



State of Utah

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Department of Environmental Quality

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DIVISION OF WATER QUALITY
John K. Mackey, P.E.
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**Utah Water Quality Board Meeting
Bonneville Conference Room
MASOB & Via [Zoom](#)
195 North 1950 West
Salt Lake City, Ut 84116**

**May 28, 2025
Board Meeting Begins at 8:30 AM**

AGENDA

Water Quality Board Meeting – Call to Order & Roll Call

James Webb

Minutes:

Approval of Minutes for March 26, 2025 Water Quality Board Meeting

James Webb

Executive Secretary Report

John Mackey

Training on Board Functions & Duties:

Haley Sousa & Liz Harris

Wastewater Certification Program:

1. Presentation of awards for retiring Wastewater Operator Certification Council Members
2. Presentation of the Utah Wastewater Operator Certification Program 2024 Annual Report

Tessa Scheuer

Tessa Scheuer & Johnathan Gubler

Compliance & Enforcement:

1. Request Approval of Administrative Settlement Docket No. I21-16 for Citation Oil & Gas Corp.

Samantha Heusser

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

195 North 1950 West • Salt Lake City, UT
Mailing Address: PO Box 144870 • Salt Lake City, UT 84114-4870
Telephone (801) 536-4300 • Fax (801) 536-4301 • TDD (801) 536-4284
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Rule Making:

1. Request to adopt the new Rule: R317-17. Great Salt Lake Mineral Extraction Salinity Discharge Limits **James Harris**
2. Request to initiate Rulemaking: to adopt Total Maximum Daily Load (TMDL) by reference into R317-17 Castel, Mill & Pack Creek (*E. coli* TMDLs) **Samuel Taylor & Sandy Wingert**

Other:

1. State Nonpoint Source Program Annual Report for Fiscal Year 2025 & Fiscal Year 2026 Project Selection **Paul Burnett**

Public Comment Period

Meeting Adjournment

James Webb

Next Meeting
April 23, 2025 at 8:30 am
MASOB & Via [Zoom](#)
195 North 1950 West
Salt Lake City, Ut 84116



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MINUTES

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY UTAH WATER QUALITY BOARD MASOB OR VIA [Zoom](#)

March 26, 2025
8:30 AM

UTAH WATER QUALITY BOARD MEMBERS PRESENT

Jim Webb
Jill Jones
Trevor Heaton
Joe Havasi
Michelle Kaufusi
Michela Harris
Rob Fehr

DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT

John Mackey	Alex Heppner	Jenifer Robinson
Emily Canton	Judy Etherington	Porter Henze
James Harris	Skyler Davies	
Leanna Littler-Woolf	Dan Griffin	
Clanci Hawks	Benj Morris	
Eric Castrejon	Lindsay Cowels	
Haley Sousa	Jeff Studenka	
Ken Hoffman	Jordan Bryant	
Samantha Heusser	Paul Burnett	
Tessa Scheuer	Harry Campbell	
Ben Holcomb	Jake Vanderlaan	
Katie Garth	Danielle Lenz	
John Schwarz	Dave Pierson	

OTHERS PRESENT & ONLINE

Melissa Reynolds Soren Simonson
Rob Dubuc Mike Chandler
Steve Jackson

Mr. Webb, Chair, called the Meeting to order at 8:30 AM.

ROLL CALL

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

APPROVAL OF MINUTES OF February 26, 2025 Meeting

Motion: Jill Jones motioned to approve the meeting minutes.
 Robert Fehr seconded the motion.
 The motion passed unanimously

EXECUTIVE SECRETARY REPORT

Mr. Mackey addressed the Board with the following updates:

- Mr. Mackey introduced two new staff members in the Compliance and Enforcement section. Katie Garth and John Schwartz introduced themselves to the Board.
- Federal Update: With the new Administration, we have changes coming through as we will revisit Waters of the U.S. (WOTUS) This term is used by states to define the waterbodies they regulate.
- The Supreme Court ruled on San Francisco versus EPA. *“This decision upholds the Clean Water Act’s critical role in protecting water quality and simply requires the EPA to fulfill its obligations under the Clean Water Act, as intended by Congress. This ruling makes clear that permitholders like San Francisco are responsible for what they discharge, and the EPA has the tools at its disposal to ensure water quality. But it’s not lawful to punish permitholders for things outside of their control, such as the end-result water quality of a shared body of water, where many other factors affect water quality. This is a good government decision that assures certainty in water quality permitting and that every permittee has predictable, knowable standards to protect water quality.”*
- State Update: Technology Based Effluent Phosphorus Limits come into effect this year. Nearly all mechanical plants are required to meet the one milligram phosphorus effluent limit. There were a couple of variances that extended into the year and there will be a couple larger projects that will come into compliance in 2026.
- Mr. Mackey noted that one of the three performance metrics reported to the legislature is Oxygen Consumption Potential. The metric is an attempt to have a unified understanding of how well wastewater treatment plants are performing. For a detailed explanation of this metric please reference the Zoom recording link [March 26, 2025 Meeting Recording](#).

- Mr. Mackey and the Board discussed that April's board meeting will fall during the Water Environment Association of Utah Annual Conference (WEAU). The Board decided to cancel April's meeting since a large number of Water Quality's staff and Board members attend this conference.
- Mr. Mackey informed the Board that the new Board Member Jeannie Simmons has been approved through the Governor's Office and her Confirmation Hearing is on April 14, 2025 at 1:00 pm. She will be joining us for the May 28, 2025 meeting.

FUNDING:

Financial Status Report: Presented by Emily Canton.

Ash Creek SSD Virgin Design Advance: Mr. Lischeske presented a funding request in the amount of \$230,400 for the design of a regional sewer lift station and force main connecting Virgin to Ash Creek's collection system in La Verkin.

Motion: Mr. Heaton moved to approve the \$230,400 Hardship Grant according to staff recommendations made in the packet including the special conditions.
Ms. Jones seconded the motion.
The motion passed unanimously.

RULE MAKING:

Request to initiate rulemaking: R317-17 Great Salt Lake Mineral

Extraction Salinity Discharge Limits: Mr. Harris & Mr. Holcomb addressed the Board to formally approve the rulemaking.

Motion: Ms. Kaufusi moved to initiate the rulemaking for R317-17.
Ms. Jones seconded the motion.
The motion passed unanimously.

COMPLIANCE & ENFORCEMENT:

Request for Approval of Settlement Docket No. I23-14 for Claude H. Nix Construction Co.: Mr. Castrejon asked the Board to seek approval of the penalty in the amount of \$25,000 for Claude H. Nix Construction.

Motion: Ms. Jones motioned to approve the Administrative Settlement Docket No. I23-14 for Claude H. Nix Construction Co. in the amount of \$25,000.
Ms. Harris seconded the motion.
The motion passed unanimously.

WASTEWATER CERTIFICATION PROGRAM:

Recommendation for Interim Appointment to the Utah Wastewater

Certification Council for April 1, 2025 through January 31, 2027: Ms. Scheuer asked for approval of Kyle Dean, Manager for the Wastewater Collection Division at Granger Hunter Improvement

District, to be appointed to serve the interim term representing Certified Wastewater Collection Operators.

Motion: Ms. Jones motioned to approve the staff recommendation to approve Kyle Dean to serve the interim term on the Wastewater Certification Council.
Ms. Harris seconded the motion.
The motion passed unanimously.

OTHER:

PUBLIC COMMENTS

Soren Simonson, Jordan River Commission: Mr. Simonson gave a huge thank you to the Division of Water Quality staff that has been working to organize a program series with the Utah County Stormwater Coalition. He noted that they just had the second of a three-part series yesterday March 25, 2025 and the next one will be held on Tuesday April 1, 2025. There has been some amazing information that has been shared by DWQ, great insights on data and ideas and best practices around low impact development and stormwater improvements. Mr. Simonson informed the Board there will be a cleanup activity around the Jordan River coming up around Earth Day and everyone is invited to join in.

MEETING ADJOURNMENT

Motion: Ms. Jones motioned to adjourn the meeting.
Ms. Kaufusi seconded the motion.
The motion passed unanimously.

To view the full recording click here [March 26, 2025 Meeting Recording](#)

Next Meeting
May 28, 2025
MASOB & Via Zoom
195 North 1950 West
Salt Lake City, UT 84116

Via [Zoom](#)

James Webb, Chair
Utah Water Quality Board



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MEMORANDUM

TO: Utah Water Quality Board

Through: John K. Mackey, P.E. Director

From: Tess Scheuer, Wastewater Certification Program Coordinator

DATE: May 28, 2025

SUBJECT: Presentation of the Utah Wastewater Operator Certification Program 2024 Annual Report to the Water Quality Board

The Utah Water Quality Board has requested a yearly report of the wastewater operator certification program activities. The Utah Wastewater Operator Certification Program 2024 Annual Report is being presented by Mr. Jonathan Gubler, who currently serves as Chair of the Wastewater Operator Certification Council. The information contained within the attached report is for the 2024 calendar year.

Enclosure: Utah Wastewater Operator Certification Council 2024 Annual Report

DWQ-2025-003856

Utah Wastewater Operator Certification Program 2024 Annual Report

Sunrise from North Davis Sewer District

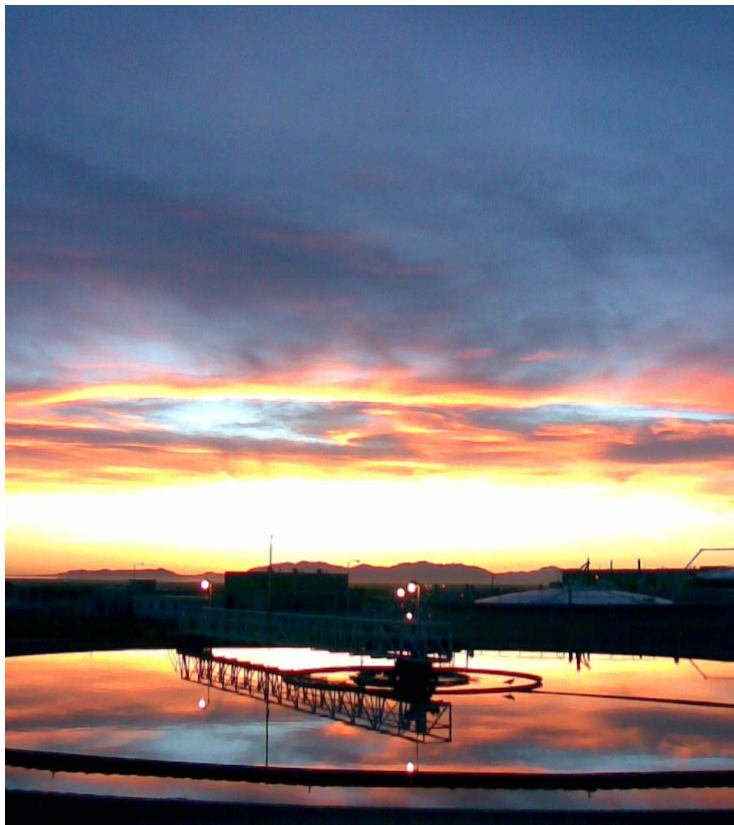


Photo courtesy of Brian Lamar

Prepared by
The Division of Water Quality

May 2025

UTAH WASTEWATER OPERATOR CERTIFICATION PROGRAM 2024 ANNUAL REPORT

Prepared by

Tessa Scheuer

Wastewater Operator Certification Program Coordinators

Utah Department of Environmental Quality

Division of Water Quality

195 North 1950 West

Salt Lake City, UT 84116

Presented to the Water Quality Board on May 28, 2025

by the Utah Wastewater Operator Certification Council

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Introduction

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

THE UTAH WASTEWATER OPERATOR CERTIFICATION COUNCIL

On January 31, 2024, the terms of two council members expired. During the January 2024 Utah Water Quality Board meeting, the Board approved reappointment of Rob Jaterka and Chad Burrell to fill the vacancies for the next 3-year term. The Council members serving during 2024 were:

Chad Burrell, Chair, represented certified wastewater treatment operators. He is the Operations and Safety Manager for Snyderville Basin Water Reclamation District and is certified as both a Grade IV Wastewater Treatment Operator and Grade IV Collection Operator. His term expires January 31, 2027.

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

Giles Demke, represented the management of municipal wastewater systems. He is the General Manager of the Mt. Olympus Improvement District and is certified as a Grade IV Wastewater Treatment Operator. His term expires January 31, 2025.

Phil Harold represented vocational training. He is the wastewater circuit rider for the Rural Water Association of Utah and is certified as both restricted Grade II Collection Operator and restricted Small Lagoon System Operator. His term expires January 31, 2026.

Rob Jaterka represented certified wastewater collection operators. He is the District Inspector for Magna Water District and is certified as both a Grade IV Collection Operator and Grade I Wastewater Treatment Operator. His term expires January 31, 2027.

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

Dr. Ben Willardson represented Utah universities. He teaches the water-related courses at Utah Valley University. His term expires January 31, 2026.

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

Examinations

The Division of Water Quality continued to maintain membership as a certifying authority with Water Professionals International (WPI), formerly the Association of Boards of Certification (ABC). Since 1972, Water Professionals International has been the central water industry authority that ensures that women and men in the industry are prepared to meet the standards that their communities can trust in through testing and certification services headquartered in Urbandale, Iowa. The role of WPI is to provide examination services to the Utah Wastewater Operator Certification program, which includes exam development, scoring, and compilation of exam results. A contract for exam services between WPI (ABC) and the Division of Water Quality is in effect for state fiscal years 2024-28. This contract includes computer-based exams as well as paper-based exams

Paper-based exams were offered in conjunction with the Rural Water Association of Utah's Annual and Fall Conferences in St. George and Layton, respectively.

On April 1st, 2024, the Division of Water Quality also began offering computer-based exams administered through PSI. In November 2024, computer-based exams were expanded to include Live Remote Proctoring exams. Onsite computer-based exams were administered at 4 different testing locations in Utah—Orem, Salt Lake City, Cedar City, and St. George—as well as various testing centers in the United States.

The registration and attendance of the 2024 paper-based and computer-based exam sessions are shown in Table 1. These totals include the traditional mandatory exams, as well as the voluntary ones that are available and provided by WPI but are not required by Utah’s wastewater operator certification program.

Table 1 - 2024 Exam Registration and Attendance (Voluntary and Mandatory)

Locations	Paper-Based Exam Sessions		Computer-Based Exam Sessions
	March	August	April-December
	St. George (in conjunction with RWAU Annual Conference)	Layton (in conjunction with RWAU Fall Conference)	Various
Applications Received	101	72	248
Total Scored*	99	68	243

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

EXAMINATION PROCEDURES

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

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

EXAM CONTENT

The exams administered in 2024 were compiled from WPI's data bank, including the Small Lagoon System exam, which is a customized exam using questions from the same data bank, but developed with 50 Wastewater Treatment I and 50 Collection I items to meet the need of smaller wastewater systems in Utah. The wastewater treatment and collection exams are "WPI 2019 standardized" exams which meet ISO 17024 standard to ensure the validity, reliability, and legal defensibility of the certification exams. Exam questions are reviewed by WPI's technical committees on a regular basis to ensure applicability to current wastewater technologies and processes. The Collection and Wastewater Treatment exams also have ten unscored, unidentified questions that are being pre-tested to see whether they would be good questions to use in future exams. Utah's participation in the pre-testing of potential questions allows our operators' knowledge, skills, and abilities to be included in the evaluation of applicability for future exams. Cumulative Totals for the 2024 mandatory wastewater exam classifications are shown in Table 2.

Table 2 - Cumulative 2024 Exam Scores (Mandatory)

Exam-Grade	Total Examinees	High Score	Low Score	#Pass (≥70%)	Pass %
C-I	33	93	57	19	58%
C-II	60	84	47	28	47%
C-III	14	88	53	4	29%
C-IV	106	89	37	36	34%
SLS-I	24	84	53	12	50%
T-I	33	80	33	10	30%
T-II	51	88	48	18	35%
T-III	21	81	31	5	24%
T-IV	54	78	38	15	28%
Totals	396			147	37%

Three voluntary classifications of wastewater-related certifications were again offered in 2024. They include Biosolids Land Applier Grades I - II, Wastewater Laboratory Analyst Grades I - IV, and Plant Maintenance Technologist Grades I - III. Mandatory exams include Collections Grades I - IV, Wastewater Treatment Grade I - IV, and Small Lagoons System Grade I.

This is the sixth year using the 2019 version standardized exams that are based on the same need-to-know criteria as the previous 2017 version. As predicted by WPI, the overall passing rates may dip when the new forms are introduced, but without any prerequisites for testing, there is really no basis for comparison. Table 3 shows overall passing rates for mandatory exams for the past six years.

Table 3 - Passing Rate Comparison for Mandatory Exams for 2019 through 2024

Exam-Grade	2019 Pass %	2020 Pass %	2021 Pass %	2022 Pass %	2023 Pass %	2024 Pass %
C-I	62	59	48	66	57	58
C-II	46	35	43	36	46	47
C-III	24	21	5	30	26	29
C-IV	20	26	30	30	29	34
SLS-I	71	52	71	68	67	50
T-I	23	30	29	29	29	30
T-II	26	25	25	32	24	35

Exam-Grade	2019 Pass %	2020 Pass %	2021 Pass %	2022 Pass %	2023 Pass %	2024 Pass %
T-III	13	6	18	13	17	24
T-IV	19	13	12	12	21	28
Overall	29	27	27	30	31	37

EXAMINATION REVIEW

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

Training

COOPERATION WITH TRAINING PROVIDERS

During 2024, certification-related training classes offered through cooperative efforts with the Water Environment Association of Utah or the Rural Water Association of Utah increased in force. Division of Water Quality staff and Certification Council members participated as instructors and presenters at conferences, seminars, and training sessions which provided training to wastewater personnel. The objective of these training opportunities was to facilitate compliance with UPDES permits, review subject matter in preparation for operator examinations, and earn required continuing education credits for renewals.

Rural Water Association of Utah offered monthly in-depth wastewater training courses that were presented online at no cost to the trainee as well as many other online and in-person training opportunities. Water Environment Association of Utah continued to provide training through their Collections College classes as well as other training opportunities both in-person and virtually.

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

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

Renewal and Compliance

Wastewater Operator Certifications may be valid for up to three years. Certifications will expire on December 31st of the expiration year unless they have been renewed. Continuing education during the three-year period prior to the expiration date, in wastewater-related subject matter, is a prerequisite for renewal. The number of credits required is dependent upon the grade of certification being renewed. Reinstatement of the certificate is also allowed within the year following expiration, provided that the operator has earned the required training credits prior to the certificate's expiration. All publicly-owned wastewater works are required to have adequately certified individuals "in charge" of both the wastewater treatment and collection systems as specified in Rule R317-10 Certification of Wastewater Works Operators. The statistics in Table 4 represent the certification actions taken during 2024 to comply with various aspects of the certification rule.

Table 4 - Certification Actions for 2024

Action	Number
Number of "new operators" added to wastewater certification database during 2024	145
Certificates expired 2023, reinstated prior to December 31, 2024 deadline	24
Certificates issued by "reciprocity" (equivalent certification from another state)	6
Issued Letter-of-Intent to issue certificate by "reciprocity"	2
Number of "reciprocity" requests denied in 2024	1
Number of "active" individuals in database (participated in certification within last 3 years)	1,883
Number of certified wastewater operators as of January 1, 2025 (all categories)	1,808
Number of certified "treatment" operators	581
WW Treatment Grade I	123
WW Treatment Grade II	155
WW Treatment Grade III	47
WW Treatment Grade IV	256
Number of certified "collection" operators	1,007
Collection Grade I	111
Collection Grade II	316
Collection Grade III	78
Collection Grade IV	502
Number of certified "small lagoon system" operators	125
Total number of current voluntary certifications (Biosolids Land Applier, WW Laboratory, Plant Maintenance)	95
Total number of publicly owned wastewater collection systems	197
Municipal Collection Class I systems	93
Municipal Collection Class II systems	51
Municipal Collection Class III systems	29
Municipal Collection Class IV systems	24
Total number of publicly owned wastewater treatment facilities	125
Municipal Treatment Class I facilities	72
Municipal Treatment Class II facilities	10
Municipal Treatment Class III facilities	21
Municipal Treatment Class IV facilities	22
Municipal Small Lagoon System I facilities (combination Treatment I & Collection I included in the above numbers)	60

As an alternative to employing a certified operator as Direct Responsible Charge (DRC), the owner of a municipal wastewater system may choose to contract with an individual or another entity with an appropriately certified operator to meet the certification requirement. Arches Special Service District, Mexican Hat Special Service District, North Village Special Service District, Powder Mountain Water and Sewer Improvement District, Strawberry Lakeview Special Service District, and Twin Creeks Special Service District renewed their contracts to remain in compliance. Other contracts in place for 2024 were Canyonland Improvement District, Emigration Improvement District, Henefer Town, and Mountain Green Special Service District.

The Division of Water Quality also began the process of purchasing a new operator certification database in collaboration with the Division of Drinking Water. The purpose for the new database is to help streamline the process of entering operator information, approving and accrediting wastewater CEUs to the correct operators, and upgrading operator certification reporting. As of December 2024, a request for proposals was sent out, and evaluations were scheduled for January 2025.

Certification Council Meetings

There were three Council meetings held during 2024. The following items may be of special note:

- The Council members discussed the new computer-based exams that were implemented in April 2024. Computer-based exams were received well from operators who reported that they enjoyed the flexibility and access to exams. Operators were particularly pleased with the availability of Live Remote Proctored exams that were implemented in November 2024, particularly from rural or non-central Utah operators who were not near the four Utah testing locations. Computer-based testing scores averaged a 4% higher passing rate above paper-based exams in 2024, and both paper-based and computer-based exams showed a 2%-9% increase in passing rates from 2023, and the council was excited about the progress.
- The Council continued to have ongoing discussions regarding computer-based testing centers not allowing approved calculators to be used during exam sessions. Multiple operators using a scientific non-programable calculator, T-30X, were not allowed to bring this calculator into their exam session. Action was requested from PSI Exams to better train test proctors on the allowed calculator models to reduce issues with this policy.
- There were 410 voluntary and mandatory exams administered during the year.
- Applications were received from operators requesting reciprocal certificates. Their previous certificates were issued from Colorado, Ohio, Idaho, and New Jersey. All requests were approved with certificates issued except for one certificate request. The denied operator received one of two certificates requested, and it was determined by the wastewater operator certification council that his other requested certificate would need to be obtained via exam.
- Accommodation was made by council members and staff to administer one exam orally in conjunction with regular testing dates. All orally administered exams required at least one council member to participate, along with one other member or staff to verify accuracy in reading exam items.
- The Council reviewed comments from examinees regarding specific test questions. One exam question was sent to WPI for review, and they submitted additional information to the council including the formula used and the math breakdown. The council ultimately approved the question as fair.
- The Council meetings were conducted both in person and virtually to accommodate council members' schedules. It allowed for discussion of the necessary agenda items, but also reduced travel for the participants. There was a quorum present at each meeting.
- There was discussion about whether public works classes count for wastewater CEU credit, particularly relating to the American Public Works Association annual conference that many wastewater operators attend yearly. The council determined that training related to Wastewater Utility, Operations and Maintenance, and Safety training courses were eligible to receive full credit, stormwater trainings were eligible to receive half credit, and other trainings were allowed no credit.



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MEMORANDUM

TO: Water Quality Board

THROUGH: John K. Mackey, P.E., Director

THROUGH: Samantha Heusser, Compliance and Enforcement Section Manager

FROM: Brendon Quirk, PhD

DATE: May 28, 2025

SUBJECT: Request for Approval of Settlement Docket No. I21-16 for Citation Oil & Gas Corp.

The Utah Water Quality Act, Utah Code § 19-5-104(3)(g) requires that any settlement negotiated by the Director of the Division of Water Quality ("Division") with a civil penalty of \$25,000 or more must be reviewed and approved or disapproved by the Utah Water Quality Board ("Board"). The Division is requesting Board approval of a proposed settlement, the Stipulated Compliance Order ("SCO") with Citation Oil & Gas Corp. ("Citation"). Citation agreed to the proposed SCO on February 26, 2025.

Citation is a foreign corporation doing business near Escalante, UT and is responsible for the operation of the Upper Valley Sales Oil Pipeline located to the west of Escalante, UT in and around the Escalante Mountains.

The proposed SCO resolves violations associated with the November 1, 2021, release of approximately 400 barrels (16,800 gallons) of crude oil that discharged to an unnamed, steep, rugged drainage ("the gulch") as well as into the ephemeral Pet Hollow drainage, a tributary to Lake Powell. In response to the violations, the Director issued Notice of Violation and Compliance Order ("NOV/CO"), Docket No. I21-16, to Citation on November 18, 2021 (enclosed).

The proposed SCO outlines both an Inspection Plan as well as a Sampling & Monitoring Plan that Citation has agreed to adhere to. The Inspection Plan requires Citation to regularly inspect the impacted spill path area semi-annually as well as the location of a constructed berm where polluted runoff may gather following any non-frozen precipitation events exceeding one-quarter inch. The

Sampling & Monitoring Plan requires Citation to monitor and sample the soils within the spill path annually, surface water within the impacted drainage following precipitation events, and shallow groundwater downstream of the constructed berm quarterly until certain conditions or corrective action concentration limits have been met.

The Director proposes to hold \$200,000.00 in abeyance to encourage compliance with terms in both the Inspection and Sampling & Monitoring plans. If Citation does not comply with the terms of the Inspection and Sampling & Monitoring plans, the \$200,000.00 will no longer be held in abeyance and will become due and owing.

The proposed SCO also requires Citation to propose a Mitigation Project as defined in Utah Admin. Code R317-1-8(8.4) and obtain approval by the Director within six months of the effective date of the proposed SCO. The Director has proposed to hold \$87,500.00 in abeyance for compliance with the terms outlined in the Mitigation Project section of the Order (paragraph 3.b) of the proposed SCO.

The total negotiated civil penalty is **\$575,000.00**. The partially signed, proposed SCO can be accessed [here](#).

The terms of the settlement are as follows:

Total Civil Penalty	\$575,000.00
<hr/>	
<i>Abeyance Terms</i>	
Mitigation Project	\$87,500.00
Inspection, Sampling & Monitoring	\$200,000.00
Total Held in Abeyance	\$287,500.00
<hr/>	
Total Settlement less Abeyance	\$287,500.00

The public comment period for the proposed SCO ran from February 27, 2025, to March 31, 2025, and no comments were received.

The proposed SCO represents what the Division believes to be a fair and reasonable settlement. It is the Division's recommendation that this settlement be granted Board approval for execution by the Director.

Attachments: I21-16 Notice of Violation and Compliance Order (DWQ-2021-029782)

**UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY**

In the Matter of: Citation Oil & Gas Corp. 14077 Cutten Road Houston, TX 77069-2212	NOTICE OF VIOLATION AND COMPLIANCE ORDER DOCKET NO. I21-16
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This Notice of Violation and Compliance Order (NOV/CO) is issued to Citation Oil & Gas Corp. (Respondent) in its capacity as Operator of the Upper Valley Sales Oil Pipeline (Facility), based on the Facts and Determinations asserted herein. This NOV/CO is issued by the Director of the Utah Division of Water Quality (Director) pursuant to the Director's authority under the Utah Water Quality Act, as amended, Utah Code. Sections 19-5-101 to 19-5-124 (the Act). This NOV/CO is also issued in accordance with the administrative procedures of the Utah Department of Environmental Quality, Utah Administrative Code R305-7 *et. seq.*

A. STATUTORY AUTHORITY

1. The State of Utah's surface water quality programs as adopted in the Utah Water Quality Act by the Utah Legislature operate with federal oversight and under delegation from the Environmental Protection Agency (EPA) under the federal Clean Water Act, 33 U.S.C. 1342.
2. The Director is authorized to issue, continue in effect, renew, revoke, modify or deny discharge permits and to issue orders under the Act and in accordance with Utah Code Section 19-5-106(2)(d) and may enforce rules made by the Board through the issuance of orders.
3. Under Utah Administrative Code R317-6-6, the Director has the authority to protect ground water including prohibiting the discharge of pollutants into ground water, requiring a ground water discharge permit, and requiring investigations and corrective action if a discharge occurs.
4. The Utah Division of Water Quality (Division) was created to administer the Act under the immediate direction and control of the Director pursuant to Utah Code Section 19-1-105.
5. Pursuant to Utah Code Section 19-5-111, whenever the Director determines that there are reasonable grounds to believe that there has been a violation of the Act, the water quality rules, or any order of the Director or the Board, the Director may issue a notice of violation. In that event, the notice shall require that the matters complained of be corrected.

6. Utah Code Section 19-5-115 provides that any person who violates a rule or order made or issued pursuant to the Act, or any rule or order made thereunder, may be subject, in a civil proceeding, to a civil penalty of up to \$10,000 per day of violation. Higher penalties and other sanctions may arise in situations amounting to knowing or willful violations.

B. APPLICABLE STATUTORY AND REGULATORY PROVISIONS

1. Utah Code Section 19-5-107(1)(a) states: “Except as provided in [the Water Quality Act] or rules made under it, it is unlawful for any person to discharge a pollutant into waters of the state or to cause pollution which constitutes a menace to public health and welfare, or is harmful to wildlife, fish or aquatic life, or impairs domestic, agricultural, industrial, recreational, or other beneficial uses of water, or to place or cause to be placed any waste in a location where there is probable cause to believe it will cause pollution.”
2. Utah Code Section 19-5-102(22) defines “Waste” or “pollutant” as “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.”
3. Utah Code Section 19-5-102(23)(a) defines “Waters of the state” as “streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, that are contained within, flow through, or border upon this state or any portion of the state.”
4. Utah Code Section 19-5-114 states: “Any person who spills or discharges any oil or other substance which may cause the pollution of the waters of the state shall immediately notify the director of the spill or discharge, any containment procedures undertaken, and a proposed procedure for cleanup and disposal, in accordance with rules of the board.”
5. Utah Administrative Code R317-6-6.15 shall apply to any person who discharges pollutants into ground water in violation of Utah Code Section 19-5-107 or who places or causes to be placed any wastes in a location where there is probable cause to believe they will cause pollution of ground water in violation of Utah Code Section 19-5-107.
6. Utah Administrative Code R317-6-6.15.B. states: “A person who spills or discharges any petroleum hydrocarbon or other substance which may cause pollution of ground waters in violation of Section 19-5-107 shall notify the Director within 24 hours of the spill or discharge. A written notification shall be submitted to the Director within five days after the spill or discharge.”

C. FACTS & DETERMINATIONS

1. Citation Oil & Gas Corporation (Citation) is a foreign for-profit corporation located in Houston Texas, doing business in Garfield County, Utah.
2. Citation operates the Upper Valley Sales Oil Pipeline within the Upper Valley oil field, approximately 20 miles southeast of Escalante, Utah.
3. On November 1, 2021, the Utah Division of Water Quality (Division) received verbal notification from Citation's environmental consultant, Absaroka Energy and Environmental Solutions, LLC (AE2), of a crude oil pipeline leak. The notification stated an estimated 300 barrels of crude oil was released onto the ground and flowed into a slot canyon leading toward Pet Hollow. The notification was logged as Report Number 15259 in the Utah Department of Environmental Quality Environmental Incidents Database.
4. On November 3, 2021, the Division received a written Status Report from AE2 on behalf of Citation. According to this report, the spill originated from Citation's Upper Valley Unit (UVU) 8" Sales Oil Pipeline which gravity feeds crude oil from the UVU Main Production Battery (location: Section 13, T36S R1E) to the Sales Tank Terminal (location: Section 2, T37S R1W). The report states that the release migrated through a canyon and into the Pet Hollow ephemeral drainage.
5. On November 15, 2021, the Utah Division of Oil, Gas & Mining (UDOGM) verbally reported to the Division field observations made along impacted areas of the release during the week of November 8, 2021; photographic evidence was also provided.

D. VIOLATIONS

Based on the foregoing, **Citation Oil & Gas Corporation** has violated the following:

1. Utah Code Section 19-5-107(1)(a) for causing pollution which constitutes a menace to public health and welfare and that is harmful to wildlife; and for placing or causing to be placed waste in a location where it causes pollution.

E. ORDER

Based on the foregoing Facts and Determinations, and Violations and pursuant to Utah Code Sections 19-5-107 and 19-5-111, **Citation Oil & Gas Corporation** is hereby **ORDERED** to:

1. As of the date of issuance of this NOV/CO, if not already initiated, initiate all action required to come into compliance with all applicable provisions of the Utah Water Quality Act in Utah Code Title 19 Chapter 5 and the Water Quality rules in the Utah Administrative Code, R317.
2. Cease and desist all un-permitted activity or discharge which violate Utah Water Quality standards.
3. Within ten (10) days of the date of issuance of this NOV/CO, submit to the Director a detailed spill response plan that includes milestones for the immediate clean-up of all segments/areas impacted by the release and how this will be achieved prior to inclement weather.
4. Submit a report containing the information below. The report must be submitted to the Director within thirty (30) days of the date of issuance of this NOV/CO and must provide the information listed below:
 - A. A detailed evaluation of what caused the release including the date it occurred and how it was discovered. This information should include the facts of the specific discharge outlined in the Facts and Determinations, as well as any other information regarding the release that occurred that may be important in resolving the violations listed in Section D of this NOV/CO.
 - B. Verification of the total quantity of material released including an explanation of how that quantity is determined.
 - C. Documentation that verifies the proper disposal of impacted materials and free liquids.
 - D. Describe, in detail, the actions taken and/or planned to be implemented (including dates), to attain and continue to be in full compliance with this NOV/CO.
 - E. Describe, in detail, any environmental mitigation and restoration plans for the area affected by the discharge, and the expected timetables related to these plans.
5. Within **60 days** of the date of issuance of this NOV/CO, submit a Contamination Investigation Report to the Director that adequately defines the nature and extent of any groundwater contamination in accordance with R317-6-6.15.D.1. The Contamination Investigation Report must be performed under the direction, and bear the seal, of a professional engineer or professional geologist.
6. Within **90 days** after Director approval of the Contamination Investigation Report, submit a Corrective Action Plan for Director approval in accordance with R317-6-6.15.D.2. of the ground water quality protection rules. The Corrective Action Plan must be performed under the direction, and bear the seal, of a professional engineer or professional geologist. Priority should be placed on locating and removing any free phase petroleum product, followed by remediation of any petroleum contaminated soil and ground water above DERR initial screening levels, pursuant to the schedule approved by the Director.

F. NOTICE

Citation Oil & Gas Corporation may contest this NOV/CO by filing and serving a written Request for Agency Action as provided in Utah Administrative Code R305-7-303 and R305-7-104(5). The NOV/CO is effective upon issuance (date signed) and, even if it is contested, remains effective unless a stay is issued or the NOV/CO is rescinded, vacated or otherwise terminated.

Failure to contest this NOV/CO within the period specified in R305-7-303(5) [30 days] waives any right to contest the NOV/CO or to seek judicial review.

All reports required under this NOV/CO must be accompanied by the following certification, which is to be signed in accordance with Utah Administrative Code R317-8-3.4(4):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations."

Utah Code Section 19-5-115 provides that violation of the Water Quality Act or a related Order may be subject to a civil penalty of up to \$10,000 per day of violation. Under certain circumstances of willfulness or gross negligence, violators may be fined up to \$25,000 per day of violation. Failure to comply with this NOV/CO may result in additional civil penalties or criminal fines under Utah Code Section 19-5-115.

Issued this Eighteenth day of November, 2021



Erica Brown Gaddis, PhD
Director, Division of Water Quality



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of Environmental Quality

Tim Davis
Executive Director

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

Water Quality Board

James Webb, Chair
Michelle Kaufusi, Vice Chair
Michela Harris
Joseph Havasi
Trevor Heaton
Robert Fehr
Jill Jones
Jeannie Simmonds
Kimberly D. Shelley
John K. Mackey
Executive Secretary

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: John Mackey, P.E., Division Director

FROM: James Harris, Great Salt Lake Coordinator

DATE: May 28, 2025

SUBJECT: Rulemaking Action: Request to Adopt R317-17. Great Salt Lake Mineral Extraction Salinity Discharge Limits

Board Action: Staff recommends that the Water Quality Board adopt R317-17 as proposed in the April 1, 2025 Bulletin as a Board Order effective immediately.

Background

During the 2024 Utah legislative session, the legislature passed HB 453 “Great Salt Lake Amendments”, which addresses a variety of Great Salt Lake related activities and improvements. Pertinent to water quality, the bill requires that “on or before June 1, 2025, the Division of Water Quality, in consultation with the Division of Forestry, Fire, and State Lands, and in cooperation with the Great Salt Lake Commissioner... shall make a rule... setting a limit for the salinity of water or brine that a person may discharge into the Great Salt Lake as part of the mineral or element extraction process.” DWQ staff worked with stakeholders on the development of the rule, held an informal public comment period and integrated a number of recommended changes.

Since coming to the Board in March 2025 for approval to initiate formal rulemaking, DWQ held a formal public comment period from April 1-May 1 (<https://rules.utah.gov/wp-content/uploads/b20250401.pdf>), and no comments were received.

At this time, staff recommends that the Water Quality Board adopt R317-17 as proposed in the April 1, 2025 Bulletin as a Board Order effective immediately.

Attachments:

Administrative Rules Analysis: R317-17.
Great Salt Lake Mineral Extraction Salinity Discharge
Limits (DWQ-2025-002396)
Density SOP Reference (DWQ-2025-002545)

DWQ-2025-004293

State of Utah
Administrative Rule Analysis
Revised May 2024

NOTICE OF SUBSTANTIVE CHANGE

TYPE OF FILING: New

Rule or Section Number:

R317-17

Filing ID: Office Use Only

Date of Previous Publication (Only for CPRs):

[Click or tap to enter a date.](#)

Agency Information

1. Title catchline:	Environmental Quality, Water Quality	
Building:	Multi-Agency State Office Building	
Street address:	195 N 1950 W, DEQ 3rd floor	
City, state:	Salt Lake City, UT	
Mailing address:	PO Box 144870	
City, state and zip:	Salt Lake City, UT, 84114-4870	
Contact persons:		
Name:	Phone:	Email:
Jim Harris	801-541-3069	jamesharris@utah.gov
Jake Vander Laan	801-536-4350	jvander@utah.gov
Please address questions regarding information on this notice to the persons listed above.		

General Information

2. Rule or section catchline:
R317-17. Great Salt Lake Mineral Extraction Salinity Discharge Limits
3. Purpose of the new rule or reason for the change:
Section 73-33-203 requires the Division of Water Quality (DWQ) to set a limit for the salinity of water or brine that a person may discharge into the Great Salt Lake (GSL) as part of the mineral or element extraction process and establish procedures to modify, revoke and reissue, or terminate any permit if those limits are exceeded.
4. Summary of the new rule or change:
This new rule establishes limits for the salinity of water or brine that a person may discharge into GSL as part of the mineral or element extraction process that prevent potential negative effects of high salinity discharges on GSL chemistry or biota, and establishes procedures to modify, revoke and reissue, or terminate any permit if those limits are exceeded. DWQ will develop corresponding guidance to be updated regularly with the latest scientific information to guide implementation decisions or written determinations.

Fiscal Information

5. Provide an estimate and written explanation of the aggregate anticipated cost or savings to:
A) State budget:
No state agency is a constrained party under the new rule, so no direct or indirect costs or savings will be incurred to the state budget.
B) Local governments:
No local government is a constrained party under the new rule, so no direct or indirect costs or savings will be incurred to local governments.
C) Small businesses ("small business" means a business employing 1-49 persons):
No small business is a constrained party under the new rule, so no direct or indirect costs or savings will be incurred to small businesses.
D) Non-small businesses ("non-small business" means a business employing 50 or more persons):
Two non-small businesses are constrained parties under this new rule. One constrained party represents a net decrease of salt load to Gilbert Bay, so there are no costs or savings for that party. DWQ requested a cost estimate from the other party but did not receive additional information.

The rule includes two requirements that could result in costs or savings for these parties, a salinity discharge limit and requirements for monitoring and reporting.

The potential costs incurred under the discharge limits established by this rule are triggered by specific environmental conditions within GSL that may or may not occur within the next three fiscal years, so the costs or savings are inestimable. The discharge limits in this rule would not be triggered by current or three year anticipated conditions in GSL, so costs within the next three fiscal years are anticipated to be zero.

Under this rule, both parties will be required to conduct and report monitoring data for discharge salinity and volume. Based on recent GSL sample analysis and labor costs, DWQ estimates that this monitoring and reporting will result in an increased annual cost of \$7,500 per constrained party.

E) Persons other than small businesses, non-small businesses, state, or local government entities ("person" means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an **agency**):

No persons other than small businesses, non-small businesses, state, or local government entities are constrained parties under the new rule, so no direct or indirect costs or savings will be incurred to other persons.

F) Compliance costs for affected persons (How much will it cost an impacted entity to adhere to this rule or its changes?):

The potential costs incurred under the discharge limits established by this rule are triggered by specific environmental conditions within GSL that may or may not occur within the next three fiscal years, so the costs or savings are inestimable. The discharge limits in this rule would not be triggered by current or three year anticipated conditions in GSL, so costs within the next three fiscal years are anticipated to be zero.

Based on recent GSL sample analysis and labor costs, DWQ estimates that compliance with monitoring and reporting requirements will result in an increased annual cost of \$7,500 per constrained party, totaling \$45,000 over three years. Compliance costs and the timing of those costs for affected persons are inestimable because they would be wholly dependent on environmental conditions which at this time cannot be predicted.

G) Regulatory Impact Summary Table (This table only includes fiscal impacts that could be measured. If there are inestimable fiscal impacts, they will not be included in this table. Inestimable impacts will be included in narratives above.)

Regulatory Impact Table			
Fiscal Cost	FY2025	FY2026	FY2027
State Government	\$0	\$0	\$0
Local Governments	\$0	\$0	\$0
Small Businesses	\$0	\$0	\$0
Non-Small Businesses	\$7500	\$7500	\$7500
Other Persons	\$0	\$0	\$0
Total Fiscal Cost	\$15,000	\$15,000	\$15,000
Fiscal Benefits	FY2025	FY2026	FY2027
State Government	\$0	\$0	\$0
Local Governments	\$0	\$0	\$0
Small Businesses	\$0	\$0	\$0
Non-Small Businesses	\$0	\$0	\$0
Other Persons	\$0	\$0	\$0
Total Fiscal Benefits	\$0	\$0	\$0
Net Fiscal Benefits	\$(15,000)	\$(15,000)	\$(15,000)

H) Department head comments on fiscal impact and approval of regulatory impact analysis:

The Executive Director of the Department of Environmental Quality, Tim Davis, has reviewed and approved this regulatory impact analysis.

Citation Information

6. Provide citations to the statutory authority for the rule. If there is also a federal requirement for the rule, provide a citation to that requirement:

Section 73-33-203		

Incorporations by Reference Information

7. Incorporations by Reference (if this rule incorporates more than two items by reference, please include additional tables):

A) This rule adds or updates the following title of materials incorporated by references (a copy of materials incorporated

by reference must be submitted to the Office of Administrative Rules; <i>if none, leave blank</i>):	
Official Title of Materials Incorporated (from title page)	Standard operating procedure—Great Salt Lake water density measurement and salinity calculation
Publisher	Great Salt Lake Salinity Advisory Committee
Issue Date	June 2020
Issue or Version	Utah Geological Survey Open-File Report 728

B) This rule adds or updates the following title of materials incorporated by references (a copy of materials incorporated by reference must be submitted to the Office of Administrative Rules; *if none, leave blank*):

Official Title of Materials Incorporated (from title page)	
Publisher	
Issue Date	
Issue or Version	

Public Notice Information

8. The public may submit written or oral comments to the agency identified in box 1. (The public may also request a hearing by submitting a written request to the agency. See Section 63G-3-302 and Rule R15-1 for more information.)

A) Comments will be accepted until:		05/01/2025
B) A public hearing (optional) will be held:		
Date (mm/dd/yyyy):	Time (hh:mm AM/PM):	Place (physical address or URL):
To the agency: If more than one hearing will take place, continue to add rows.		

9. This rule change MAY become effective on:	05/28/2025
NOTE: The date above is the date the agency anticipates making the rule or its changes effective. It is NOT the effective date.	

Agency Authorization Information

To the agency: Information requested on this form is required by Sections 63G-3-301, 63G-3-302, 63G-3-303, and 63G-3-402. Incomplete forms will be returned to the agency for completion, possibly delaying publication in the *Utah State Bulletin* and delaying the first possible effective date.

Agency head or designee and title:	John K. Mackey, Director Division of Water Quality	Date:	Click or tap to enter a date.
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R317. Environmental Quality, Water Quality.

R317-17. Great Salt Lake Mineral Extraction Salinity Discharge Limits

R317-17-1. Purpose and Authority.

- (1) Authority. This rule is promulgated pursuant to Section 73-33-203.
- (2) Purpose. To set a limit for the salinity of water or brine that a person may discharge into the Great Salt Lake as part of the mineral or element extraction process according to Section 73-33-203 and establish procedures to modify, revoke and reissue, or terminate any permit if those limits are exceeded.
- (3) Applicability. This rule applies to discharges derived from the extraction of minerals or elements from the brines of Great Salt Lake.

R317-17-2. Definitions.

As used in this rule:

- (1) "Current salinity" means the maximum daily mean salinity level in Gilbert Bay observed within the past 90 days, measured and calculated following the Great Salt Lake Salinity Advisory Committee, 2020, Standard operating procedure—Great Salt Lake water density measurement and salinity calculation: Utah Geological Survey Open-File Report 728, incorporated by reference, collected from multiple United States Geological Survey monitoring locations representative of Gilbert Bay using standardized sampling methods, excluding deep brine layer and freshwater lenses.
- (2) "De minimis discharge" means a discharge that results in a negligible increase in salinity concentration or load, as determined by the director.

(3) "Director" means the director of the Utah Division of Water Quality.

(4) "Discharge" means any water, substance, or pollution placed into a receiving water; which may include any combination of treated, processed, or returned waters.

(5) "Division" means the Utah Division of Water Quality.

(6) "FFSL" means the Utah Department of Natural Resources, Division of Forestry, Fire, and State Lands.

(7) "GSL" means Great Salt Lake, and includes Gilbert Bay, Gunnison Bay, Bear River Bay, Farmington Bay, and Transitional Waters, as defined in Subsection R317-2-6(6.5).

(8) "Salinity" means the amount of dissolved salts in water expressed as grams per liter (g/L).

(9) "Salinity Advisory Committee" means an advisory committee formed and co-chaired by the division and FFSL that makes recommendations to the division and FFSL regarding the short-term and long-term management of the salinity of GSL.

(10) "UPDES" means Utah Pollutant Discharge Elimination System, as defined in Rule R317-8.

R317-17-3. Permit Discharge Limits for Salinity into Great Salt Lake

(1) If the current salinity of Gilbert Bay exceeds 150 g/L, no person, as part of the mineral or element extraction process, may discharge water or brine into Gilbert Bay, Bear River Bay, Farmington Bay, or the Transitional Waters associated with those bays, except as provided in Subsection R317-17-3(5).

(2) If the current salinity of Gilbert Bay is below 150 g/L, a person, as part of the mineral or element extraction process, may discharge water or brine, including water or brine exceeding 150 g/L salinity into Gilbert Bay, Bear River Bay, Farmington Bay, or the Transitional Waters associated with those bays.

(3) For discharges of water or brine into Gunnison Bay, as part of the mineral or element extraction process, there is no limit for the maximum salinity.

(4) The director may disallow discharges of water or brine as part of the mineral or element extraction process, when, in consultation with the GSL Salinity Advisory Committee and the GSL Commissioner's office, the director determines that discharges will cause the salinity of Gilbert Bay to exceed 150 g/L.

(5) Upon request, the director shall allow a discharge into Gilbert Bay, Bear River Bay, Farmington Bay or the Transitional Waters associated with those bays at any time if:

(a) the director determines, in writing, as part of an UPDES permit, that the discharge is a de minimis discharge; or

(b) the director determines, in writing, as part of an UPDES permit, that the discharge represents a net decrease of salt load to Gilbert Bay as a result of the extraction process.

(6) The discharge limits for salinity specified in this section and monitoring requirements for salinity and discharge volume will be incorporated into the discharger's UPDES permit as effluent limits.

R317-17-4. Compliance

(1) If a person discharges water or brine that exceeds the limit imposed under Section R317-17-3, the director may modify, revoke and reissue, or terminate any permit issued by the director related to the discharge, consistent with the processes provided in Subsection 19-5-106(2)(g) and Subsection R317-8-6(6.2).

(2) It is a violation of the discharger's UPDES permit to discharge water or brine that exceeds the discharge limits for salinity identified in Section R317-17-3.

Key: Great Salt Lake, Salinity, Extraction

Date of Last Change:

Authorizing, and Implemented or Interpreted Law: Section 73-33-203

Standard Operating Procedure—Great Salt Lake Water Density Measurement and Salinity Calculation

by

Great Salt Lake Salinity Advisory Committee

Suggested citation:

Great Salt Lake Salinity Advisory Committee, 2020, Standard operating procedure—Great Salt Lake water density measurement and salinity calculation: Utah Geological Survey Open-File Report 728, 6 p., <https://doi.org/10.34191/OFR-728>.

Disclaimer

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OPEN-FILE REPORT 728
UTAH GEOLOGICAL SURVEY
a division of
UTAH DEPARTMENT OF NATURAL RESOURCES
2020

Blank pages are intentional for printing purposes.

BACKGROUND

The purpose of this open-file release is to make the attached document prepared by the Great Salt Lake Salinity Advisory Committee available to the public, part of the permanent record, and citable for future reference. The Great Salt Lake Salinity Advisory Committee is a group of scientists and stakeholders convened by the Utah Division of Forestry, Fire and State Lands and the Utah Division of Water Quality. The committee was formed in early 2018. Their goal and purpose, as stated in their charter (version 3), follows:

The goal of the Great Salt Lake (GSL) Salinity Advisory Committee (SAC) is to provide recommendations for long-term management of the salinity of GSL to the Utah Division of Forestry, Fire and State Lands (FFSL) and the Utah Division of Water Quality (UDWQ) that maximize the benefits of GSL in accordance with the public trust doctrine and protect the designated uses of GSL in accordance with the Utah Water Quality Act.

The purpose of the SAC is to review and interpret results from GSL salinity research and monitoring activities and make recommendations to FFSL and UDWQ regarding potential modifications to the UPRR causeway opening, berm or channel and long-term management of the salinity of GSL.

The following document was prepared in large part by Jeff DenBleyker (Jacobs), the facilitator of the committee, with significant input and review by the committee members. In particular, committee members Ryan Rowland, Andrew Rupke, Jake VanderLaan, and Elliot Jagniecki provided substantial contributions to the effort and document. This standard operating procedure (SOP) was largely built upon the U.S. Geological Survey's methods for measuring Great Salt Lake density and, to a lesser extent, the Utah Geological Survey's methods.

The 2020 members of the Great Salt Lake Salinity Advisory Committee are:

Cory Angerth, U.S. Geological Survey
Jamie Barnes, Utah Division of Forestry, Fire and State Lands
Bonnie Baxter, Westminster College
Thomas Bosteels, Great Salt Lake Brine Shrimp Cooperative
Jaimi Butler, Westminster College (alternate)
Jim Harris, Utah Division of Water Quality
Joe Havasi, Compass Minerals
Tim Hawkes, Great Salt Lake Brine Shrimp Cooperative (alternate)
Ben Holcomb, Utah Division of Water Quality (alternate)
Elliot Jagniecki, Utah Geological Survey (alternate)
Paul Jewell, University of Utah (alternate)
Bill Johnson, University of Utah
Bill Kerner, Compass Minerals (alternate)
Krishna Khatri, Utah Division of Water Resources (alternate)
John Luft, Utah Division of Wildlife Resources
Craig Miller, Utah Division of Water Resources
Ryan Rowland, U.S. Geological Survey (alternate)
Andrew Rupke, Utah Geological Survey
Kyle Stone, Utah Division of Wildlife Resources (alternate)
Tom Tripp, US Magnesium
Jake VanderLaan, Utah Division of Water Quality*
Laura Vernon, Utah Division of Forestry, Fire and State Lands (alternate)

*No longer a member, but was a member at the time of document preparation.

Standard Operating Procedure

Great Salt Lake Salinity Advisory Committee, June 2020

Great Salt Lake Water Density Measurement and Salinity Calculation

Introduction

Characterization of the salinity of Great Salt Lake (GSL) water is essential to understanding the complex dynamics of GSL and has been a common measurement made by lake users, managers and researchers alike. Although there has been coordination of data, different organizations have used different field and laboratory analytical methods to develop and report the salinity of GSL. The Great Salt Lake Salinity Advisory Committee (SAC) completed a round robin in early 2020 to examine the different methods and develop a standard protocol for measuring and reporting the density and salinity of GSL waters (Jacobs 2020). This Standard Operating Procedure (SOP) is an adaptation of the US Geological Survey (USGS) SOP (2019) and the Utah Geological Survey (UGS) SOP (2019) for GSL water density measurement and salinity calculations and has been recommended for use with GSL waters by the SAC.

Water Density

A measure of the mass (grams) per unit volume of water (cubic centimeter) including all solutes (g/cm^3). Water density varies with temperature and total dissolved solids (TDS).

Salinity

A measure of the concentration of all solutes dissolved in water. Solutes in GSL water are unique and difficult to accurately measure; GSL salinity is typically defined as the mass of dissolved solids (or TDS) in grams per liter of water (g/L).

Purpose

This SOP establishes a standardized method for measuring and reporting GSL water density and calculating and reporting its salinity in weight per volume units. It sets a consistent protocol to ensure the quality of data collected and reported for GSL — resulting in improved uniformity, reproducibility, verifiability, and defensibility of the data.

Applicability

This SOP is available for use by all organizations measuring and reporting GSL water density and salinity data. Individual organizations may measure GSL density and salinity using an alternative method; however, data intended for use in comparison with long term

datasets should include a description of the method used to enable interpretation and comparison of results.

Note: Density measurements are not necessarily a reliable proxy for salinity at or near saturation.

Parameters

1. Water density, in grams per cubic centimeter (g/cm^3). Density shall be rounded to the nearest thousandth; e.g. $1.018 \text{ g}/\text{cm}^3$.
2. Water temperature at time and location of density measurement (i.e., not the temperature in field), in degrees Celsius ($^{\circ}\text{C}$)
3. Salinity, in grams per liter (g/L)

Personnel Qualifications

Personnel should be familiar with laboratory safety practices and steps necessary to avoid contaminating samples. Personnel preparing samples for the first time should be supervised by someone familiar with these procedures.

Density Instrument

Instrument- The density of water samples shall be determined with a density meter that uses the oscillating U tube method (e.g., Anton Paar DMA 35 or equivalent).

Calibration method used- Density: factory calibration using pure water and dodecane; calibration checks using ultra-pure deionized water. Temperature: factory calibration.

Density Acceptance criteria and response if not acceptable- The maximum permissible error is $\pm 0.001 \text{ g}/\text{cm}^3$. If a calibration check reading is outside the maximum permissible error, the density meter should be returned to the manufacturer for maintenance/repair.

Calibration frequency and location- Calibration checks should be completed per the manufacturer's recommendations. Laboratory calibration checks are performed prior to each use.

Density Measurement Procedure

Important: Measurements shall be done near room temperature (preferably at 20°C).

1. Attach the filling tube to the bottom of the density meter (see instruction manual).
2. Turn on the density meter.
3. Rinse the density meter three times with ultra-pure deionized water. Fill the density meter by pushing down on the pump lever, submerging the filling tube in ultra-pure deionized water, and slowly releasing the pump lever. Pump out the deionized water by pushing down on the pump lever.

4. After rinsing, check the calibration of the density meter by filling it with ultra-pure deionized water that is near room temperature. The measured density should be within $\pm 0.001 \text{ g/cm}^3$ of the density of pure water at the temperature of the sample (the density meter reports water temperature in addition to density). Table 1, below, shows the density of pure water at temperatures ranging from 18-25 °C. The density of pure water is based on Spieweck and Bettin (1992).

Table 1. Density of pure water at 18-25 degrees Celsius.

Temperature, in degrees Celsius	Density, in grams per cubic centimeter
18.0	0.9986
18.5	0.9985
19.0	0.9984
19.5	0.9983
20.0	0.9982
20.5	0.9981
21.0	0.9980
21.5	0.9979
22.0	0.9978
22.5	0.9977
23.0	0.9975
23.5	0.9974
24.0	0.9973
24.5	0.9972
25.0	0.9970

5. If the density of ultra-pure deionized water is not within $\pm 0.001 \text{ g/cm}^3$ of the actual value shown in table 1, repeat the measurement. Ensure there are no water bubbles in the measuring cell. If it still fails the calibration check, suspend the density measurements. There is a problem with the deionized water or the density meter needs to be repaired and calibrated by the manufacturer.
6. If the density meter passes the calibration check, proceed to measuring the sample (bring the sample to $20 \pm 0.5 \text{ }^\circ\text{C}$). Rinse the density meter three times with the sample water. Fill the meter a fourth time for the actual measurement. Record the temperature and density value.
7. Pump out the sample and repeat the measurement to verify the initial measurement. Record the check measurement temperature and density value. If the density measurements do not agree, repeat the measurement again. Ensure there are no air bubbles in the measuring cell. Continue density measurements until two consecutive density values are equal, or within $\pm 0.0001 \text{ g/cm}^3$. It should only take two or three

measurements to verify agreement. There is something wrong with the sensor if it takes more than three measurements to verify the density value.

8. Rinse the meter three times with ultra-pure deionized water before proceeding to the next sample.

***Important:** Depress pump slowly several times on last rinse to get water out before taking the next measurement.*

9. When finished with sample measurements recheck the calibration of the unit with ultra-pure deionized water (rinse the meter three times with ultra-pure deionized water before checking the calibration). Pump out the deionized water after the calibration check.
10. To begin cleaning the instrument, flush with several mL (50 or more) of water (deionized or tap) using the pump.
11. After flushing instrument with water, flush the instrument with ethanol/ethyl alcohol* 2 to 3 times using the pump. Remove the ethyl alcohol using the pump. Again, depress pump slowly to remove as much of the ethanol as possible.
12. Power down the unit, remove the filling tube, and store the meter in its designated area.

***Note:** * Grain alcohol that is at least 95 percent alcohol (e.g., Everclear™) may be used as a substitute cleaning and drying agent. Alconox may also be used to flush through the instrument as recommended by the manufacturer. Applying the Alconox step would come before flushing water through the instrument after measurements have been taken.*

Salinity Calculation

Measured densities of water samples collected from GSL are used to compute the salinity of each sample (in grams per liter (g/L)).

Salinity is calculated with an equation of state specific to GSL waters with salinities ranging from 23 to 182 g/L (Equation 1; Naftz et al., 2011). The GSL SAC is working with its partners to develop a new equation of state for GSL waters with salinities ranging from 10 to about 360 g/L. Until the new equation is developed, results for GSL waters outside of the range of 23 to 182 g/L shall be noted as “outside the salinity range used to develop the GSL equation of state”. The equation of state can be solved for salinity as a function of water temperature, density of the sample, and the density of pure water at the same temperature as the water sample (Equation 2). Note that water temperature refers to the temperature of the water when the density measurement is made (should be 20 ± 0.5 °C), not the temperature measured in the field, when the sample was collected.

Equation 1 (Naftz et al, 2011).

$$\rho - \rho^0 = \left(184.01062 * (1.04708 * S) - (1.21061 * T) + (3.14721^{-4} * S^2) + (0.00199 * T^2) - (0.00112 * S * T) \right) * 1000$$

Equation 2 (transposed from Equation 1).

$$S = \frac{\left(\sqrt{\left(\left((1.04708 - (0.00112 * T))^2 \right) - (4 * 0.000314721 * (-\rho * 1000) + (\rho^0 * 1000) + (0.00199 * T^2) - (1.21061 * T) + 184.01602) \right)} \right) - (1.104708 - (0.00112 * T))}{(2 * 0.000314721)}$$

ρ = density of GSL water (g/cm³)

S = salinity (g/L)

ρ^0 = density of pure water (g/cm³)

T = water temperature (°K)

Reporting

Water density (in g/cm³) and the temperature of the water when the density was measured (in °C) shall be reported for each water sample. Additional sampling metadata that should be reported are the date, location, and the depth below the water surface at which the sample was collected, and the water temperature of the sample when collected from Great Salt Lake.

Important: The density and temperature of a water sample shall always be measured and reported together; the density of a water sample will vary with temperature.

Note: The GSL SAC recognizes that the density of GSL water has been historically measured and reported at different temperatures. Users of density data must be aware of the corresponding temperature at which the water density was measured as the density of a water sample will be different at different temperatures. A means to facilitate accurate comparison and evaluation of these GSL water density data that is independent of water temperature would be useful. The SAC is evaluating the feasibility of developing an equation to normalize water densities measured at various water temperatures to a water density at 20°C.

References

Anton Paar DMA 35N Portable Density Meter Instruction Manual

Jacobs Engineering Group Inc (Jacobs). 2020. Round Robin of Methods to Estimate the Salinity of Great Salt Lake Waters. Technical memorandum prepared with the Great Salt Lake Salinity Advisory Council.

Naftz, D.L., Millero, F.J., Jones, B.F., and Green, W.R., 2011, An equation of state for hypersaline water in Great Salt Lake, Utah, USA. Aquatic Geochemistry (2011) 17:809-820.

Spieweck F, Bettin H (1992) Review: solid and liquid density determination. Technisches Messen 59:285-292

US Geological Survey (USGS). 2019. Great Salt Lake Water Density Measurement and Salinity Calculation. 4pp.

Utah Geological Survey (UGS). 2019. Density Meter Procedures. 1p.



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MEMORANDUM

TO: Water Quality Board

THROUGH: John K. Mackey, P.E., Director

FROM: Samuel Taylor and Sandy Wingert, Watershed Protection Section

DATE: May 28, 2025

SUBJECT: Request to initiate rulemaking to adopt Total Maximum Daily Load (TMDL) by reference into R317-1-7 Castle, Mill, and Pack Creek *E. coli* TMDLs

The Division of Water Quality (DWQ) has completed Total Maximum Daily Load (TMDL) studies to address *Escherichia coli* (*E. coli*) in Castle, Mill and Pack Creeks, near Moab, UT. The Creeks were listed on the Clean Water Act 303(d) list of impaired waterbodies for not meeting the drinking water and recreational beneficial uses due to *E. coli*. *E. coli* is an indicator of fecal contamination from human or animal waste and is a potential risk to human health. There are no point sources that contribute *E. coli* loading to the Creeks identified in this report. The nonpoint sources identified are not regulated by DWQ and instead, addressed through voluntary and incentive-based grants. Therefore, there are no costs associated with these TMDLs.

Finalization Timeline

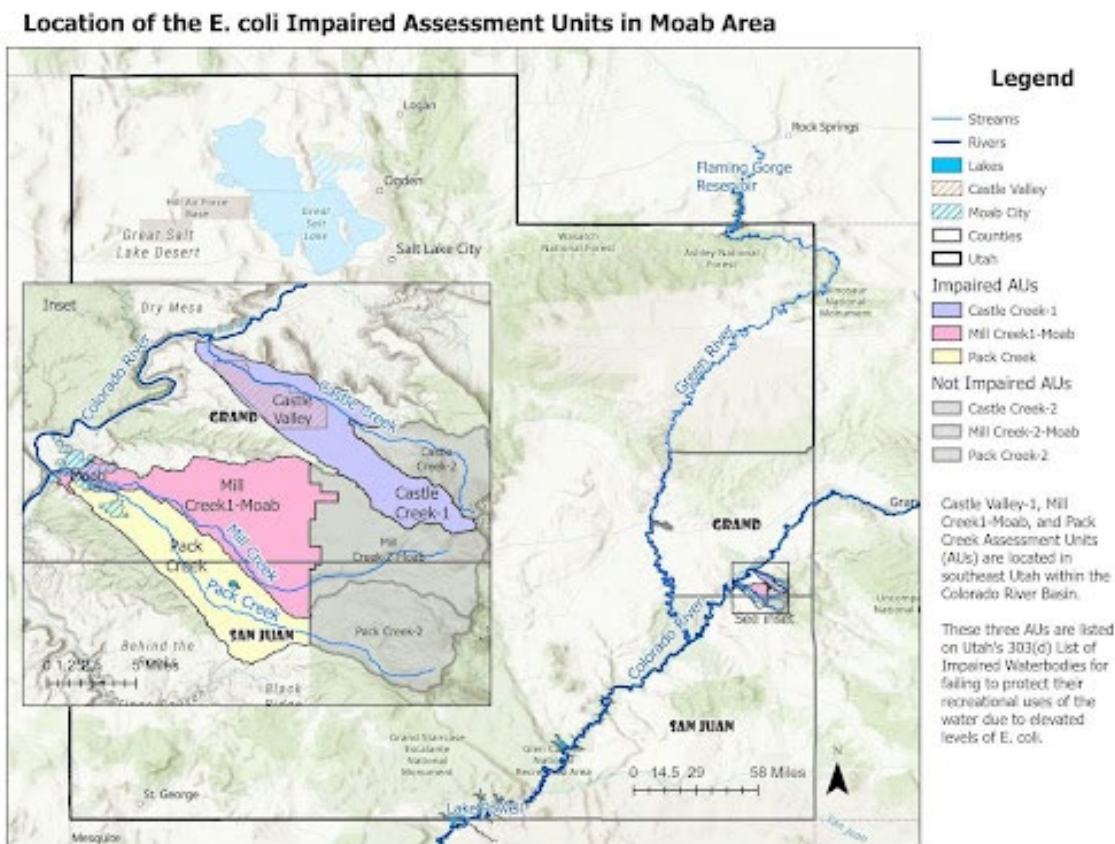
May 28, 2025:	Water Quality Board preliminary approval of TMDL / Petition to initiate rulemaking
June 15, 2025 - July 15, 2025:	30-day Division of Administrative Rule Public Notice Period
August 27, 2025:	Petition Water Quality Board for formal adoption of TMDL into R317-1-7
August 28, 2025:	Submit TMDL to the Environmental Protection Agency (EPA) for approval

Background

The Clean Water Act (CWA) requires states develop TMDLs for waters that do not meet water quality standards for their designated beneficial uses. Waterbodies that do not protect their beneficial uses are added to the 303(d) list, which is updated every two years as part of the DWQ Integrated Report. The purpose of a TMDL is to establish an allowable amount of a pollutant to a waterbody and use data to determine why a waterbody is not meeting its beneficial use. Although not required by EPA, DWQ includes an implementation plan with each TMDL that acts as a guide for projects, financial assistance, and to foster community support for improving water quality.

The Castle Creek-1, Mill Creek-1-Moab, and Pack Creek Assessment Units (AU) were listed for an *E. coli* impairment on the 303(d) list of impaired waterbodies with a high priority to receive a TMDL. These listings, in conjunction with input from local stakeholders and the Moab Area Watershed Partnership (MAWP), triggered a targeted data collection effort that culminated in the completion of a TMDL for each waterbody in 2025. DWQ coordinated and collaborated with the MAWP and other stakeholders throughout the development of the TMDLs. Stakeholders reviewed the TMDL document and staff addressed their comments, which are linked with the full report.

Background



Results

The TMDL analysis for Castle, Mill, and Pack Creeks incorporated ten years of *E. coli* data. Results from this study determined that *E. coli* reductions are needed to protect recreational beneficial uses for all three water bodies: 4% in Castle Creek, 45% in Mill Creek, and 87% in Pack Creek. Data shows *E. coli* concentrations peak in late summer and decrease in the fall in all Assessment Units. The analysis determined that the main sources of *E. coli* pollution are failing onsite wastewater systems and agricultural practices.

Stakeholder and Public Involvement

Year	Activity
2013	<i>Escherichia coli</i> (<i>E. coli</i>) and field sampling conducted by DWQ and local watershed coordinator
2014	MAWP request for TMDL development in <i>E. coli</i> impaired waterbodies
2022	November 15 - Tour of Mill Creek and Pack Creek Watersheds with the local watershed coordinator November 16 - Introduction of TMDLs to the MAWP
2023	March 14 - Tour of Castle Creek Watershed with the local watershed coordinator March 22 - Introduction of TMDLs to the Water Quality Board July 27 - Microbial Source Tracking (MST) on Castle, Pack, and Mill Creek August 23 - Microbial Source Tracking (MST) on Castle, Pack, and Mill Creek September 11 - Microbial Source Tracking (MST) on Castle, Pack, and Mill Creek September 20 - TMDL and monitoring update to MAWP
2024	January 17 - <i>E. coli</i> data summary update to MAWP February 22 - Virtual meeting with SEUHD representative and the local watershed coordinator April 15/16 - Tour of Castle Creek, Mill Creek, and Pack Creek Watersheds with the local watershed coordinator. Meet with SEUHD and the local watershed coordinator to discuss <i>E. coli</i> sources. May 14 - Virtual meeting with USGS to discuss hydrology of impaired Assessment Units (AUs) July 15 - Castle Creek synoptic <i>E. coli</i> sampling run. Meeting with the Town of Castle Valley, Castle Valley Irrigation Company, and the local watershed coordinator July 16 - Mill Creek and Pack Creek synoptic <i>E. coli</i> run July 17 - Meeting with Moab Irrigation Company and local watershed coordinator. MAWP meeting August 13 - San Juan Conservation District meeting and Grand Conservation District (GCD) meeting to discuss the <i>E. coli</i> TMDLs August 14 - Virtual meeting with Utah Division of Wildlife (Makeda Hanson) August 28 - Virtual Meeting with Utah Division of Wildlife (Josh Fife) September 18 - MAWP meeting September 19 - Tour of Castle Creek Watershed with the local watershed coordinator November 20 - Presented the draft TMDL Implementation Plan to the MAWP for their feedback
2025	January 15 - Presented the TMDL results to MAWP and stakeholders. February 18 - Presented the TMDL Grand County Commission. February 19 - Presented the TMDL to Moab City staff March 3 – Stakeholder draft sent out for review and comments March 19 - Presented TMDL at Castle Valley Town Council March 26 – Presented the TMDL results to MAWP and stakeholders

Main Report and Comments

[LINK TO MAIN REPORT](#)

[LINK TO COMMENTS](#)



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MEMORANDUM

TO: Water Quality Board

THROUGH: John Mackey, P.E., Director

FROM: Paul Burnett

DATE: May 28, 2025

SUBJECT: State Nonpoint Source Program Annual Report for Fiscal Year 2025
and Fiscal Year 2026 Project Selection

The Utah Division of Water Quality receives grant funds through two sources: Federal Section 319(h) funds from the EPA, and an annual allocation of \$1M in hardship grant funds from the Utah Water Quality Board to implement nonpoint source pollution control projects throughout the state. Every year the Watershed Protection Section submits an annual report to the EPA documenting the accomplishments of the State's Nonpoint Source Program from the previous federal fiscal year. Paul Burnett will present a summary of the federal Fiscal Year 2024 annual report including an overview of the projects selected for Federal Fiscal Year 2025 and State Fiscal Year 2026.



State Fiscal Year 2026 Utah Nonpoint Source Grant Awards

Photo Credit: Eric McCulley

PREPARED BY Paul Burnett, Nonpoint Source Program Coordinator



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Watershed	Project Title	Brief Project Description	Sponsoring Organization	Project Category	Award
Jordan River	Big Bend Adaptive Monitoring and Stewardship Plan	The Big Bend Adaptive Monitoring and Stewardship Plan aims to work with project stakeholders to develop a sustainable and adaptive implementation strategy to ensure the successful establishment of the River Phase of the Big Bend Habitat Restoration Project. By engaging stakeholders, scientists, and community members, this project ensures sustainable ecological and water quality benefits for the Jordan River Corridor.	McCulley Watershed Consulting Services, LLC	Monitoring and Assessment	\$49,700.00
	Lower Jordan River Basin Watershed Coordinator FY 2026	Funds will support a variety of projects throughout the basin including: water quality project effectiveness monitoring, ongoing restoration and bank stabilization efforts, ongoing outreach efforts, collaboration and coordination with partners, as well as supporting time spent in search of new restoration projects.	Salt Lake County Watershed Planning and Restoration Program	Technical Assistance (e.g. staff capacity)	\$30,000.00
	Stream Improvements to Rose Creek & Tributaries, Phase 2	Rose Creek and its tributaries are plagued by high volumes of E.coli being introduced to the stream due to excessive recreational usage. SLCo WPRP will be implementing multiple locations of exclusionary fencing, vegetative buffers, and bioengineered bank stabilization with the intention of reducing E.coli and sediment load to the stream.	Salt Lake County Watershed Planning and Restoration Program	Stream Restoration	\$29,500.00
Logan River	JH streambank stabilization phase 3	Excessive stream erosion has diminished an agricultural producer's land. This project would remedy this by installing low-tech devices near the ordinary high water mark to slow erosive velocities and capture sediments. See prior years, phase 1 and phase 2.	Utah Department of Agriculture and Food	Stream Restoration	\$20,000.00
Ogden River	Ogden Valley Virtual Fencing	This project will support grazing in the Ogden Valley with virtual fencing to ensure protection of riparian areas, water quality, and soil health.	Utah Department of Agriculture and Food	Agricultural Nonpoint Source	\$43,500.00
	Ogden Valley BDAs	This project will support the installation of 5 BDAs on a tributary to the N. Fork Ogden River.	Utah Department of Agriculture and Food	Stream Restoration	\$2,250.00

Watershed	Project Title	Brief Project Description	Sponsoring Organization	Project Category	Award
Price River	Impaired Watershed Capacity Funding SFY 26	Watersheds in Utah are degraded to varying degrees due to land use practices and lack of understanding of proper management. We can accelerate the rate of improvement to Utah's watersheds by building on the past success of TU and the UDWQ. This proposal presents an opportunity for partnership through co-funding positions in the Price River and Duchesne River watersheds to capacity for accelerated and scaled riverscape improvements leading to improved water quality.	Trout Unlimited	Technical Assistance (e.g. staff capacity)	\$56,580.82
	Price River Minimum Instream Flow Study	This project will determine a minimum instream flow rate for the Price River required to support ecological restoration, native and wild fish, and other aquatic species. This instream flow rate study will help inform resource managers, water users, land managers, and wildlife advocates as to the needs required to maintain current aquatic ecosystems and riverine function present in the Price River.	Trout Unlimited	Monitoring and Assessment	\$44,000.00
Provo River	Provo River Watershed Council Information and Education	This project will benefit water quality in the Middle Provo by implementing several information and education projects. Projects include partnering with local stakeholders to continue supporting annual trash cleanup events, hosting the Provo River Watershed Council annual tour, and working with a local nonprofit to host a watershed festival for the Provo River.	Utah Department of Agriculture and Food	Information and Education	\$10,000.00
Sevier River - Upper	Panguitch Lake fence and riparian restoration	Install 15,300 feet of wildlife-friendly fence excluding cattle from access to low water mark along Panguitch Lake. Install off sight watering system to allow cattle access to water in excluded pasture.	Utah Department of Agriculture and Food	Agricultural Nonpoint Source	\$75,000.00
	Panguitch Lake Hypolimnetic Drain	This project is to fund the cost of incorporating a hypolimnetic drain as part of a newly constructed dam planned at Pangutich Lake. The drain would pull water from the most nutrient-rich areas of the lake in an effort to reduce water quality issues caused by nutrient loading that currently pose a threat to the extremely popular and economically important fishery.	Utah Division of Wildlife Resources	In-Lake Treatment	\$50,000.00

Watershed	Project Title	Brief Project Description	Sponsoring Organization	Project Category	Award
	Upper Sevier I&E	Host approximately 600 elementary school kids on a farm field day or natural resource day each year. Host Panguitch High School Freshman class planting willows and trees and teaching kids about the importance of macroinvertebrate populations on a stream system. Host an Upper Sevier Watershed Tour and any other tours/workshops needed in the watershed.	Utah Department of Agriculture and Food	Information and Education	\$16,000.00
Southeast Colorado River	Southeast Colorado River Basin Watershed Coordinator	This funding will support the watershed coordinator position for the Southeast Colorado River Basin that encompasses waterbodies in both Grand County and San Juan County. The watershed coordinator provides important resources for watershed planning, support in directing and tracking implementation practices to attain defined TMDL endpoints, and assistance to the local watershed group to establish management plans and implementation activities recommended within approved TMDLs.	Utah Division of Water Quality	Technical Assistance (e.g. staff capacity)	\$74,300.00
	BLM Phase VII Mill Creek Watershed Erosion Control	This project involves nature-based solutions to reduce accelerated erosion within the Mill Creek Watershed on BLM lands. Sustainable ecosystem friendly designs would enhance streambank stability, increase soil stability and improve riparian conditions. This project entails construction of Zeedyk type structures in gullies and upland areas, hardening hiking trails, limiting social trailing, and stabilizing streambanks by planting locally sourced willow cuttings and other simple techniques.	BLM	Stream Restoration	\$50,000.00
Spanish Fork River	Implementing Low Impact Designs to Spanish Fork's Stormwater Management System	Spanish Fork City manages conveyance of stormwater by a network of pipes and ditches throughout the city. The end point for stormwater runoff is either retention basins or being discharged in Dry Creek or the Spanish Fork River. Runoff is a primary contributor of pollutants and pathogens found in natural waterbodies. We propose to decrease the amount of pollutants entering the Spanish Fork River by retrofitting green infrastructure following Low Impact Development principles at appropriate sites.	Trout Unlimited	Urban Nonpoint Source	\$35,000.00

Watershed	Project Title	Brief Project Description	Sponsoring Organization	Project Category	Award
Statewide	The 2025 Small Farm Water Quality Improvement Project	The Small Farm Water Quality Improvement Project aims to provide small-scale agriculture producers with funding to improve water quality and waste management on agricultural properties and Utah waterways. Large farms or agriculture facilities often have resources available to improve water quality and waste management; this project seeks to offer a similar opportunity for smaller farms and ranchers.	Utah State University Extension	Animal Feeding Operation Waste Management	\$85,000.00
	Onsite Wastewater Hardship Financial Assistance Program	This program assists homeowners with demonstrated financial hardship to repair or replace malfunctioning onsite wastewater (septic) systems that they could not otherwise afford to repair or replace. Requested funding will repair or replace 6-8 septic systems per year.	Utah Division of Water Quality	Onsite Waste Water (e.g. septic)	\$70,000.00
	FY2026 NPS Sponsorship Fund	Throughout a typical fiscal year, the Nonpoint Source Program is asked to sponsor events from public meetings to conferences. This fund will allow the NPS program to sponsor these events without developing applications for each one.	Utah Division of Water Quality	Information and Education	\$5,000.00
Utah Lake	Utah Lake Watershed Stormwater Seminar - Year 2	Utah Lake's watershed is highly populated and only continuing to grow. As this growth continues, the more residents, businesses, and municipalities need access to education. We request funds to build on a pilot year of stormwater education outreach and seminars. In partnership with Utah County Stormwater Coalition and Provo River Watershed Council, the first year of Utah County stormwater outreach is underway.	Utah Lake Authority	Information and Education	\$30,869.59
Weber River	Phase 3: Addressing Sediment in Echo Canyon with riparian habitat restoration	This State Nonpoint Source grant will provide matching support for an existing project addressing sediment in Echo Creek through riparian habitat restoration. Echo Creek is an important source of drinking water in the Weber River watershed and is impaired for sediment. We propose to design and implement low-tech, process-based restoration (LTPBR) practices on up to 4 miles of Echo Creek and tributaries to address sediment according to the 2024 Watershed Plan.	Sageland Collaborative	Stream Restoration	\$68,600.00

Watershed	Project Title	Brief Project Description	Sponsoring Organization	Project Category	Award
	Weber River Water-Quality Monitoring and Floodplain Restoration	In this project, we propose to complete floodplain and stream bank restoration in a degraded reach of the Weber River to enhance instream and riparian habitat, reduce sediment loading, and reduce nutrient loading. At the same time, we will implement a pilot program for collecting real-time water-quality data at three sites. The pilot program will help to monitor effects of the restoration work, engage community members, and develop monitoring methods that can be scaled throughout the state.	Trout Unlimited	Stream Restoration	\$65,000.00
	Upper East Canyon Creek 9-Element Watershed Plan	Create an EPA approved 9-element watershed plan for the upper East Canyon Creek watershed.	Trout Unlimited	EPA 9-Element Watershed Plan Development	\$38,830.00
	Weber Basin Floodplain Restoration Workshops FY26	We propose two workshops- one focused on the urban/ lower Weber and one focused on the rural/upper Weber Basin. Both will address floodplain restoration, providing stakeholders, local governments, planners, engineers, and private landowners with technologies and techniques to improve waterway health. These workshops will include visits to successful floodplain restoration projects, hands-on training, and the opportunity to network with partners to share ideas and best practices.	Sageland Collaborative	Information and Education	\$30,869.59
	Pace Trough Expansion Pt 2	This project will implement a pumping plant alongside troughs and piping to increase rangeland use and reduce riparian grazing pressure from cattle and sheep.	Utah Department of Agriculture and Food	Agricultural Nonpoint Source	\$20,000.00