustainability Program for all of the sewerage system and treatment works assets under their management.

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

**Duck Creek Request for Loan Refinancing:** Mr. Davies presented the board with the Kane County Water Conservancy District Duck Creek sewer project reauthorization request. 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.

**Motion:** Ms. Niehaus moved to table this request until more information can be presented at a special meeting to be held in July, 2020. Mr. Webb seconded the motion. The motion passed unanimously.

**Millville City Request for 2001 Grant Repayment Forgiveness:** Mr. Hoffman presented that in the process of underwriting for the current Millville funding package, an issue has come up for which Board input is required. On June 15, 2001, Millville received funding for their \$977,578 portion of Nibley City's new wastewater collection system, lift station, and force main to connect to Logan City Wastewater Collection and Treatment Facility. The funding of this \$977,578 project was in 2 pieces: \$391,000 of loan and \$553,600 of grant. The grant has been paid out from the Hardship Grant Fund with no notes in DWQ's funds for projected repayment. The funding package approved by the Board on March 25, 2020 did not factor in repayment of this grant. Based on this information, clarification is requested from the Board on repayment of this \$553,600 grant. The Board could require Millville to repay the grant to the Hardship Grant Fund or the Board could forgive the grant without repayment.

**Motion:** Ms. Niehaus moved to approve the staff recommendations that the Board forgive the repayment of the \$553,600 grant issued on July 19, 2001 with the following special condition.

1. If Millville benefits monetarily from their ownership or the sale of their capacity in the Nibley Wastewater Line, this monetary benefit shall be paid into the restricted sewer enterprise fund for the benefit of Millville's wastewater

**infrastructure and its upkeep.**

**Mr. Luers seconded the motion. The motion passed unanimously.**

#### **RULE MAKING**

**Request to Initiate Rule Making for R317-1-3.2, Compliance with Secondary Treatment Requirements:** Ms. Robinson requested authorization from the Board to initiate rulemaking to revise Utah Administrative Code (UAC) Rule 317-1-3.2. The proposal is to amend UAC R317-1-3.2 to be consistent with 40 CFR 125.3 by removing “all persons” and replacing it with “publically owned treatment works”.

**Motion: Mr. Galecki moved to initiate the change to R317-1-3.2. Ms. Niehaus seconded the motion. The motion passed unanimously.**

**Request to Initiate Rule Making for R317-2, Standards of Water Quality for Waters of the State:** Mr. Bittner requested authorization from the Board to initiate rulemaking to change the designated aquatic life use from Class 3A, cold water aquatic life, to Class 3B, warm water aquatic life.

**Motion: Ms. Niehaus moved to initiate the change to R317-2. Mr. Luers seconded the motion. The motion passed unanimously.**

#### **OTHER BUSINESS**

**Introduction to 2020 Water Quality Standards Triennial Review:** Mr. Bittner presented to the Board that in accordance with R317-2-1C and Section 303(c) of the Clean Water Act, Utah is required to review the Standards of Quality for Waters of the State, R317-2, at least once every three years. The last Triennial Review was in 2017 and Water Quality staff are initiating the 2020 Triennial Review.

**Wastewater Monitoring for Coronavirus:** Dr. Gaddis presented to the Board a pilot program that was launched to determine whether monitoring sewage could provide a useful tool for public health officials. Scientists at DEQ and DWQ, the University of Utah, Utah State University and Brigham Young University have measured the genetic material of the SARS-CoV-2 virus; the virus that causes COVID-19 in sewage entering ten treatment plants across Utah. With the completion of the pilot project, the State of Utah is committed to expanding and operationalizing this tool in the ongoing response to the COVID-19 pandemic.

**Public Comments:** No public comments.

#### **Meeting Adjournment**

**Motion: Mr. Webb moved to adjourn the meeting. Ms. Niehaus seconded the motion. The motion passed unanimously.**

To listen to the full recording of the Board meeting go to: <http://www.utah.gov/pmn/index.html>

**Next Meeting – August 26, 2020 at 8:30 am**  
195 North 1950 West  
Room 1015  
Salt Lake City, UT 84116

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Gregg Galecki, Vice Chair  
Utah Water Quality Board



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*Executive Secretary*

### *MINUTES*

### **UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY UTAH WATER QUALITY BOARD Via Adobe Connect**

**July 22, 2020  
9:00 am**

#### **UTAH WATER QUALITY BOARD MEMBERS PRESENT**

Steven Earley	Emily Niehaus
Jennifer Grant	James VanDerslice
Brandon Gordon	James Webb
Mike Luers	

Excused: Gregg Galecki  
Scott Baird

#### **DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT**

Robert Beers	Ken Hoffman
Emily Cantón	Brenda Johnson
Skyler Davies	John Mackey
Erica Gaddis	Duncan Nelson

#### **OTHERS PRESENT**

Amanda Buhler	Kane County Water Conservancy District
Joe Phillips	Sunrise Engineering

Ms. Grant called the Board meeting to order at 8:30 AM and took roll call for the members of the Board.

#### **FUNDING REQUESTS**

**Duck Creek Request for Loan Refinancing:** Mr. Davies presented the board with the Kane County Water Conservancy District Duck Creek sewer project reauthorization request. 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.

**Motion:** Mr. Luers moved to approve the staff recommendation of the Board to 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 plus one additional special condition to add impact fees within 12 months. Mr. Webb seconded the motion. The motion passed by majority vote with Ms. Niehaus opposing.

**Public Comments:** No public comments.

### **Meeting Adjournment**

**Motion:** Ms. Niehaus moved to adjourn the meeting. Mr. Webb seconded the motion. The motion passed unanimously.

To listen to the full recording of the Board meeting go to: <http://www.utah.gov/pmn/index.html>

**Next Meeting – August 26, 2020 at 8:30 am**

**Via Adobe Connect**

<https://utdeq.adobeconnect.com/wqb/>

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Jennifer Grant, Chair  
Utah Water Quality Board

LOAN FUNDS FINANCIAL STATUS REPORT JUNE 2020

STATE REVOLVING FUND (SRF)	State Fiscal Year 2021	State Fiscal Year 2022	State Fiscal Year 2023	State Fiscal Year 2024	State Fiscal Year 2025	State Fiscal Year 2026
<b>Funds Available</b>						
Capitalization Grants Awards (FFY17 - 20)	27,390,801	-	-	-	-	-
State Match (FFY17 - 20)	6,471,600	-	-	-	-	-
Future Capitalization Grants (estimated)	8,358,000	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000
Future State Match (estimated)	1,671,600	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000
SRF - 2nd Round	74,984,365	71,701,844	23,788,516	21,605,744	34,812,771	61,830,540
Interest Earnings at 0.7404%	508,919	530,880	176,130	159,969	257,754	457,793
Loan Repayments	12,727,854	18,091,792	17,121,097	17,247,059	17,160,015	15,904,662
<b>Total Funds Available</b>	<b>132,113,139</b>	<b>99,924,516</b>	<b>50,685,744</b>	<b>48,612,771</b>	<b>61,830,540</b>	<b>87,792,996</b>
<b>Project Obligations</b>						
Central Valley Water Reclamation Facility	(28,324,000)	(24,976,000)	(6,700,000)	-	-	-
Duchesne City	(27,295)	-	-	-	-	-
Logan City	(13,131,000)	(7,000,000)	-	-	-	-
Moab City	(80,000)	-	-	-	-	-
Salem City	(269,000)	-	-	-	-	-
South Salt Lake City (A)	(1,580,000)	(2,160,000)	(234,000)	-	-	-
<b>Loan Authorizations</b>						
Millville City	(2,000,000)	-	-	-	-	-
Provo City	(15,000,000)	(35,000,000)	(15,000,000)	(13,800,000)	-	-
South Davis Sewer District (with NPS)	-	(7,000,000)	(7,146,000)	-	-	-
<b>Planned Projects</b>						
None at this time	-	-	-	-	-	-
<b>Total Obligations</b>	<b>(60,411,295)</b>	<b>(76,136,000)</b>	<b>(29,080,000)</b>	<b>(13,800,000)</b>	<b>-</b>	<b>-</b>
<b>SRF Unobligated Funds</b>	<b>\$ 71,701,844</b>	<b>\$ 23,788,516</b>	<b>\$ 21,605,744</b>	<b>\$ 34,812,771</b>	<b>\$ 61,830,540</b>	<b>\$ 87,792,996</b>

UTAH WASTEWATER LOAN FUND (UWLF)	State Fiscal Year 2021	State Fiscal Year 2022	State Fiscal Year 2023	State Fiscal Year 2024	State Fiscal Year 2025	State Fiscal Year 2026
<b>Funds Available</b>						
UWLF	21,853,123	8,931,519	5,109,626	1,264,413	(818,496)	2,439,039
Sales Tax Revenue	2,863,622	3,587,500	3,587,500	3,587,500	3,587,500	3,587,500
Loan Repayments	2,449,175	3,031,806	2,582,488	2,565,791	2,906,235	2,759,353
<b>Total Funds Available</b>	<b>27,165,919</b>	<b>15,550,826</b>	<b>11,279,613</b>	<b>7,417,704</b>	<b>5,675,239</b>	<b>8,785,892</b>
<b>General Obligations</b>						
State Match Transfers	(8,143,200)	(1,600,000)	(1,600,000)	(1,600,000)	(1,600,000)	(1,600,000)
DWQ Administrative Expenses	(1,636,200)	(1,636,200)	(1,636,200)	(1,636,200)	(1,636,200)	(1,636,200)
<b>Project Obligations</b>						
South Salt Lake City (B)	(2,455,000)	(2,205,000)	(1,779,000)	-	-	-
<b>Loan Authorizations</b>						
Kane Co Water Conservancy Dist (Duck Creek)	(1,000,000)	-	-	-	-	-
<b>Planned Projects</b>						
Future Project Reserve	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)	-	-
<b>Total Obligations</b>	<b>(18,234,400)</b>	<b>(10,441,200)</b>	<b>(10,015,200)</b>	<b>(8,236,200)</b>	<b>(3,236,200)</b>	<b>(3,236,200)</b>
<b>UWLF Unobligated Funds</b>	<b>\$ 8,931,519</b>	<b>\$ 5,109,626</b>	<b>\$ 1,264,413</b>	<b>\$ (818,496)</b>	<b>\$ 2,439,039</b>	<b>\$ 5,549,692</b>

<b>Total Loan Fund Balance</b>	<b>80,633,363</b>	<b>28,898,142</b>	<b>22,870,157</b>	<b>33,994,276</b>	<b>64,269,579</b>	<b>93,342,688</b>
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DWQ-2020-016737

HARDSHIP GRANT FUNDS FINANCIAL STATUS REPORT JUNE 2020

	State Fiscal Year 2021	State Fiscal Year 2022	State Fiscal Year 2023	State Fiscal Year 2024	State Fiscal Year 2025	State Fiscal Year 2026
<b>HARDSHIP GRANT FUNDS (HGF)</b>						
<b>Funds Available</b>						
Beginning Balance		625,098	923,274	1,044,833	502,792	(189,865)
Federal HGF Beginning Balance	6,809,429	-	-	-	-	-
State HGF Beginning Balance	2,092,324	-	-	-	-	-
Interest Earnings at 0.7404%	60,416	4,628	6,836	7,736	3,723	-
UWLF Interest Earnings at 0.7404%	148,317	66,129	37,832	9,362	-	18,059
Hardship Grant Assessments	974,418	854,384	731,418	623,670	514,199	396,397
Interest Payments	284,657	373,034	345,473	317,191	289,421	261,668
Advance Repayments	962,500	-	-	-	-	-
<b>Total Funds Available</b>	<b>11,332,062</b>	<b>1,923,274</b>	<b>2,044,833</b>	<b>2,002,792</b>	<b>1,310,135</b>	<b>486,259</b>
<b>Financial Assistance Project Obligations</b>						
Eagle Mountain City - Construction Grant	(510,000)	-	-	-	-	-
Emigration Sewer Imp Dist - Planning Grant	(26,158)	-	-	-	-	-
Green River	(54,000)	-	-	-	-	-
Kane Co Water Conservancy Dist (Duck Creek) - Hardship Grant	(3,997,000)	-	-	-	-	-
Lewiston City - Design and Construction	(500,000)	-	-	-	-	-
Millville City - Design and Construction	(1,500,000)	-	-	-	-	-
*Salina City - Planning Advance	(99,500)	-	-	-	-	-
Wasatch Co. Study	(100,000)	-	-	-	-	-
Wellington City - Hardship Design Grant	(350,000)	-	-	-	-	-
<b>Non-Point Source/Hardship Grant Obligations</b>						
Fitzgerald ARDL interest-rate buy down	(51,056)	-	-	-	-	-
McKees ARDL interest-rate buy down	(55,261)	-	-	-	-	-
Munk Dairy ARDL interest-rate buy down	(16,017)	-	-	-	-	-
(FY11) Gunnison Irrigation Company	(48,587)	-	-	-	-	-
(FY12) Utah Department of Agriculture	(334,266)	-	-	-	-	-
(FY13) DEQ - Great Salt Lake Advisory Council	(82,506)	-	-	-	-	-
(FY15) DEQ - Ammonia Criteria Study	(27,242)	-	-	-	-	-
(FY15) DEQ - Nitrogen Transformation Study	(14,500)	-	-	-	-	-
(FY17) DEQ - GW Quality Study	(5,051)	-	-	-	-	-
(FY17) DEQ - Utah Lake Water Quality Study	(348,301)	-	-	-	-	-
BYU - Bioassays to Investigate Nutrient Limitation	(31,011)	-	-	-	-	-
USU - Historic Trophic State/Nutrient Concentrations Paleo	(162,276)	-	-	-	-	-
FY 2015 - Remaining Payments	(4,223)	-	-	-	-	-
FY 2016 - Remaining Payments	(2,386)	-	-	-	-	-
FY 2018 - Remaining Payments	(129,287)	-	-	-	-	-
FY 2019 - Remaining Payments	(576,538)	-	-	-	-	-
FY 2020 - Remaining Payments	(681,799)	-	-	-	-	-
Future NPS Annual Allocations	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)
<b>Planned Projects</b>						
*Spanish Fork Credit Enhancement	-	-	-	(500,000)	(500,000)	(500,000)
<b>Total Obligations</b>	<b>(10,706,963)</b>	<b>(1,000,000)</b>	<b>(1,000,000)</b>	<b>(1,500,000)</b>	<b>(1,500,000)</b>	<b>(1,500,000)</b>
<b>HGF Unobligated Funds</b>	<b>\$ 625,098</b>	<b>\$ 923,274</b>	<b>\$ 1,044,833</b>	<b>\$ 502,792</b>	<b>\$ (189,865)</b>	<b>\$ (1,013,741)</b>

DWQ-2020-016737



**State of Utah**  
**Wastewater Project Assistance Program**  
**Project Priority List**  
*As of August 14, 2020*

Rank	Project Name	Funding Authorized	Total Points	Point Categories			
				Project Need	Potential Improvement	Population Affected	Special Consideration
1	Provo City	x	144	50	24	10	60
2	South Davis Sewer District	x	138	50	18	10	60
3	Spanish Fork Water Reclamation Facility		117	50	19	8	40
4	Millville City	x	114	45	46	3	20
5	Fairview City		107	50	15	2	40
6	Wellington City	x	74	10	21	3	40
7	Lewiston City	x	67	10	16	1	40
8	Kane County Water Conservancy District (Duck Creek)	x	62	40	21	1	0

DWQ-2020-016737



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## Department of Environmental Quality

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*Executive Director*

DIVISION OF WATER QUALITY  
Erica Brown Gaddis, PhD  
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Dr. Erica Brown Gaddis  
*Executive Secretary*

### **WATER QUALITY BOARD REQUEST FOR HARDSHIP PLANNING ADVANCE TO PREPARE WASTEWATER COLLECTION/TREATMENT FEASIBILITY STUDY AUTHORIZATION**

**APPLICANT:**

Salina City  
PO Box 69  
Salina Utah 84654  
Telephone: 435-529-7304

**PRESIDING OFFICIAL:**

Mayor Jed Maxwell

**TREASURER:**

Kathy Maxwell

**RECORDER:**

Ashlee Larsen

**CITY ATTORNEY:**

David A. Blackwell  
David A. Blackwell  
PO Box 727  
Ferron, Utah 84523  
435-749-9888

**BOND COUNSEL:**

Richard Chamberlain  
Chamberlain Associates  
225 North 100 East  
Richfield, Utah 84701  
435-896-4461

### **APPLICANT'S REQUEST:**

Salina City is requesting a **hardship planning advance in the amount of \$99,500** to complete a wastewater facility plan to evaluate alternatives to identify needed wastewater collection and treatment system improvements.

### **APPLICANT'S LOCATION**

Salina City is located in Sevier County. Salina is a community at the northern edge of Sevier County.



### **PROJECT NEED**

The original wastewater collection system was installed in the 1930s. The sanitary collection system consists of 23 miles of gravity sewer lines and 1 mile of pressurized sewer line. The system also includes one lift station. The lift station carries the wastewater from the southwest corner of the City to the location of the lagoon system. The collection system includes sections of vitrified clay pipe (VCP), asbestos cement pipe, concrete pipe, and PVC pipe ranging in

diameter from 6” to 18”. The lagoon treatment system was constructed in 1986. A three-cell lagoon system treats the wastewater collected by the collection system. The lagoons are designed as a total containment system with one primary cell, one secondary cell, and a winter storage cell. The City was issued a Utah General Permit for Non-Discharging Wastewater Lagoon Operation Permit in 2010.

Salina City’s last wastewater collection & treatment master plan was conducted in 1998. Their last major improvements project was conducted in 2002.

In January 2020, the City had secured and spent \$80,000 from its self-funding to procure the ownership of the location that the lagoons are located on and to reactivate the lagoons.

The City currently charges residential sewer rates of \$20 per month. The affordable WQB criteria analysis is based on a local 2018 MAGI of \$40,300 and the affordable monthly sewer bill of \$47.01 per month/ERU. The City intends to raise the sewer user rate by \$1 per month each year per service connection.

### **PROJECT DESCRIPTION:**

The proposed City Wastewater Capital Improvements Plan will update the general facilities plan that was completed in 1998 and will evaluate capacity of sanitary sewer and treatment system.

Creating an updated hydraulic model of the collection system will be a significant value of the project. The hydraulic model will be used to model projected development and identify needed improvements and can be applied in the future to evaluate the impact of developments to the system. An analysis of the existing GIS mapping will be included. The studies will analyze the lift station’s capacity and efficiency. An analysis of the lagoon system will be included as part of this scope of work. This includes reviewing capacity of the lagoon system and evaluating any changes that have occurred in the system since then.

The City also intends to contract for system wide video inspection of the existing sewer concurrently with the capital facilities plan in order to support with planning effort with current information on the condition of the pipes and collection system components. They have already received estimates from inspection contractors, and plan to pay \$70,000 - \$100,000 of their own funds for this effort to support the capital facilities plan.

Based on the findings of the system evaluation, a Capital Improvement Plan will be developed to identify improvements needed to meet current and projected needs. The plan will incorporate an implementation schedule, development of alternatives and cost estimates for the improvements. The plan will also incorporate an evaluation of sewer rates based on probable project costs to identify rate adjustments needed to fund improvements.

NEPA work and preparation of the environmental report are not included in this facilities master

plan, and would need to be evaluated at a later time.

### **IMPLEMENTATION SCHEDULE:**

The facility plan is scheduled to have an estimated completion date of May 1, 2021.

### **PROJECT PRIORITY LIST**

This is a planning project. It will be ranked when a recommended project scope of work has been identified and a request for funding has been submitted.

### **COST ESTIMATE:**

The City is requesting \$99,500 from the Water Quality Board to fund this Study.

### **STAFF COMMENTS AND RECOMMENDATION:**

The City of Salina is currently experiencing a financial hardship. These expenditures were an unexpected cost to the City. Because of the above reasons, Salina City is requesting from the Board a planning advance with a \$50,000 grant and a \$49,500 loan.

Given the current hardship conditions of the community, the Board should consider authorizing a portion of the funding as a planning grant to the City. The other portion, the Planning Advance, should be expeditiously repaid at the completion of the study whether or not a project is implemented as a result of this study.

Staff recommends the Board **authorize a hardship planning grant of \$50,000 and a planning advance of \$49,500** to Salina City. The advance should be repaid from Project funds once the project is identified and funded or repaid expenditures.

### **SPECIAL CONDITIONS:**

The Division of Water Quality must approve the engineering agreement and plan of study before the advance will be executed.



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Dr. James VanDerslice  
Dr. Erica Brown Gaddis  
*Executive Secretary*

Date Received: June 4, 2020

Date to be presented to the WQB: August 26, 2020

### **WATER QUALITY BOARD FEASIBILITY REPORT FOR WASTEWATER TREATMENT PROJECT**

#### **INTRODUCTION**

APPLICANT: Spanish Fork City  
40 S Main Street  
Spanish Fork, UT 84660

PRESIDING OFFICIAL: Steve Leifson - Mayor

CONTACT PERSON: Chris Thompson - PW Director/City Engineer.

TREASURER/RECORDER: Kent Clark - Finance Director

CONSULTING ENGINEER: Gary Vance, P.E.  
J-U-B Engineers, Inc.  
392 East Winchester St, Suite 300  
Salt Lake City, UT 84107  
Telephone: (801) 547-0393

BOND COUNSEL: Gilmore & Bell  
15W South Temple #145  
Salt Lake City, UT 84101  
Telephone (801) 364-5080

FINANCIAL ADVISOR: Jonathon Ward, Senior Vice President  
Zions Public Finance  
One S Main St 18th Floor  
Salt Lake City, UT 84113-1109  
Telephone (801) 844-7379

### **APPLICANT'S REQUEST:**

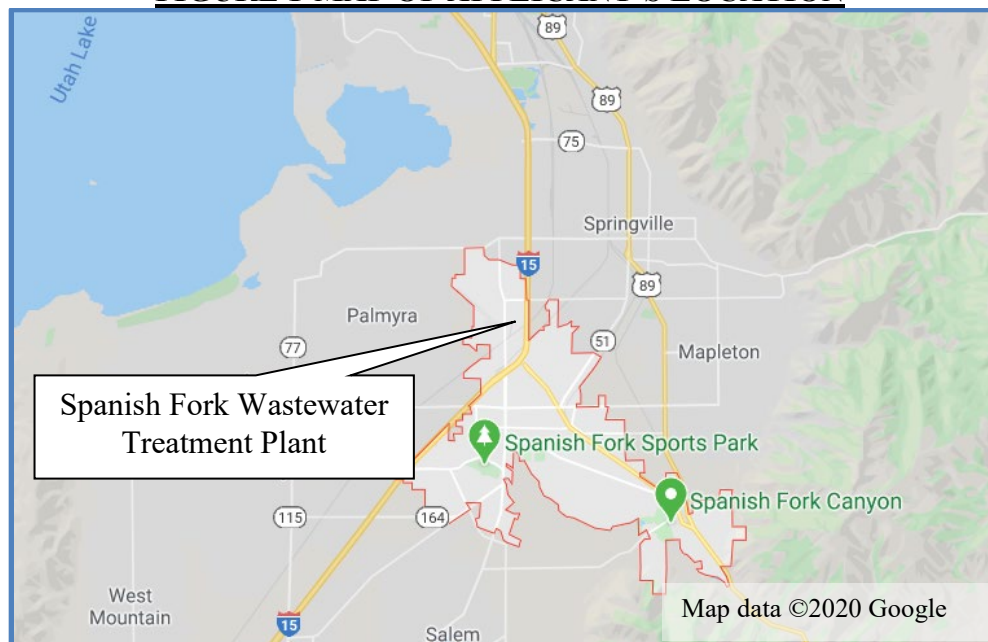
**Spanish Fork City is requesting a grant in the amount of \$3,500,000 to be issued over 7 years in \$500,000 annual increments, to enhance the City's credit position in bonding to construct their new \$94.1 Million plant.**

The City has expressed interest in a low interest loan from the Board but, in recognizing fund limitations, has proposed a credit enhancement agreement, funded by grant. The proposed agreement would enable the City to maintain a debt service coverage ratio of 1.5 (the Board normally requires 1.25 on its loans) and secure other favorable financing.

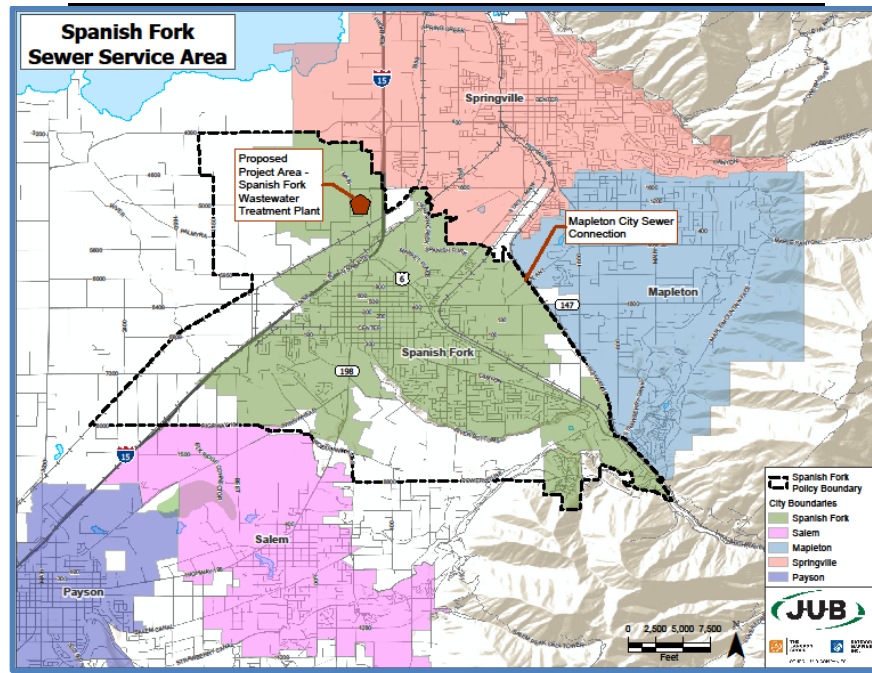
### **APPLICANT'S LOCATION:**

The Spanish Fork Wastewater Treatment Plant is located at 150 E 2160 N in Spanish Fork City, about 50 miles south of Salt Lake City. Figure 1 shows the plant location and Figure 2 shows its service area:

**FIGURE 1-MAP OF APPLICANT'S LOCATION**



**FIGURE 2-MAP OF APPLICANT'S SERVICE AREA**



## **BACKGROUND:**

The Spanish Fork Wastewater Treatment Plant (WWTP) was originally constructed in 1955. The original design capacity was 1.8 MGD. A plant upgrade in 1987 increased the plant's capacity to 5 MGD, and in 2006 further upgrades increased the capacity to 6 MGD. The current average inflow to the plant is 4.5 MGD with a permit limit of 5 MGD. Spanish Fork WWTP provides regional service to over 56,000 people in Spanish Fork and Mapleton Cities.

Most of Spanish Fork City's collection system flows by gravity to the WWTP as the land slopes downward from the mountains towards Utah Lake. The only exceptions are the industrial areas near the Airport and areas at the southwest end of the City, which have lift stations to pump the sewage to the treatment plant. The facility discharges to Dry Creek which flows into Provo Bay on Utah Lake. The City now maintains and operates about 167 miles of sewer pipe.

Spanish Fork's city limits cover about 16.22 square miles with an estimated population of 44,623. The Mapleton city limits span approximately 13.35 square miles with a population of almost 10,762. Mapleton was incorporated in 1948 and is significantly more rural than Spanish Fork, with 60% of its land still undeveloped. The ownership of the treatment facility is split between the two cities based on usage. As upgrades are made at the facility, the financial requirements for the projects are split between the two cities according to the current capacity ownership.



**PROJECT NEED:**

The City recently completed a condition assessment study which indicated the need for significant upgrades and replacement of existing infrastructure. In addition, the WWTP will need substantial modifications to reliably meet the technology based phosphorus effluent limit (TBPEL) and future water quality based effluent limits that are anticipated for discharges to Utah Lake.

The general condition assessment was conducted for the existing treatment process-related equipment and structures at the WWTP. The results of the assessment determined asset placement priority based on the remaining useful life of each asset. Overall, very few of the plant facilities are in “like new” or “very good” condition. The majority of the equipment at the plant is in “satisfactory”, “poor”, or “very poor” condition.

The proposed improved facilities will continue to discharge to the same outfall in Dry Creek. Dry Creek discharges to Provo Bay in Utah Lake, which is an impaired water body. The excess nutrients in Utah Lake contribute to Harmful Algal Blooms (HABs), which occur during the summer months. Currently, a study is being conducted for Utah Lake to establish water quality standards for the Utah Lake system.

While the study is being conducted, DWQ has established a compliance schedule for meeting the more stringent, chronic ammonia limits listed in the permit (7 mg/L maximum monthly average in the summer and 9 mg/L maximum monthly average the rest of the year) and the technology-based phosphorus effluent limit (TBPEL) of 1 mg/L phosphorus. Compliance with these new limits is required by 2023, unless an extension is negotiated. As currently configured, the WWTP will not be able to meet the new monthly average ammonia limits, as the plant has had several exceedances of the previous daily maximum ammonia concentration limit of 18 mg/L in 2018 and 2019.

Spanish Fork and Mapleton have formally submitted a request to DWQ to delay the implementation of the interim ammonia permit limits until January 1, 2026. DWQ has also established an interim total phosphorous maximum monthly average concentration of 3.7 mg/L until the end of 2020.

To meet these new nutrient limits, Spanish Fork WWTP is proposing to install a new Membrane Bioreactor (MBR) treatment process. The new upgrades will also increase the capacity of the plant to 8.4 MGD (maximum monthly flow). The plant will also be designed to accommodate future upgrades that support future regionalization and more stringent nutrient limits. Spanish Fork WWTP has acquired land across the street from the existing plant, which will allow for simpler construction now and with future expansion.

The goal of this WWTP expansion project is to decrease nutrient loads to Utah Lake, while increasing the capacity of the WWTP to accommodate growth within the service area and expectantly, to provide broader regional service for surrounding towns.

### **POSITION ON PROJECT PRIORITY LIST:**

This project is ranked 3rd of 8 projects on the Wastewater Treatment Project Priority List.

### **POPULATION GROWTH:**

The Spanish Fork Wastewater Treatment Plant receives sewage from both Spanish Fork City and Mapleton City. Since 2018, Spanish Fork and Mapleton have experienced annual average growth rates of 1.78% and 3.08%, respectively. The Governor's Office of Management and Budget (2013) estimated that the populations will increase annually by 1.87% and 2.28% for Spanish Fork and Mapleton, respectively, from 2020 to 2040. The combined build out population is estimated to be 145,374 people.

Year	Spanish Fork		Mapleton		Total Population
	Population	Growth Rate <sup>1</sup>	Population	Growth Rate <sup>1</sup>	
2020	44,623	1.27%	10,762	1.51%	55,385
2040	64,607	1.87%	16,901	2.28%	81,508
Build-Out <sup>2</sup>	115,971		29,403		145,374
<sup>1</sup> Annual Average Growth Rate for previous 20 year period					
<sup>2</sup> Expected build-out population taken from Aqua Engineering's 2011 Wastewater Master Plan					

(Source: Spanish Fork and Mapleton WWTP Master Plan –JUB/Stantec- May 29, 2020)

### **PUBLIC PARTICIPATION AND DEMONSTRATION OF PUBLIC SUPPORT:**

The proposed project has been discussed as an agenda item in several public City Council meetings over the past two years, including most recently in April 2020. The City Council is supportive of the project and demonstrated their support by (1) increasing sewer rates; (2) increasing sewer impact fees; (3) exploring financial assistance with DWQ. Public hearings in City Council were held in July of 2018 and 2019 to present the sewer rate increases in anticipation of the new WWTP. The City believes the public is well informed on the need for the project. The public has been notified of a sewer rate increase and impact fee increase to support the upcoming WWTP project. Additional public meetings are planned as the project progresses.

### **IMPLEMENTATION SCHEDULE:**

Apply to WQB for Funding:	June 2020
WQB Introduction	August 26, 2020
WQB Funding Authorization:	September 23, 2020
Begin Construction	2021
Complete Construction	2024

**APPLICANT'S CURRENT USER CHARGE:**

Spanish Fork currently charges a base rate of \$19.82 for most residential connections with an overage rate of \$2.25/1,000 gallons; if a resident uses 5,000 gallons per month then their monthly bill would be \$31.07.

**APPLICANT'S ALTERNATIVES EVALUATE:**

Spanish Fork retained JUB/Stantec to conduct a study to determine the most feasible treatment plant upgrades. The results of the JUB/Stantec study are contained in the report "Spanish Fork and Mapleton Wastewater Treatment Master Plan". A retrofit option and an offsite construction option were both proposed with several different wastewater treatment technologies. The alternatives considered are listed below:

Existing Site (Retrofit)

- Activated Sludge Process (A2O)
- Membrane Bioreactor (MRB)
- Integrated Fixed Film Activated Sludge
- Ballasted Activated Sludge (BioMag)
- Algae Bioreactor (CLEARAS)
- AquaNereda

Construction on New Site (Greenfield Site)

- Activated Sludge Process (A2O)
- Membrane Bioreactor (MBR)
- AquaNereda
- Sequencing Batch Reactor

Based on their alternatives analysis, JUB/Stantec recommends constructing an MBR plant offsite. Spanish Fork recently acquired land across the street from the existing plant. This will lower construction costs, and allow Spanish Fork to continue to utilize some of the existing treatment plant facilities.

The proposed project will address the existing WWTP's capacity, aging infrastructure, and ability to comply with future nutrient limits. A proposed regional greenfield membrane bioreactor facility will be constructed at a new 9-acre site located on the east side of 200 E, across the street from the existing WWTP and south of the railroad tracks. The site will be master planned to facilitate regionalization in the area, both for Springville and for developable county land toward West Mountain. Spanish Fork intends to treat future entities that tie into their system as partners rather than customers. Future regionalization partners will buy into the facility and have a voice at the table for all decisions.

The greenfield site will include a new headworks facility with coarse screens, grit removal, and fine screens; influent lift station; anaerobic, anoxic, and aerobic biological process basins (A2O

process); membrane bioreactor tanks; blower/recycle pump station/chemical storage building; emergency standby generator; electrical/MCC building; UV disinfection building; and all associated yard piping and site civil work.

For this first phase of the project, the City plans to keep the solids handling facilities at the existing site and retrofit it to be used in conjunction with the new plant to reduce overall construction costs. This project will also include interceptor sewers to the new site.

The recommended alternative allows space for expansion, in the case of further regionalization, or for a water reuse application site. This recommended alternative will also allow for Spanish Fork WWTP to meet the current nutrient limits and to adjust to potential future nutrient limits.

### **COST ESTIMATE:**

Spanish Fork is looking to construct phase 1 at this time. The total cost of this phase is estimated to be \$94,100,000 of which Spanish Fork is requesting \$3,500,000 in grant from the Water Quality Board. A breakdown of these costs follows:

<b>Item</b>	<b>Project Costs</b>
Loan Origination Fee	N/A
Legal and Bonding	900,000
Engineering and CMS	\$13,400,000
Construction	\$66,200,000
Contingency	\$13,600,000
Sub-Total	\$94,100,000

### **COST SHARING:**

Spanish Fork is proposing the following cost sharing for the identified projects. Spanish Fork intends to fund the portion not funded by the Water Quality Board utilizing Market Loans and local contribution.

<u>Funding Source</u>	<u>Cost Sharing</u>	<u>Percent of Project</u>
Spanish Fork Cash	\$ 17,500,000	18.6%
Spanish Fork Market Loan	\$ 73,100,000	77.7%
WQB Grant	\$ 3,500,000	3.7%
Total	\$94,100,000	100%

**STAFF COMMENTS:**

Spanish Fork City has been diligent in keeping out of debt and saving toward the cost of this project. The City has tried to do their due diligence to minimize the impact of the plant upgrade on its citizens.

The type of funding Spanish Fork is requesting is unusual in that they are requesting \$500,000 grants each year for 7 years in order to increase their debt service coverage ratio, and improve their ability to obtain low interest loans through the market. The intent of this financing proposal is to maintain a high debt service coverage ratio which would help their bond marketability and reduce the need to increase rates as much as they would need to if interest rates were higher.

This funding would provide a high impact per capita for the investment of Water Quality Board funding, as a relatively small amount of funding would lower the cost to the residents of Spanish Fork significantly.

Spanish Fork City has an MAGI of \$54,600 which would place a 1.4% bill at \$63.70 per month, about double their current sewer rate. This project would not place Spanish Fork City into a hardship position based on the criteria of 1.4% of MAGI even if the entire project were financed at current market rates. A preliminary static cost model is included as Attachment 1. In the cost model, staff considered different combinations of WQB Grants, loans, and interest rates to provide a comparison between sewer rates with various WQB assistance terms. In the analysis staff found that for the proposed project financing, the \$3,500,000 grant would provide similar subsidy to a \$19 Million loan at 0% interest (equating around \$5.5 Million in 0% interest loan with \$1 Million in grant). This would vary as the market loan rate varies.

**STAFF RECOMMENDATIONS:**

**This project is being introduced. Staff recommendations will be made in a later Board meeting.**

**ATTACHMENT 1**  
**Spanish Fork City - Water Quality Board**  
20 Year Loan Static Cost Model

**Project Costs**

Legal and Bonding	\$	900,000.00
Engineering & CMS	\$	13,400,000.00
Construction	\$	66,200,000.00
Contingency	\$	13,600,000.00
Total Project Cost:	\$	94,100,000.00

**Project Funding**

WQB Grant	\$	3,500,000.00
Local Contribution	\$	17,500,000.00
Market Loan	\$	73,100,000.00
Total Project Funding	\$	94,100,000.00

**Current Customer Base & User Charges**

Current (ERU):	14,577
MAGI 2018 CITY):	\$54,600
Monthly User Fee (per ERU):	\$31.07
1.4% MAGI UserFee	\$63.70

**Projected Annual Sewer O&M Cost**

Estimated Operating Expenses:	\$1,965,000
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**Funding Conditions**

Loan Repayment Term:	20
Reserve Funding Period:	6 years

**TABLE 1- PROJECT ESTIMATED COST OF SEWER SERVICE UNDER STRAIGHT-LINE AMORTIZATION**

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 Service	*Market Loan Reserve	Annual Sewer O&M Cost	Total Annual Sewer Cost	Monthly Sewer Cost/ERU	Sewer Cost as % of MAGI
<b>\$3,500,000</b>	<b>\$0</b>	<b>0.00%</b>	<b>\$0</b>	<b>\$0</b>	<b>\$73,100,000</b>	<b>2.00%</b>	<b>\$4,470,556</b>	<b>\$1,117,639</b>	<b>\$1,965,000</b>	<b>\$7,553,195</b>	<b>\$43.18</b>	<b>0.95%</b>
\$2,500,000	\$0	0.00%	\$0	\$0	\$74,100,000	2.00%	\$4,531,713	\$1,132,928	\$1,965,000	\$7,629,641	\$43.62	0.96%
\$2,000,000	\$0	0.00%	\$0	\$0	\$74,600,000	2.00%	\$4,562,291	\$1,140,573	\$1,965,000	\$7,667,864	\$43.84	0.96%
\$1,500,000	\$0	0.00%	\$0	\$0	\$75,100,000	2.00%	\$4,592,870	\$1,148,217	\$1,965,000	\$7,706,087	\$44.05	0.97%
\$1,000,000	\$0	0.00%	\$0	\$0	\$75,600,000	2.00%	\$4,623,448	\$1,155,862	\$1,965,000	\$7,744,310	\$44.27	0.97%
\$0	\$0	0.00%	\$0	\$0	\$76,600,000	2.00%	\$4,684,605	\$1,171,151	\$1,965,000	\$7,820,756	\$44.71	0.98%
\$0	\$0	0.00%	\$0	\$0	\$76,600,000	2.50%	\$4,913,670	\$1,228,418	\$1,965,000	\$8,107,088	\$46.35	1.02%
\$0	\$0	0.00%	\$0	\$0	\$76,600,000	3.00%	\$5,148,723	\$1,287,181	\$1,965,000	\$8,400,904	\$48.03	1.06%
\$0	\$0	0.00%	\$0	\$0	\$76,600,000	3.50%	\$5,389,658	\$1,347,415	\$1,965,000	\$8,702,073	\$49.75	1.09%
\$0	\$0	0.00%	\$0	\$0	\$76,600,000	6.00%	\$6,678,337	\$1,669,584	\$1,965,000	\$10,312,921	\$58.96	1.30%
\$0	\$5,500,000	0.00%	\$275,000	\$68,750	\$71,100,000	2.00%	\$4,348,243	\$1,087,061	\$1,965,000	\$7,744,053	\$44.27	0.97%
\$0	\$11,000,000	0.00%	\$550,000	\$137,500	\$65,600,000	2.00%	\$4,011,881	\$1,002,970	\$1,965,000	\$7,667,351	\$43.83	0.96%
\$0	\$19,200,000	0.00%	\$960,000	\$240,000	\$57,400,000	2.00%	\$3,510,396	\$877,599	\$1,965,000	\$7,552,995	\$43.18	0.95%
\$1,000,000	\$13,700,000	0.00%	\$685,000	\$171,250	\$61,900,000	2.00%	\$3,785,601	\$946,400	\$1,965,000	\$7,553,251	\$43.18	0.95%
\$2,000,000	\$8,200,000	0.00%	\$410,000	\$102,500	\$66,400,000	2.00%	\$4,060,806	\$1,015,202	\$1,965,000	\$7,553,508	\$43.18	0.95%
\$2,500,000	\$5,450,000	0.00%	\$272,500	\$68,125	\$68,650,000	2.00%	\$4,198,409	\$1,049,602	\$1,965,000	\$7,553,636	\$43.18	0.95%
\$3,000,000	\$2,700,000	0.00%	\$135,000	\$33,750	\$70,900,000	2.00%	\$4,336,011	\$1,084,003	\$1,965,000	\$7,553,764	\$43.18	0.95%
\$0	\$10,000,000	0.00%	\$500,000	\$125,000	\$66,600,000	2.00%	\$4,073,037	\$1,018,259	\$1,965,000	\$7,681,297	\$43.91	0.97%
\$0	\$20,000,000	0.00%	\$1,000,000	\$250,000	\$56,600,000	2.00%	\$3,461,470	\$865,368	\$1,965,000	\$7,541,838	\$43.11	0.95%
\$0	\$60,000,000	0.00%	\$3,000,000	\$750,000	\$16,600,000	2.00%	\$1,015,202	\$253,800	\$1,965,000	\$6,984,002	\$39.93	0.88%
\$0	\$60,000,000	0.50%	\$3,159,987	\$789,997	\$16,600,000	2.00%	\$1,015,202	\$253,800	\$1,965,000	\$7,183,986	\$41.07	0.90%
\$0	\$60,000,000	1.00%	\$3,324,919	\$831,230	\$16,600,000	2.00%	\$1,015,202	\$253,800	\$1,965,000	\$7,390,151	\$42.25	0.93%
\$0	\$60,000,000	1.75%	\$3,581,473	\$895,368	\$16,600,000	2.00%	\$1,015,202	\$253,800	\$1,965,000	\$7,710,844	\$44.08	0.97%

**Bolded** row is the requested funding. 2% interest rate is from the application however the actual market interest rate may be higher.

\*Market Loan Reserve on market loan may not be required, however, this is the same amount necessary to achieve a 1.25 debt service coverage ratio that most institutions require as a minimum, and it provides a better comparison to loans issued by the Board.



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Dr. Erica Brown Gaddis  
*Executive Secretary*

**MEMORANDUM**

**TO:** Utah Water Quality Board

**THROUGH:** Erica Brown Gaddis, PhD, Director

**FROM:** Jennifer Robinson, UPDES Surface Water Section

**DATE:** August 26, 2020

**SUBJECT:** Recommendation for Approval of the Amendment to R317-1-3.2 by the Water Quality Board

**Action Item: Request Board approval to adopt proposed rule changes.**

The Board authorized the Division to initiate rulemaking to amend R317-1-3.2 on June 24, 2020. The Division coordinated with the Utah Division of Administrative Rule to public notice the amendment to R317-1-3.2. The public notice occurred from July 15, 2020 until August 14, 2020. During the public comment period no comments were received.

Staff requests **approval by the Board to adopt the proposed amendment to R317-1-3.2.** With the approval by the Board, staff will implement the changes effective August 27, 2020.

Attachment 1 is the redline-strikeout version of the proposed change

DWQ-2020-05645

**ATTACHMENT 1**  
**Redline/Strikeout of Proposed Change to R317-1-3.2**  
**Utah Water Quality Board Meeting**

R317. Environmental Quality, Water Quality.  
R317-1 Definitions and General Requirements.  
R317-1-3 Requirements for Waste Discharges.  
R317-1-3.2 Compliance With Secondary Treatment Requirements.  
~~All persons~~ Publicly owned treatment works discharging wastes  
from point sources into any of the waters of the State shall  
provide treatment processes which will produce secondary  
effluent meeting or exceeding the following effluent quality  
standards.





## State of Utah

GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

## Department of Environmental Quality

L. Scott Baird  
*Executive Director*

DIVISION OF WATER QUALITY  
Erica Brown Gaddis, PhD  
*Director*

**Water Quality Board**  
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Emily Niehaus  
James Webb  
Dr. James VanDerslice  
Dr. Erica Brown Gaddis  
*Executive Secretary*

### **MEMORANDUM**

**TO:** Utah Water Quality Board

**THROUGH:** Erica Gaddis, PhD, Director

**FROM:** Chris Bittner, Standards Coordinator

**DATE:** August 26, 2020

**SUBJECT:** 1. Staff requests approval from the Board to initiate rulemaking: Proposed Amendments to Standards of Water Quality for the State, [UAC R317-2](#).  
2. Invitation for Board Member to serve as hearing officer for the rulemaking.

#### **Background**

By statute, the Board has the authority to amend Utah's water quality standards through the rulemaking process. Staff is requesting Board approval to initiate the rulemaking process to update the Colorado River Salinity Standards in R317-2-4 and changes to the total dissolved solids (TDS) criteria for segments of Kanab Creek. Upon your approval, staff will file the proposed amendments with the Division of Administrative Rules, notify the public and government officials, schedule a hearing, incorporate comments from the public and other interested parties, and finally, return to the Board with recommendations for adoption.

The public hearing is scheduled for Wednesday, October 21, 2020 from 6:00 until at least 7:00 P.M. In accordance with federal and state directives regarding Covid-19, the hearing will be convened virtually. This hearing will also serve as an opportunity for public comment on the 2020 Triennial Review. A Board member is invited to volunteer to serve as hearing officer. Staff will be present to provide administrative support and guidance for the hearing. Alternatively, the Board may designate staff to serve as the hearing officer. In either case, the Board will be apprised of all comments received.

The proposed TDS criteria for Kanab Creek were reviewed with affected stakeholders and the Water Quality Standards Workgroup. Residents of Kanab expressed concerns regarding the downstream effects of the proposed increase in the TDS criteria upstream of Kanab (no change is recommended to Kanab Creek TDS criteria in Kanab). Water from upper Kanab Creek infrequently connects to lower Kanab Creek during storm events and when it does, TDS concentrations are relatively low. Staff clarified the Use and Value Assessment to address these concerns. The proposed revision is summarized below and a detailed explanation is provided as

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Attachment 1: *Kanab Creek - Use and Value Assessment and Revised Criteria for Total Dissolved Solids, June 18, 2020 v. 1.4*. Attachment 2 is a mark-up of the water quality standards. Staff will summarize the basis for the proposed revisions at the Board meeting.

**Summary of Proposed Standards Revisions**

1. **Colorado River Salinity Standards.** The proposed change is to add the 2014, 2017, and 2020 reviews as shown by the underlining:

In addition to quality protection afforded by these rules to waters of the Colorado River and its tributaries, such waters shall be protected also by requirements of "Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975" and a supplement dated August 26, 1975, entitled "Supplement, including Modifications to Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975", as approved by the seven Colorado River Basin States and the U.S. Environmental Protection Agency, as updated by the 1978 Revision and the 1981, 1984, 1987, 1990, 1993, 1996, 1999, 2002, 2005, 2008, ~~and~~ 2011, 2014, 2017, and 2020 reviews of the above documents.

2. **Kanab Creek.**

Executive Summary from the *Use and Value Assessment*:

Kanab Creek flows for about 30 miles from its headwaters in Utah to the Arizona state border and eventually to the Colorado River. Both upper Kanab Creek, near the town of Alton, and lower, near the town of Kanab, have segments of perennial flow supported by two different base flow systems. Stream flow in the middle section of Kanab Creek is intermittent from several miles south of the town of Alton downstream to the White Cliffs area, flowing only during snowmelt runoff or infrequent high intensity precipitation events.

Stream flow is highly seasonal in Kanab Creek and tributaries. An inverse relationship exists between stream flow and TDS concentrations in upper Kanab Creek, resulting in a strong seasonal signature in TDS concentrations. Periods of low stream flow in the summer months show elevated TDS concentrations and lower TDS concentrations during high flows.

The Tropic Shale geologic formation underlays much of the upper Kanab Creek watershed. This marine shale is a major salt bearing formation that acts as parent material for saline soils and alluvium. Interactions between surface and groundwater and Tropic Shale-derived soils and alluvium cause the dissolution of soluble salts present in these materials, increasing the TDS of those waters. As a result, TDS concentrations in Kanab Creek increase near Alton. Downstream, the TDS concentrations in the perennial segment upstream of lower Kanab Creek are markedly lower than observed in upper Kanab Creek and no changes to the statewide TDS criterion of 1,200 mg/L are proposed.

Geologic and hydrologic data from Kanab Creek and its tributaries near Alton, Utah, indicate that elevated TDS concentrations in these waters are primarily a result of natural conditions and secondarily, unalterable (agricultural irrigation use) conditions.

Based on this assessment, the proposed alternative TDS criteria are protective of the existing and anticipated future agricultural uses of Kanab Creek's water and therefore, consistent with the agricultural use and value of the water. These alternative criteria will continue to protect downstream uses.

The proposed alternative TDS criteria are:

Kanab Creek and tributaries above Simpson Hollow Wash to irrigation diversion at confluence with Reservoir Canyon: April through November, daily maximum 1,400 mg/l. Assessments shall be based on TDS concentrations measured in Kanab Creek.

Kanab Creek and tributaries from immediately below the confluence with Sink Valley Wash to the confluence of Simpson Hollow Wash: April through November, daily maximum 1,900 mg/l; December through March, daily maximum 1,700 mg/l. Assessments shall be based on TDS concentrations measured in Kanab Creek.

#### End Executive Summary

The Figure below illustrates the boundaries for the proposed TDS criteria and the approximate location where Kanab Creek perennial flows change to intermittent. These proposed changes will affect a UPDES permitted discharge, Alton Coal, LLC. Currently, their permit restricts TDS discharges to the statewide criterion of 1,200 mg/L. Under the revised criteria, the permit limits for TDS can be increased depending on the season and location of the outfalls but the Colorado River Salinity Standards cap of 1 ton/day remains unchanged.

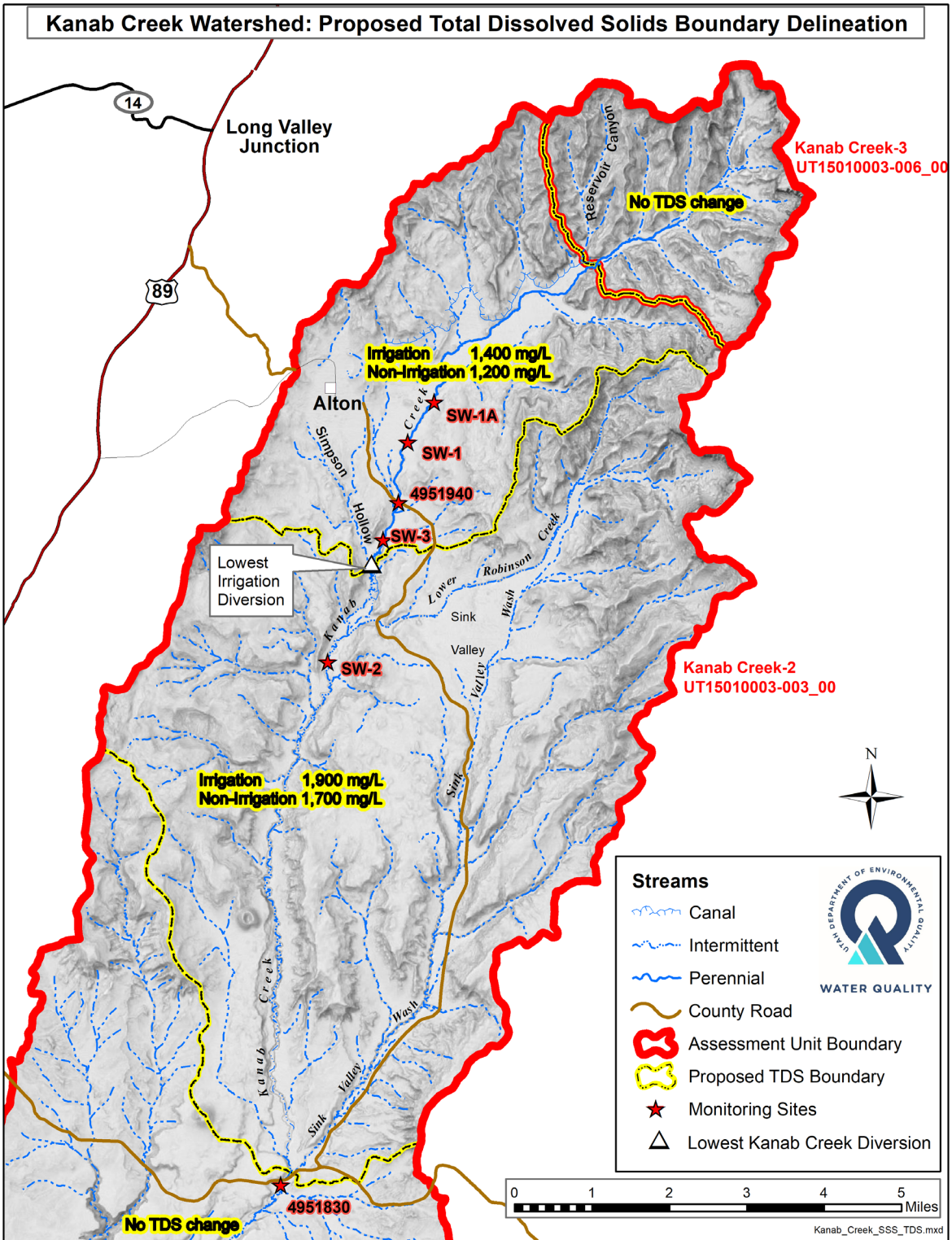
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***Supporting Documents***

**Attachment 1:** [DWQ-2020-013798](#) *Kanab Creek - Use and Value Assessment and Revised Criteria for Total Dissolved Solids, June 18, 2020 v. 1.4.*

**Attachment 2:** Mark-up of R317-2 Standards of Quality for Waters of the State

## ATTACHMENT 1



**ATTACHMENT 2**

**Mark-up of R317-2 showing proposed revisions presented to the Utah Water Quality Board at the June and August, 2020 Meetings. Changes are highlighted. Deletions are marked with ~~strikeout~~ font and [bracketed]. Additions are underlined.**

**R317. Environmental Quality, Water Quality.  
R317-2. Standards of Quality for Waters of the State.**

-----**BREAK**-----

**R317-2-4. Colorado River Salinity Standards.**

In addition to quality protection afforded by these rules to waters of the Colorado River and its tributaries, such waters shall be protected also by requirements of "Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975" and a supplement dated August 26, 1975, entitled "Supplement, including Modifications to Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975", as approved by the seven Colorado River Basin States and the U.S. Environmental Protection Agency, as updated by the 1978 Revision and the 1981, 1984, 1987, 1990, 1993, 1996, 1999, 2002, 2005, 2008, [and ]2011, 2014, 2017, and 2020 reviews of the above documents.

-----**BREAK**-----

**R317-2-13. Classification of Waters of the State (see R317-2-6) .**

- 13.1 Upper Colorado River Basin  
a. Colorado River Drainage

**TABLE**

Paria River and tributaries, from state line to headwaters	2B	3C	4
All tributaries to Lake Powell except as listed below:	2B	3B	4
Tributaries to Escalante River from confluence with Boulder			

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Creek to headwaters, including Boulder Creek	2B	3A		4
Dirty Devil River and tributaries, from Lake Powell to Fremont River	2B		3C	4
Deer Creek and tributaries, from confluence with Boulder Creek to headwaters	2B	3A		4
[Fremont] Fremont River and tributaries from confluence with Muddy Creek to Capitol Reef National Park, except as listed below:	1C	2B	3C	4
Pleasant Creek and tributaries, from confluence with Fremont River to East boundary of Capitol Reef National Park		2B	3C	4
Pleasant Creek and tributaries, from East boundary of Capitol Reef National Park to headwaters	1C	2B	3A	
Fremont River and tributaries, through Capitol Reef National Park to headwaters	1C	2A	3A	4
Muddy Creek and tributaries, from Confluence with Fremont River to Highway U-10 crossing, except as listed below		2B	3C	4
Muddy Creek from confluence with Fremont River to confluence with Ivie Creek		2B	3C	4*
Muddy Creek and tributaries from the confluence with Ivie Creek to U-10		2B	3C	4*
Ivie Creek and its tributaries from the confluence with Muddy Creek to the confluence with Quitichupah Creek		2B	3C	4*



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Ivie Creek and its tributaries from the confluence with Quitchapah Creek to U-10, except as listed below:		2B	3C	4*
Quitchapah Creek from the confluence with Ivie Creek to U-10		2B	3C	4*
Quitchapah Creek and tributaries, from Highway U-10 crossing to headwaters		2B 3A		4
Ivie Creek and tributaries, from Highway U-10 to headwaters		2B 3A		4
Muddy Creek and tributaries, from Highway U-10 crossing to headwaters	1C	2B 3A		4
San Juan River and tributaries from Lake Powell to state line except as listed below:	1C 2A		3B	4
Johnson Creek and tributaries, from confluence with Recapture Creek to headwaters	1C	2B 3A		4
Verdure Creek and tributaries, from Highway US-191 crossing to headwaters		2B 3A		4
North Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B 3A		4
South Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B 3A		4
Spring Creek and tributaries, from confluence with Vega Creek to headwaters		2B 3A		4
Montezuma Creek and tributaries,				

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from U.S. Highway 191 to headwaters	1C	2B 3A	4
Colorado River and tributaries, from Lake Powell to state line except as listed below:	1C 2A	3B	4
Indian Creek and tributaries, through Newspaper Rock State Park to headwaters	1C	2B 3A	4
Kane Canyon Creek and tributaries, from confluence with Colorado River to headwaters		2B 3C	4
Mill Creek and tributaries, from confluence with Colorado River to headwaters	1C 2A	3A	4
Castle Creek from confluence with the Colorado River to Seventh Day Adventist Diversion	1C 2A	3B	4*
Onion Creek from the confluence with Colorado River to road crossing above Stinking Springs	1C 2A	3B	4*
Dolores River and tributaries, from confluence with Colorado River to state line		2B 3C	4
Roc Creek and tributaries, from confluence with Dolores River to headwaters		2B 3A	4
LaSal Creek and tributaries from state line to headwaters		2B 3A	4
Lion Canyon Creek and tributaries, from state line to headwaters		2B 3A	4
Little Dolores River and tributaries, from confluence with Colorado River to state line		2B 3C	4

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Bitter Creek and tributaries, from confluence with Colorado River to headwaters	2B	3C	4
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(\*) Site-specific criteria are associated with this use.

-----BREAK-----

b. Kanab Creek Drainage

TABLE

<del>[Kanab Creek and tributaries, from state line to irrigation diversion at confluence with Reservoir Canyon ]Kanab Creek and tributaries, from state line to immediately below the confluence with Sink Valley Wash</del>	<del>2B</del>	<del>3C</del>	<del>4</del>
Kanab Creek and tributaries, from immediately below the confluence with Sink Valley Wash to Simpson Hollow Wash	2B	3C	4*
Kanab Creek and tributaries, from immediately above Simpson Hollow Wash to irrigation diversion at confluence with Reservoir Canyon	2B	3C	4*
Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters	2B 3A		4
Johnson Wash and tributaries, from state line to confluence with Skutumpah Canyon	2B	3C	4
Johnson Wash and tributaries, from confluence with Skutumpah Canyon to headwaters	2B 3A		4

-----BREAK-----

13.5 Utah Lake-Jordan River Basin  
a. Jordan River Drainage

TABLE

Jordan River, from Farmington Bay to North Temple Street, Salt Lake City		2B	3B*	3D	4
State Canal, from Farmington Bay to confluence with the Jordan River		2B	3B*	3D	4
Jordan River, from North Temple Street in Salt Lake City to confluence with Little Cottonwood Creek		2B	3B*		4
Surplus Canal from Great Salt Lake to the diversion from the Jordan River		2B	3B*	3D	4
Jordan River from confluence with Little Cottonwood Creek to Narrows Diversion		2B	[3A]	<u>3B</u>	
4					
Jordan River, from Narrows Diversion to Utah Lake	1C	2B	3B		4
City Creek, from Memory Park in Salt Lake City to City Creek Water Treatment Plant		2B	3A		
City Creek, from City Creek Water Treatment Plant to headwaters	1C	2B	3A		
Red Butte Creek and tributaries, from Liberty Park pond inlet to Red Butte Reservoir		2B	3A		4
Red Butte Creek and tributaries, from Red Butte Reservoir to headwaters	1C	2B	3A		
Emigration Creek and tributaries, from 1100 East in Salt Lake City					

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to headwaters		2B 3A	4
Parleys Creek and tributaries, from 1300 East in Salt Lake City to Mountain Dell Reservoir	1C	2B 3A	
Parleys Creek and tributaries, from Mountain Dell Reservoir to headwaters	1C	2B 3A	
Mill Creek (Salt Lake County) from confluence with Jordan River to Interstate 15		2B 3C*	4
Mill Creek (Salt Lake County) and tributaries, from Interstate 15 to headwaters		2B 3A	4
Big Cottonwood Creek and tributaries, from confluence with Jordan River to Big Cottonwood Water Treatment Plant		2B 3A	4
Big Cottonwood Creek and tributaries from Big Cottonwood Water Treatment Plant to headwaters	1C	2B 3A	
Deaf Smith Canyon Creek and tributaries	1C	2B 3A	4
Little Cottonwood Creek and tributaries, from confluence with Jordan River to Metropolitan Water Treatment Plant		2B 3A	4
Little Cottonwood Creek and tributaries, from Metropolitan Water Treatment Plant to headwaters	1C	2B 3A	
Bells Canyon Creek and tributaries, from Lower Bells Canyon Reservoir to headwaters	1C	2B 3A	
Little Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A	

Big Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B	3A	
South Fork of Dry Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B	3A	
All permanent streams on east slope of Oquirrh Mountains (Coon, Barneys, Bingham, Butterfield, and Rose Creeks)		2B	3D	4
Kersey Creek from confluence of C-7 Ditch to headwaters		2B	3D	
(*) Site-specific criteria are associated with this use.				

-----**BREAK**-----

**R317-2-14. Numeric Criteria.**

TABLE 2.14.1  
NUMERIC CRITERIA FOR DOMESTIC,  
RECREATION, AND AGRICULTURAL USES

Parameter	Domestic Source 1C(1)	Recreation and Aesthetics 2A2B		Agri- culture 4
BACTERIOLOGICAL				
(30-DAY GEOMETRIC MEAN) (NO.)/100 ML) (7)				
E. coli	206	126	206	
MAXIMUM				
(NO.)/100 ML) (7)				
E. coli	668	409	668	
PHYSICAL				
pH (RANGE)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-
9.0				

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Turbidity Increase (NTU)		10	10
METALS (DISSOLVED, MAXIMUM MG/L) (2)			
Arsenic	0.01		0.1
Barium	1.0		
Beryllium	<0.004		
Cadmium	0.01		0.01
Chromium	0.05		0.10
Copper			0.2
Lead	0.015		0.1
Mercury	0.002		
Selenium	0.05		0.05
Silver	0.05		
INORGANICS (MAXIMUM MG/L)			
Bromate	0.01		
Boron			0.75
Chlorite	<1.0		
Fluoride	4.0		
Nitrates as N	10		
Total Dissolved Solids (4)			1200
	RADIOLOGICAL		
(MAXIMUM pCi/L)			
Gross Alpha	15		15
Gross Beta	4 mrem/yr	Radium 226, 228	
(Combined)	5		
Strontium 90	8		
Tritium	20000		
Uranium	30		
ORGANICS (MAXIMUM UG/L)			
2,4-D 94-75-7	70		
2,4,5-TP 93-72-1	10		
Alachlor 15972-60-8	2		
Atrazine 1912-24-9	3		
Carbofuran 1563-66-2	40		
Dichloroethylene (cis- 1,2) 156-59-2	70		
Dalapon 75-99-0	200		

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Di (2ethylhexyl) adipate	
103-23-1	400
Dibromochloropropane	
96-12-8	0.2
Dinoseb 88-85-7	7
Diquat 85-00-7	20
Endothall 145-73-3	100
Ethylene Dibromide	
106-93-4	0.05
Glyphosate 1071-83-6	700
Xylenes 1330-20-7	10,000

POLLUTION

INDICATORS (5)

BOD (MG/L)	5	5	5
Nitrate as N (MG/L)	4	4	
Total Phosphorus as P			
(MG/L) (6)	0.05	0.05	

FOOTNOTES:

(1) See also numeric criteria for water and organism in Table 2.14.6.

(2) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by approved laboratory methods for the required detection levels.

(3) Reserved

(4) SITE SPECIFIC STANDARDS FOR TOTAL DISSOLVED SOLIDS (TDS)

Blue Creek and tributaries, Box Elder County, from Bear River Bay, Great Salt Lake to Blue Creek Reservoir:  
 March through October daily maximum 4,900 mg/l and an average of 3,800 mg/l; November through February daily maximum 6,300 mg/l and an average of 4,700 mg/l. Assessments will be based on TDS concentrations measured at the location of STORET 4960740.

Blue Creek Reservoir and tributaries, Box Elder County,  
 daily maximum 2,100 mg/l;

Castle Creek from confluence with the Colorado River to Seventh Day Adventist Diversion: 1,800 mg/l;

Cottonwood Creek from the confluence with Huntington Creek to Highway U-57: 3,500 mg/l;



Ferron Creek from the confluence with San Rafael River to Highway U-10: 3,500 mg/l;

Huntington Creek and tributaries from the confluence with Cottonwood Creek to Highway U-10: 4,800 mg/l;

Ivie Creek and its tributaries from the confluence with Muddy Creek to the confluence with Quitchupah Creek: 3,800 mg/l provided that total sulfate not exceed 2,000 mg/l to protect the livestock watering agricultural existing use;

Ivie Creek and its tributaries from the confluence with Quitchupah Creek to Highway U-10: 2,600 mg/l;

Kanab Creek and tributaries from immediately below the confluence with Sink Valley Wash to the confluence of Simpson Hollow Wash: April through November, daily maximum 1,900 mg/l; December through March, daily maximum 1,700 mg/l. Assessments shall be based on TDS concentrations measured in Kanab Creek.;

Kanab Creek and tributaries from immediately above Simpson Hollow Wash to irrigation diversion at confluence with Reservoir Canyon: April through November, daily maximum 1,400 mg/l. Assessments shall be based on TDS concentrations measured in Kanab Creek.;

Lost Creek from the confluence with Sevier River to U.S. National Forest boundary: 4,600 mg/l;

Muddy Creek and tributaries from the confluence with Ivie Creek to Highway U-10: 2,600 mg/l;

Muddy Creek from confluence with Fremont River to confluence with Ivie Creek: 5,800 mg/l;

North Creek from the confluence with Virgin River to headwaters: 2,035 mg/l;

Onion Creek from the confluence with Colorado River to road crossing above Stinking Springs: 3000 mg/l;

Brine Creek-Petersen Creek, from the confluence with the Sevier River to Highway U-119 Crossing: 9,700 mg/l;

Price River and tributaries from confluence with Green River to confluence with Soldier Creek: 3,000 mg/l;

Price River and tributaries from the confluence with Soldier Creek to Carbon Canal Diversion: 1,700 mg/l;

Quitcupah Creek and tributaries from the confluence with Ivie Creek to Highway U-10: 3,800 mg/l provided that total sulfate not exceed 2,000 mg/l to protect the livestock watering agricultural existing use;

Rock Canyon Creek from the confluence with Cottonwood Creek to headwaters: 3,500 mg/l;

San Pitch River from below Gunnison Reservoir to the Sevier River: 2,400 mg/l;

San Rafael River from the confluence with the Green River to Buckhorn Crossing: 4,100 mg/l;

San Rafael River from the Buckhorn Crossing to the confluence with Huntington Creek and Cottonwood Creek: 3,500 mg/l;

Sevier River between Gunnison Bend Reservoir and DMAD Reservoir:  
1,725 mg/l;

Sevier River from Gunnison Bend Reservoir to Crafts Lake:  
3,370 mg/l;

Silver Creek and tributaries, Summit County, from confluence with Tollgate Creek to headwaters: maximum 1,900 mg/L.

South Fork Spring Creek from confluence with Pelican Pond	
Slough Stream to U.S. Highway 89	1,450 mg/l (Apr.-Sept.)
	1,950 mg/l (Oct.-March)

Virgin River from the Utah/Arizona border to Pah Tempe Springs:  
2,360 mg/l

(5) Investigations should be conducted to develop more information where these pollution indicator levels are exceeded. These indicators are superseded by numeric criteria in waters where promulgated.

(6) Total Phosphorus as P (mg/l) indicator for lakes and reservoirs shall be 0.025.

(7) Where the criteria are exceeded and there is a reasonable

basis for concluding that the indicator bacteria E. coli are primarily from natural sources (wildlife), e.g., in National Wildlife Refuges and State Waterfowl Management Areas, the criteria may be considered attained provided the density attributable to non-wildlife sources is less than the criteria. Exceedences of E. coli from nonhuman nonpoint sources will generally be addressed through appropriate Federal, State, and local nonpoint source programs.

Measurement of E. coli using the "Quanti-Tray 2000" procedure is approved as a field analysis. Other EPA approved methods may also be used.

For water quality assessment purposes, up to 10% of representative samples may exceed the 668 per 100 ml criterion (for 1C and 2B waters) and 409 per 100 ml (for 2A waters). For small datasets, where exceedences of these criteria are observed, follow-up ambient monitoring should be conducted to better characterize water quality.

-----BREAK-----

**KEY: water pollution, water quality standards**

**Date of Enactment or Last Substantive Amendment:** **[July 1, 2019] 2020**

**Notice of Continuation: September 26, 2017-1317, 1329**

**Authorizing, and Implemented or Interpreted Law: 19-5; FWPCA 33 USC 1251, 1311**



## State of Utah

GARY R. HERBERT  
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*Lieutenant Governor*

## Department of Environmental Quality

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Dr. Erica Brown Gaddis  
*Executive Secretary*

### MEMORANDUM

**TO:** Water Quality Board

**THROUGH:** Erica Brown Gaddis, PhD  
Director, Division of Water Quality

**FROM:** Amy Dickey  
Watershed Protection Section

**DATE:** August 26, 2020

**SUBJECT:** Total Maximum Daily Load (TMDL) for Fremont River: Request to initiate rulemaking to adopt TMDL by reference into R317-1-7

The Division of Water Quality (DWQ) has completed a TMDL study to address water quality impairments in the Fremont River located in the south-central Utah. Since the cost of implementation is below \$10 million, Legislature involvement is not warranted for approval.

#### *Finalization Timeline*

August 26, 2020	Water Quality Board preliminary approval of TMDL/Petition to initiate rulemaking
Sept 15 - Oct 15, 2020	30-day Division of Administrative Rules Public Notice
October 28, 2020	Petition Water Quality Board for formal adoption of TMDL into R317-1-7
October 29, 2020	Submit TMDL to EPA for approval

#### *Fremont River TMDL Summary*

The Fremont River was listed as impaired on the 303(d) list in 2014 for failing to meet the 2A-frequent primary contact criterion for *E. coli*. This watershed was a high priority for *E. coli* TMDL development by DWQ due to the large number of people recreating in and near the river in Capitol Reef National Park.

Water quality concerns in the Fremont River were first identified through routine monitoring in 2010. Since then, hundreds of *E. coli* samples were collected at multiple sampling sites in the watershed on a monthly basis throughout the recreation season of May through October, as well as during non-recreation season months, to understand the spatial and temporal extent of the problem.

Primary sources of bacteria loading to the river include livestock, wildlife and potentially failing septic systems. Implementation plan recommendations include grazing and irrigation water management, feedlot improvements or relocation, and onsite wastewater system inspections and maintenance. An information and education component is also included. With proper management and implementation of the best management practices identified in the TMDL, DWQ believes water quality standards will be met and maintained.

### *Sources*

There are no permitted point sources in this watershed so potential sources of bacteria loading are non-point in nature. Exceedances of the water quality standard are primarily driven by livestock grazing with direct access to the river, runoff from Animal Feeding Operations in close proximity to the river, and return flows from actively grazed pastures (74% bacterial contribution by source). Wildlife are plentiful throughout the watershed and contribute to the impairment (25%). Humans may also be a contributor of bacteria into the river as a result of improperly maintained onsite wastewater systems throughout the watershed (1%).

### *Technical Approach*

TMDL results were calculated using daily flow measurements and daily geometric means of *E. coli* concentrations. For each target site, the loading capacities and observed loadings of all recreation-season months were calculated. Then loading capacities and observed loadings of all recreation-season months requiring a reduction were averaged to calculate the final percent reduction necessary. The geometric mean standard of 126 MPN/100mL was used for determination of the loading capacity.

### *TMDL Recommendations*

The TMDL target is to meet the following water quality assessment scenarios:

1. For recreation seasons (May 1st through October 30th) with >5 collection events, no more than 10% of samples shall exceed 409 MPN/100 mL.
2. For recreation seasons with  $\geq 5$  collection events, no 30-day interval geometric means shall exceed 126 MPN/100 mL.
3. For recreation seasons with  $\geq 10$  collection events, the geometric mean of all samples shall not exceed 126 MPN/100 mL.

For the TMDL endpoints to be met, the following *E. coli* load reductions are necessary:

- Fremont River-2: UT14070003-005, Fremont River and tributaries from Bicknell to Mill Meadow Reservoir near USFS boundary. 88% load reduction.

- Fremont River-3: UT14070003-008, Fremont River and tributaries from east boundary of Capitol Reef National Park to Bicknell. 72% load reduction.

#### *Implementation Strategy and Estimated Costs*

Several Best Management Practices have already been implemented in the Fremont River watershed in response to the 2002 Fremont River total phosphorus and dissolved oxygen TMDL. Those practices included relocation or improvement of 17 animal feeding operations that were in close proximity to the river, as well as stabilization of over 2.5 miles of streambank.

Potential practices to be considered in the watershed to address the *E. coli* exceedances include continued animal feeding operations maintenance or relocation, riparian fencing, improvement of riparian vegetated buffers, an assessment of onsite wastewater systems in the watershed, and irrigation system improvements to decrease return flows. An education and outreach component is included to encourage proper waste management for pets, humans and livestock and to inform the public of the importance of good water quality and the risks associated with recreating in waters where *E. coli* standards are not being met.

The implementation strategy associated with the TMDL is voluntary and includes the general recommendations mentioned above. DWQ staff will continue to coordinate with the Fremont River Conservation District and other partners to identify specific project locations on a case by case basis. The anticipated total cost of implementation is expected to be well below the \$10 million threshold that requires legislative approval.

#### *Public Involvement*

Stakeholder participation for this TMDL process included meetings and site visits with state and federal agency representatives and private landowners.

August 2018:	Public meeting to discuss the impairment
September 2018:	Introduction to the Water Quality Board
April 27, 2020:	Draft TMDL Report Stakeholder Meeting
April 27-June 1, 2020:	Stakeholder Review of Draft TMDL
August 26, 2020:	Water Quality Board to initiate rulemaking

#### *Stakeholder Comments on draft TMDL*

DWQ received informal comments that were editorial in nature from the Environmental Protection Agency, Utah Department of Agriculture and Food, Capitol Reef National Park and the Fremont River Conservation District. Those recommended changes were incorporated into the document.

The Wayne County Commissioners submitted a letter to the Governor's office on June 1<sup>st</sup> stating their concerns about the TMDL, specifically that the TMDL targets agriculture more than other sources and has the potential to negatively impact the livelihoods of producers in the watershed. The Implementation Plan of the TMDL suggests improvements that may be made on a strictly voluntary basis, with local interest and leadership driving the process. The Fremont River *E. coli*

TMDL is entirely nonpoint source based. Therefore, none of the recommendations within it are mandated. DWQ provides opportunities for cost share incentives for those interested in implementing best management practices but all are on a voluntary basis. DWQ submitted a response to their letter. Both are included here for Water Quality Board review.

#### *Active Participants*

Utah Division of Water Quality  
Utah Department of Agriculture and Food  
Fremont River Conservation District  
Capitol Reef National Park  
Utah State University Extension  
Central Utah Health Department  
Natural Resources Conservation Service  
Private landowners

#### *Public Involvement*

The draft TMDL is posted online for review at [https://deq.utah.gov/water-quality/watershed-monitoring-program/watershed-management-program#Public\\_Comment](https://deq.utah.gov/water-quality/watershed-monitoring-program/watershed-management-program#Public_Comment).

#### *Proposed language change to R317-1-7*

### **R317. Environmental Quality, Water Quality.**

#### **R317-1. Definitions and General Requirements.**

##### **R317-1-7. TMDLs.**

The following TMDLs are approved by the Board and hereby incorporated by reference into these rules:

- 7.1 Middle Bear River -- February 23, 2010
- 7.2 Chalk Creek -- December 23, 1997
- 7.3 Otter Creek -- December 23, 1997
- 7.4 Little Bear River -- May 23, 2000
- 7.5 Mantua Reservoir -- May 23, 2000
- 7.6 East Canyon Creek -- September 14, 2010
- 7.7 East Canyon Reservoir -- September 14, 2010
- 7.8 Kents Lake -- September 1, 2000
- 7.9 LaBaron Reservoir -- September 1, 2000
- 7.10 Minersville Reservoir -- September 1, 2000
- 7.11 Puffer Lake -- September 1, 2000
- 7.12 Scofield Reservoir -- September 1, 2000
- 7.13 Onion Creek (near Moab) -- July 25, 2002
- 7.14 Cottonwood Wash -- September 9, 2002
- 7.15 Deer Creek Reservoir -- September 9, 2002
- 7.16 Hyrum Reservoir -- September 9, 2002
- 7.17 Little Cottonwood Creek -- September 9, 2002

- 7.18 Lower Bear River -- September 9, 2002
- 7.19 Malad River -- September 9, 2002
- 7.20 Mill Creek (near Moab) -- September 9, 2002
- 7.21 Spring Creek -- September 9, 2002
- 7.22 Forsyth Reservoir -- September 27, 2002
- 7.23 Johnson Valley Reservoir -- September 27, 2002
- 7.24 Lower Fremont River -- September 27, 2002
- 7.25 Mill Meadow Reservoir -- September 27, 2002
- 7.26 UM Creek -- September 27, 2002
- 7.27 Upper Fremont River -- September 27, 2002
- 7.28 Deep Creek -- October 9, 2002
- 7.29 Uinta River -- October 9, 2002
- 7.30 Pineview Reservoir -- December 9, 2002
- 7.31 Browne Lake -- February 19, 2003
- 7.32 San Pitch River -- November 18, 2003
- 7.33 Newton Creek -- June 24, 2004
- 7.34 Panguitch Lake -- June 24, 2004
- 7.35 West Colorado -- August 4, 2004
- 7.36 Silver Creek -- August 4, 2004
- 7.37 Upper Sevier River -- August 4, 2004
- 7.38 Lower and Middle Sevier River -- August 17, 2004
- 7.39 Lower Colorado River -- September 20, 2004
- 7.40 Upper Bear River -- August 4, 2006
- 7.41 Echo Creek -- August 4, 2006
- 7.42 Soldier Creek -- August 4, 2006
- 7.43 East Fork Sevier River -- August 4, 2006
- 7.44 Koosharem Reservoir -- August 4, 2006
- 7.45 Lower Box Creek Reservoir -- August 4, 2006
- 7.46 Otter Creek Reservoir -- August 4, 2006
- 7.47 Thistle Creek -- July 9, 2007
- 7.48 Strawberry Reservoir -- July 9, 2007
- 7.49 Matt Warner Reservoir -- July 9, 2007
- 7.50 Calder Reservoir -- July 9, 2007
- 7.51 Lower Duchesne River -- July 9, 2007
- 7.52 Lake Fork River -- July 9, 2007
- 7.53 Brough Reservoir -- August 22, 2008
- 7.54 Steinaker Reservoir -- August 22, 2008
- 7.55 Red Fleet Reservoir -- August 22, 2008
- 7.56 Newcastle Reservoir -- August 22, 2008
- 7.57 Cutler Reservoir -- February 23, 2010
- 7.58 Pariette Draw -- September 28, 2010
- 7.59 Emigration Creek -- September 1, 2011
- 7.60 Jordan River -- June 27, 2012
- 7.61 Colorado River -- December 5, 2013



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7.62 Echo Reservoir -- March 26, 2014

7.63 Rockport Reservoir -- March 26, 2014

7.64 Nine Mile Creek -- October 27, 2016

7.65 North Fork Virgin River -- May 23, 2018

7.66 Fremont River -- October 28, 2020

**KEY: TMDL, water pollution**

**Date of Enactment or Last Substantive Amendment: [July 1, 2019]2020**

**Notice of Continuation: August 30, 2017**

**Authorizing, and Implemented or Interpreted Law: 19-5**

*Wayne County Commissioners' Letter addressed to Governor Herbert*

<b>Wayne County</b> <b>18 South Main</b> <b>Loa, Utah 84747</b> Phone 435-836-2765 Fax 435-836-2479	<b>COMMISSIONERS</b> Stanley W. Wood Chair Dennis G. Blackburn Roger S. Brian	<b>Recorder/Treasurer</b> Assessor Attorney Clerk/Auditor Sheriff	<b>Colleen Allen</b> Sharon E. Torgerson Michael D. Olsen Ryan Torgerson Daniel N. Jensen
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Honorable Gary R. Herbert  
Utah State Capitol Complex  
350 North State Street, Suite 200  
PO Box 142220  
Salt Lake City, UT 84114-2220

June 1, 2020

**RE: Final Draft Report, Total Maximum Daily Load for Escherichia coli (E. coli) in the Fremont River Watershed**

The subject report issued by the Utah Division of Water Quality should be suspended until issues and data insufficiencies used to support it can be corrected. If implemented, this document will affect livelihoods and property and should not be dependent on inadequate water sampling data and poor unsubstantiated assumptions.

**Class 2A Should be Changed back to Class 2B**

The efforts to address levels of E. coli in the Fremont River have been unjustifiably focused on livestock and grazing without any definitive evidence that it is the real problem. This whole fraudulent scheme began in 2010 when Capitol Reef National Park (Park) sent pictures of people enjoying themselves at the waterfall on the Fremont River within the Park. As a result of these pictures and information sent with them to the Division of Water Quality (DWQ) the Fremont River and tributaries, through Capitol Reef National Park to headwaters were changed from Class 2B (infrequent primary and secondary contact recreation) to Class 2A (frequent primary and secondary contact recreation) based on information and pictures provided by the U.S. Park Service. Frequent primary recreation has more stringent numeric standards than infrequent primary recreation. Shortly after this, the Park permanently closed the waterfall and do not allow any human recreational use of it. So, this use no longer exists to justify the Class 2A recreation status. The upper part of the river above the Park, is cold, intermittent, shallow, and thus does not and never was used frequently for activities such as swimming, and boating, other than on the reservoirs for fishing. The more frequent recreational activities in the upper river section is limited to fishing and hunting in places that are conducive to these activities. This has never changed and so the Classification should never have been changed.

**Sampling Needs to Define the Sources**

Sampling to justify a 303(d) listing of impairment for E. coli began in 2008 by special interest groups. The primary contributor being the Northern Colorado Plateau Network, a Park Service affiliated group consisting of ecologists/environmentalists. Any information collected and reports written by them is likely very biased and should not be used by a State agency (DWQ) to make policy that affects our County's residents' livelihoods and property.

The IDEXX Colilert Quanti-Tray 2000 and IDEXX Colilert 18 method of analysis used, only results in an estimate "Most Probable Number (MPN) per 100 mL". This number varies with dilution or concentration of water, but the total number of bacteria may not change. This method gives no information as to the origin of the E. coli, be it

from humans, livestock, or wildlife.

The Utah State University Extension took and analyzed samples monthly for a year from April 2017 through March 2018 at ten sites along the Fremont River from near Loa down through the Park to Hickman Bridge. The upper part of the river where two sampling sites are located (Big Rocks & Spring Creek) is intermittent and is diverted for irrigation during the summer months. During these summer months these sites showed high (>409 MPN/100mL) due to lack of dilution by water flow. With only two exceptions all above State standards sample results were located within the Park during June and July. One exception outside the Park was located at the highway 12 river crossing just south east of Torrey. The other exception was only 435 MPN/100mL and at the bridge south east of Bicknell.

**Impairment Seems to be more Related to Human Activity**

Capitol Reef National Park receives over one million visitors per year. Torrey's motels house and feed many of those visitors. The motels in and near Torrey use millions of gallons of water per month in the summer and have septic systems. Much of the Torrey area is underlain by a sandstone bench covered with a thin veneer of unconsolidated material with a high water table. Not the best situation for septic systems. There are also many houses with septic systems located on both sides of the river near Torrey. The one high reading in July 2017 was at the highway 12 crossing just south and east of Torrey. There is no free open flow of the Fremont River from Mill Meadow Reservoir to the Bicknell bridge. It is intermittent at best to just north of the Bicknell Bottoms then in the Bottoms it has been dammed by flooding and must flow through a slough then open flows again prior to reaching the Bicknell bridge. Because of this it is difficult to see how E. coli would travel from the upper reaches of the watershed to the Park.

**Assumptions are Flawed**

The assumption or assessment that 74% of bacterial contribution is from livestock and 1% from humans is not substantiated. There has been no testing that verifies where any of the fecal coliform is coming from. There is no direct pathway for fecal coliform in the upper portion of the watershed to get to the river below the Bicknell Bottoms. The upper portion of the river is diverted for irrigation and essentially dried up during the summer months and is intermittent the rest of the year. The higher sample results are predominately from areas of high human activity and recreation such as in the Park and near the town of Torrey. In recent years with a huge increase in Park visitation, overflow camping on public lands east of Torrey has been a big problem including the lack of sanitation associated with it. The higher results from the upper area near Loa are irrelevant to this effort because they are caused by diversion of water for irrigation and there are no recreation activities associated with the river in this area.

**Summary**

In summary the Wayne County Commission is kindly requesting your help to delay implementation of this flawed report, which has an overwhelming anti-grazing and ranching theme. We strongly support maintaining clean water and environmental health in our County. However, we are not in favor of picking winners and losers by blaming one industry overwhelmingly for environmental harm over others without definite proof. Please contact us with any questions or concerns or for clarification. We thank you in advance for any help and assistance you can give us with this issue.

Sincerely,

Wayne County Commission



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Water Quality Board

Request to Initiate Rule Make for R317-1-7

CC: Scott Baird, Utah DEQ

Erica Gaddis, Division of Water Quality

Jodi Gardberg, Division of Water Quality

Amy Dickey, Division of Water Quality

Kathleen Clarke, PLPCO

Redge Johnson, PLPCO

Wayne Urie, NRCS

Kerry Cook, Soil Conservation District

Tracy Balch, Soil Conservation District

*DWQ Response Letter*



State of Utah  
GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

Department of  
Environmental Quality

L. Scott Baird  
Executive Director

DIVISION OF WATER QUALITY  
Erica Brown Gaddis, PhD  
Director

June 5, 2020

Honorable Gary R. Herbert  
Utah State Capitol Complex  
350 North State Street, Suite 200  
PO Box 142220  
Salt Lake City, UT 84114-2220

**Subject: DWQ response to the Wayne County Commission letter addressed to the Governor's Office titled "Final Draft Report, Total Maximum Daily Load for *Escherichia coli* (*E. coli*) in the Fremont River Watershed"**

The Division of Water Quality (DWQ) would like to address the comments and concerns raised by the Wayne County Commission in a letter submitted to your office on June 1, 2020 regarding the Total Maximum Daily Load Study (TMDL) for *Escherichia coli* (*E. coli*) in the Fremont River Watershed.

In 2014, the Fremont River was placed on the Clean Water Act 303 (d) list of impaired waters for not meeting primary recreational uses due to exceedances of the *E. coli* water quality standard. The presence of *E. coli* bacteria is primarily attributed to fecal matter and its presence in water is an indication of recent contamination that can pose a potential threat to human health through incidental ingestion. In 2018, DWQ initiated development of the Fremont River *E. coli* TMDL to address the impairment. A TMDL analysis determines the maximum amount of an identified pollutant (i.e., the load) that a waterbody can receive and still support its beneficial uses and meet state water quality standards. Once the pollutant loads and sources have been identified, controls are implemented to reduce those loads until the waterbody meets water quality standards. For point source load reductions, DWQ issues Utah Pollution Discharge Elimination System Permits to protect Waters of the State. Nonpoint source load reductions from agriculture are not regulated. *The Implementation Plan of the TMDL suggests improvements that may be made on a strictly voluntary basis, with local interest and leadership driving the process. The Fremont River E. coli TMDL is entirely nonpoint source based. Therefore, none of the recommendations within it are mandated. DWQ provides opportunities for cost share incentives for those interested in implementing best management practices but all are on a voluntary basis.*

DWQ's response to the specific concerns and comments raised in the Wayne County Commission letter are provided below.

**Use class change from 2B to 2A**

Waters of the State are assigned beneficial uses and associated numeric criteria to ensure protection of those uses. A Class 2A use is defined in UAC R317-2-6 as protected for frequent primary contact

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recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Class 2B waters are defined as protected for infrequent primary contact recreation, as well as secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Frequent primary contact recreation has more stringent numeric standards for *E. coli* than infrequent primary contact recreation.

In 2012, the Fremont River and tributaries, through Capitol Reef National Park to headwaters, were changed from a Class 2B use (infrequent primary and secondary contact recreation) to a Class 2A use (frequent primary and secondary contact recreation). The change was not initiated by DWQ. At the request of the federal landowners, the recreational use was changed in 2012. This request was vetted by the Water Quality Standards Workgroup that includes representatives from agriculture. During the enhanced public participation process unique for water quality standards, no opposing comments were submitted. The Class 2A use reflects how Utahns and visitors use the Fremont River to recreate on hot summer days. The change has little practical effect because federal regulations require that the river's water quality be safe for full immersion regardless of designated use (40 C.F.R. § 131.3(e)).

A change back to the Class 2B use is inappropriate because recreational use of the Fremont River within Capitol Reef National Park is occurring even though the popular waterfall area is now closed. Visitors are regularly observed swimming and wading in the river adjacent to the campground at a location where *E. coli* exceedances were measured. In addition, 3 of 10 monitoring locations would still not meet the Class 2B *E. coli* water quality standard.

#### **Better Define Sources**

All of the monitoring for the TMDL was done with the EPA accepted and recommended Idexx Colilert method to sample and quantify *E. coli* in ambient waters. All Standard Operating Procedures were followed, the monitoring staff was trained and demonstrated capability and proficiency of monitoring. Quality assurance and quality control procedures are in place to ensure accurate results.

The 303(d) listing of the Fremont River was based on data collected by the Northern Colorado Plateau Network, one of 32 National Park Service inventory and monitoring networks nationwide. Additional data were collected by a volunteer as part of the Utah Water Watch Program from January 2016 to January 2017. DWQ has a cooperative monitoring program in place with several different state and federal agencies to assist with monitoring Utah's waters. As mandated in 40 CFR 130.7(b)(5), DWQ assembles and evaluates all existing and readily available data in determining whether a waterbody is supporting or not supporting the assigned beneficial uses and numeric criteria in UAC R317-2. Existing and readily available data can include data collected by cooperators.

In 2017, the Wayne County Commission and local producers expressed concern with the monitoring that was conducted by the National Park Service affiliated group and the Utah Water Watch volunteer. In response and in conjunction with local input, DWQ trained and provided equipment for a Utah State University extension agent to sample after March 2017. Subsequent monitoring results from April 2017 to March 2018 continued to show *E. coli* exceedances at several sites in the watershed.

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### Hydrology

In an effort to better understand the complex and highly altered hydrology of the Fremont watershed and accurately describe it in the TMDL, DWQ staff participated in a watershed tour with Fremont Conservation District staff and others on July 27<sup>th</sup>, 2016. As stated in the Commissioners' letter, much of the water in the upper Fremont watershed is diverted and flow is at times intermittent. The water flowing from the upper watershed may have little impact on the water quality of the lower watershed depending on the time of year. As the TMDL notes in the Hydrology section, minimal pathogen loading is possible from the upper watershed above Mill Meadow Reservoir due to diversion of water. It also states that the river channel in areas below the reservoir contains minimal flow and that at certain times can be dry. The monitoring location established between the upper and lower watershed areas does not show impairment, indicating that the upper Fremont-2 Assessment Unit has a minimal impact on the water quality of the adjacent downstream Fremont River-3 Assessment Unit.

### Impairment seems more related to human activity than livestock

The TMDL estimate of 74% of bacteria loading in the Fremont River watershed originating from livestock is based upon scientifically accepted methods for estimating bacterial loading. State (SITLA) and federal (BLM and USFS) agency grazing program managers provided the livestock estimates for allotments in the TMDL area. Estimates from the Utah Agriculture 2017 Census for Wayne County were used for the number of animals grazing private land.

The human contribution portion was estimated in the only feasible way possible based on the data available. The Torrey area has seen a rapid increase in visitation and hotel development and as a result, several large onsite wastewater systems have been installed. These systems are all included in the TMDL and are required to have an operating permit with the State that is renewed every five years. One condition of the operating permit is an annual inspection performed by an onsite professional and submitted to DWQ. To date there have been no reported system inadequacies. The Central Utah Health Department provided the number of permitted individual septic systems in the watershed. Onsite wastewater systems are primarily designed to remove pathogens, including *E. coli*, from the water. Failing systems should be immediately reported to the local health department.

Capitol Reef National Park has a large onsite wastewater treatment system to manage the ever-increasing number of visitors. That system is subject to an annual inspection by the National Park Service regional public health officer as part of a survey of water and wastewater safety requirements. The system is inspected every 3 years by the Utah State Engineer's Office as part of a sanitary survey of National Park Service water and wastewater systems. Although the system isn't currently failing, maintenance and upgrades are planned for this summer, 2020.

Dispersed camping on public lands adjacent to the park is increasing and improper human waste management can occur. DWQ recognizes this issue but cannot accurately quantify or estimate this source in the TMDL. DWQ is willing to refine the estimates included in the TMDL if additional data or methods are made available for consideration. All TMDLs include estimates and assumptions that are clearly stated in the document, as they are in the draft Fremont River TMDL.

In more recent years, many pathogen TMDLs include a microbial source tracking (MST) component to determine through genetic analysis the relative sources of bacteria in the river. MST techniques can help

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determine if the source of bacteria is from human, wildlife, or domestic animals sources. Microbial source tracking monitoring was conducted in the Fremont River watershed but because of Quality Assurance Quality Control issues, the results were unreliable and not included in the TMDL. Since then, the techniques for collection and analysis have improved. In the future, DWQ could conduct MST sampling and revise the TMDL if warranted.

#### **Outreach efforts**

Outreach efforts are a critical component of TMDL development. Local understanding of water quality issues and support for water quality protection and improvement are essential and DWQ staff work hard to ensure that happens. For the Fremont River *E.coli* TMDL, DWQ began the process of stakeholder outreach by conducting a facilitated stakeholder meeting on August 29, 2018. Water quality assessments and the TMDL process were discussed, as well as the specifics of the Fremont River *E. coli* impairment, monitoring plan and timeline for the study. Participants included the Wayne County Commissioners, Utah Dept. of Agriculture and Food, Fremont River Conservation District, Capitol Reef National Park, Utah State University Extension, Bureau of Land Management, US Forest Service, Central Utah Health Department and private landowners.

Several site visits, monitoring runs, and a watershed tour were conducted between 2017 and 2020 to help inform the study. Some of these activities were conducted with agency staff and others with local landowners. A newspaper [article](#) discussing the kickoff meeting and TMDL process was posted in The Insider newspaper on September 6, 2018. This publication serves Wayne and Garfield counties.

Utah Conservation Districts are the local voice for conservation. The Fremont River Conservation District is one of 38 in the state tasked with using a voluntary, incentive-based approach to protect water and other natural resources. DWQ staff attended nine Fremont River Conservation District meetings between the TMDL kickoff meeting in 2018 and the presentation of the draft TMDL document to stakeholders on April 27, 2020. TMDL progress was reported at each of those meetings.

Due to the coronavirus pandemic, the meeting to present the draft TMDL to stakeholders was conducted virtually. Subsequent to the meeting, the draft TMDL document was sent to all stakeholders, including the county commissioners, along with a recording of the meeting for those not able to attend. DWQ requested comments be submitted within 2 weeks of that meeting. Comments submitted by the Utah Department of Agriculture and Food, National Resource Conservation Service and Capitol Reef National Park were editorial in nature, and did not call for any substantive changes to the document.

DWQ has continued to have recent active dialogue with local stakeholders about the draft TMDL through phone conversations with Commissioner Blackburn and the Fremont Conservation District Chairman. DWQ staff are planning to travel to Loa next Wednesday, June 10<sup>th</sup> to participate in a discussion with the County Commissioners, Conservation District and other stakeholders. The meeting was scheduled prior to the letter being sent to the Governor's office.

#### **Economic impact**

As part of the TMDL adoption process, state rulemaking requirements include an economic analysis. DWQ always considers the economic impacts of our recommendations prior to requesting Water Quality Board approval. These potential impacts were explored as part of the Fremont River TMDL process. The

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preliminary analysis of the economic impacts shows no direct or indirect costs to agricultural interests. This is largely because the recommendations in the TMDL are voluntary and multiple state and federal incentive programs are available to assist with implementation costs. If DWQ has failed to account for impacts, we welcome data to ensure that all impacts are considered.

If you have additional questions about the Fremont River *E. coli* TMDL, please contact Amy Dickey by phone at (801) 536-4301 or email at [adickey@utah.gov](mailto:adickey@utah.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Erica B. Gaddis".

Erica Brown Gaddis, PhD  
Director

EGB/blj

DWQ-2020-012770

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## State of Utah

GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

## Department of Environmental Quality

L. Scott Baird  
*Executive Director*

DIVISION OF WATER QUALITY  
Erica Brown Gaddis, PhD  
*Director*

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Dr. James VanDerslice  
Dr. Erica Brown Gaddis  
*Executive Secretary*

### MEMORANDUM

**TO:** Water Quality Board Members

**THROUGH:** Erica Brown Gaddis, Director

**FROM:** Jim Bowcutt, Nonpoint Source Program Coordinator

**DATE:** August 26, 2020

**SUBJECT:** State Nonpoint Source Program Annual Report for Fiscal Year 2020

The Division of Water Quality (DWQ) receives grant funds to help implement nonpoint source pollution control projects throughout the state. These grants include Section 319(h) funds from the Environmental Protection Agency and State Nonpoint Source funds authorized by the Water Quality Board. Every year an annual report is submitted to the Environmental Protection Agency (EPA) on the accomplishments of the State's Nonpoint Source Program. Jim Bowcutt, the Nonpoint Source Program Coordinator, will present a summary of this report to the Water Quality Board during the meeting scheduled for August 26, 2020.

#### Summary of FY-2020 Grant Accomplishments

- 7 Local watershed coordinators funded throughout the state
- 2 Animal feeding operations addressed
- 8 Information and Education projects funded
- 9.07 miles of stream bank restored
- 105.5 acres of riparian improvement
- Initiated the Heber Valley watershed plan
- 4 storm water projects funded

In FY-20, DWQ oversaw six federal grant awards, which have been expended to a varied degree. Table 1 summarizes grant awards by year and the approximate percentage that has already been expended in each grant.

DWQ-2020-016362

**Table 1**

<b>Section 319(h) Nonpoint Source Funding Project Allocations</b>			
<b>Federal Fiscal Year</b>	<b>Grant Award</b>	<b>Total Expenditures</b>	<b>Percent Expended</b>
<b>FY-15</b>	\$879,703	\$879,703	<b>100%</b>
<b>FY-16</b>	\$987,458	\$987,458	<b>100%</b>
<b>FY-17</b>	\$1,004,260	\$896,319	<b>89%</b>
<b>FY-18</b>	\$970,494	\$552,487	<b>57%</b>
<b>FY-19</b>	\$959,059	\$446,488	<b>47%</b>
<b>FY-20</b>	\$1,035,799	\$0	<b>0%</b>
<b>Total</b>	<b>\$5,836,773</b>	<b>\$3,762,455</b>	<b>65%</b>

**FY-2021 Projects Funded**

The targeted basin approach continues to be implemented (See Table 2). In the spring of 2020 the Colorado River Watershed was the targeted basin; projects in this basin were prioritized for funding with the FY-2021 grants. Table 3 shows the nonpoint source grants that were selected for funding. Fifty-seven FY-2021 Grant Applications were received totaling \$4,520,111. Of these proposals 33 were fully or partially funded using a combination of State Nonpoint Source Grants.

**Table 2**

<b>Basin Priority Funding Schedule</b>						
<b>Watershed</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>(1) Jordan/ Utah lake</b>						
<b>(2) Colorado River</b>						
<b>(3) Sevier, Cedar-Beaver</b>						
<b>(4) Bear River</b>						
<b>(5) Weber River</b>						
<b>(6) Uinta Basin</b>						

**Other Notable NPS Accomplishments**

- The Agricultural Voluntary Incentive Program (VIP) was launched.
- A success story was submitted to EPA for the Spring Creek Watershed, which has shown a significant decrease in pollutants as a result of restoration work and point source improvements.

- The DWQ website has been improved with a map showing many of the restoration projects that have taken place around the state.
- Two information and education projects were launched focusing on small farm management and human waste.

**Table 3. FY-2021 Grant Awards**

<b>Projects Funded with State Nonpoint Source Grants</b>					
<u>Project Title</u>	<u>Watershed</u>	<u>Sponsor</u>	<u>Project Type</u>	<u>Amount Requested</u>	<u>Amount Awarded</u>
South East Watershed Coordinator	SE Colorado	South East Health Department	Technical Assistance	\$38,500	\$38,500
Voluntary Agricultural Incentive Program	Statewide	Utah Division of Water Quality	Nutrient Management	\$150,000	\$150,000
Onsite Waste Water Program	Statewide	DEQ/DWQ	Onsite	\$50,000	\$45,894
Upper Sevier NWQI Match	Upper Sevier	Upper Sevier Conservation District	Stream Restoration	\$175,000	\$150,000
BLM Mill Creek Restoration	SE Colorado	Grand Conservation District	watershed Restoration	\$33,075	\$33,075
Rose and Yellow Fork Creeks	Jordan River	Utah Division of Wildlife Resources	Stream Restoration	\$7,300	\$7,300
Bench Riparian Project Phase 2	San Pitch	San Pete Conservation District	Stream Restoration	\$5,500	\$5,500
West Mountain Water Project	San Pitch	San Pete Conservation District	Irrigation	\$18,000	\$18,000
Wallsburg Restoration	Provo River	Wasatch Conservation District	Stream Restoration	\$60,000	\$60,000
Otter Creek Riparian and Water Quality Restoration Project Phase 1a	Upper Sevier	Utah State University	Stream Restoration	\$47,240	\$20,000
Wastewater Digital Database Development Phase II	SE Colorado	South East Health Department	Onsite	\$19,000	\$19,000
MST Monitoring	Jordan River	Salt Lake County	Monitoring	\$13,208	\$13,208

Project Repairs	San Pitch	San Pete Conservation District	Stream Restoration	\$36,000	\$36,000
Small Farm Water Quality Improvement Project	Statewide	Utah State University	Small Farm	\$150,000	\$75,000
Montezuma Creek Project Effectiveness Monitoring	SE Colorado	UGS	Monitoring	\$39,598	\$15,000
Duchesne River Restoration	Uinta Basin	Trout Unlimited	Stream Restoration	\$20,608	\$20,608
Chalk Creek Monitoring	Weber River	Summit Soil Conservation District	Technical Assistance	\$15,000	\$15,000
Upper Provo River Restoration	Provo River	Summit Conservation District	Stream Restoration	\$6,400	\$6,400
Southeast Utah Human Waste Initiative	SE Colorado	South East Health Department	I&E	\$200,000	\$75,000
Pot Creek Watershed Plan	Uinta Basin	Uintah Conservation District	Watershed Planning	\$40,000	\$40,000
Beaver River Restoration Project	Beaver River	Trout Unlimited	Stream Restoration	\$22,645	\$22,645
Richins Easement	Weber River	Summit Land Conservancy	Easement	\$15,000	\$15,000
Lower Jordan River Basin Watershed Restoration	Jordan River	Salt Lake County	Stream Restoration	\$30,000	\$30,000
AWWA Water Week	Statewide	Intermountain Section AWWA	I&E	\$5,000	\$5,000
Pelican Lake	Uinta Basin	DWR	Stream Restoration	\$40,000	\$40,000
Kent Baker Riparian Project	Bear River	Black Smith Fork CD	Stream Restoration	\$5,500	\$5,500
Producer Website	Statewide	Utah State University	I&E	\$10,000	\$10,000
Russon Irrigation/Soil Health	Bear River	Private Landowner	Soil Health/Irrigation	\$28,370	\$28,370
<b>Total</b>				<b>\$1,280,944</b>	<b>\$1,000,000</b>

**Projects Funded with Section 319**

**Funding**

<u>Project Title</u>	<u>Watershed</u>	<u>Sponsor</u>	<u>Project Type</u>	<u>Amount Requested</u>	<u>Amount Awarded</u>
Local Watershed Coordinators	Statewide	Utah Division of Water Quality	Technical Assistance	\$450,000	\$450,000
Utah Water Watch	Statewide	Utah State University	I&E	\$71,720	\$71,720
Mud Creek Restoration	Colorado	Trout Unlimited	River Restoration	\$500,000	\$400,000
Pack Creek Restoration	SE Colorado	Rim to Rim Restoration	Stream Restoration	\$129,500	\$102,576
Grand County Dog Waste	SE Colorado	BLM	Dog Waste	\$11,487	\$11,503
			<b>Total</b>	<b>\$1,162,707</b>	<b>\$1,035,799</b>



State of Utah

GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

Department of  
Environmental Quality

L. Scott Baird  
*Executive Director*

DIVISION OF WATER QUALITY  
Erica Brown Gaddis, PhD  
*Director*

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L. Scott Baird  
Emily Niehaus  
James Webb  
Dr. James VanDerslice  
Dr. Erica Brown Gaddis  
*Executive Secretary*

**MEMORANDUM**

**TO:** Utah Water Quality Board

**THROUGH:** Erica Gaddis

**FROM:** Harry Campbell

**DATE:** August 26, 2020

**SUBJECT:** Presentation of the 2019 MWPP Results

The results of the 2019 Municipal Wastewater Planning Program (MWPP) have been compiled and will be presentation at the August 2020 Board Meeting. The MWPP surveys all municipal treatment works and sewerage system utilities to assess the financial, operational, and institutional capacities, limitations and needs of the industry. The survey is voluntary except for sewerage systems and those utilities receiving financial assistance from the Board. In 2019, there 55 more responding to the survey for a total of 168 or about 77 percent.

The survey serves to inform both the Board and the industry on the state of the industry in Utah. The survey also informs the division about capital projects that are in the pipeline and the financial capacity and needs of the industry over the next 5 years and 20 years.

There were significant efforts in the past year to improve the quality of the survey for 2019. Questions were added and revised, particularly in the area of asset management, to enrich the information gathered. Staff has also been working on the delivery system to simplify reporting and facilitate broader engagement by the industry. It is our hope that producing rich consistent data year by year for comparison will allows us to better track changes and improvements in the overall management of the wastewater industry.

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