

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

OPERATING PERMIT FOR TREATMENT, REUSE, AND LAND DISPOSAL OF TREATED
WASTEWATER

Operating Permit No. **UTOP9004**

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended* (the "Act"),

EMERY VALLEY SEWER, LLC

is hereby directed to have no discharge to Waters of the State

is hereby authorized to discharge treated effluent from its wastewater treatment facility to its land application site,

in accordance with specific limitations, outfalls, and other conditions set forth herein.

This permit shall become effective on December 1, 2021.

This permit expires at midnight on November 30, 2026.

Signed this 22nd day of November, 2021.



Erica Brown Gaddis, PhD
Director

DWQ-2021-002669

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

A. Description of Discharge Points. The authorization to discharge wastewater provided under this part is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under this permit are violations of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

<u>Reuse Outfall Number</u> 001R	<u>Location of Effluent Reuse Discharge Outfall</u> This discharge is from the Winter Storage Pond to pivot system sprinklers which will apply the treated effluent to the land.
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B. Narrative Standard. It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately, and lasting through the life of this permit, there shall be no acute or chronic toxicity in Outfall(s) 001R as defined in *Part VII* of this permit.
2. Such discharges shall be limited and monitored by the permittee as specified below:
 - a. **Influent** Self-Monitoring and Reporting Requirements

Table 1: Influent - Wastewater Treatment Plant Self-Monitoring and Reporting Requirements¹			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD

b. **Effluent** Limitations for Treatment Plant

Table 2: Effluent - Wastewater Treatment Plant				
	Average Monthly Discharge Limit	Average Weekly Discharge Limit	Daily Minimum	Daily Maximum
Total Flow, MGD	0.060			

(1) **Effluent Self-Monitoring and Reporting Requirements for Treatment Plant**

Table 3: Effluent - Wastewater Treatment Plant			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder or calculated ^{2, 3}	MGD

3. Effective immediately and lasting the duration of this permit, the permittee is authorized to operate the treatment facilities for Outfall 001R. Such discharges shall be limited and monitored by the permittee as specified below:

a. Outfalls 001R (Type II Reuse for Land Application)

Table 4: Reuse of Treated Effluent for Land Application				
Parameter	Outfall 001R Effluent Limitations ¹			
	Average Monthly Discharge Limit	Average Weekly Discharge Limit	Daily Minimum	Daily Maximum
BOD ₅ , mg/L	25	35		
TSS, mg/L	25	35		
<i>E. coli</i> , No./100 mL	126			500
pH, SU			6.5	9.0
TDS, mg/L				1,000
Total Inorganic Nitrogen, mg/L				10

(1) **Self-Monitoring and Reporting Requirements for Outfall 001R (Reuse)**

Table 5: Reuse of Treated Effluent for Land Application			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder or calculated ^{2, 3}	MGD
BOD ₅	Monthly	Composite ⁴	mg/L
TSS	Weekly		
<i>E. coli</i>	Weekly	Grab ⁴	No./100 mL
pH	Weekly	Grab ⁴	SU
TDS	Monthly	Grab ⁴	mg/L
Total Inorganic Nitrogen (TIN)	Monthly	Grab ⁴	mg/L
Total Nitrogen (TN)	Monthly	Grab ⁴	mg/L
Zinc	Monthly	Grab ⁴	mg/L
Phenol	Monthly	Grab ⁴	mg/L
Formaldehyde	Monthly	Grab ⁴	mg/L

4. Monitoring Well 001 shall be installed at the first saturated water below ground surface with a screen interval to maintain saturated conditions throughout seasonal variations.

a. Monitoring Well 001

(1) Self-Monitoring Requirements for Groundwater at the Land Application Site

Table 6: Groundwater Monitoring Requirements			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Depth	Biannual	Measured	ft
TDS	Biannual	Grab ⁵	mg/L
pH	Biannual	Grab ⁵	SU
<i>E. coli</i>	Biannual	Grab ⁵	No./100 mL
Total Inorganic Nitrogen (TIN)	Biannual	Grab ⁵	mg/L
Total Nitrogen (TN)	Biannual	Grab ⁵	mg/L

5. To prevent nitrogen loading to the aquifer, the effluent must be applied to the land application site at an agronomic rate.

a. Land Application Site

Table 7: Nutrient Loading Limits for Land Application	
	Maximum
Applied Nitrogen Percent	150% of average nitrogen uptake rate from crops as calculated below in Table 8.

¹ See Part VIII of the Permit, for definition of terms.

⁵ Groundwater Sample will be taken before and after the growing season.

(1) Self-Monitoring and Reporting Requirements for Land Application Site

Table 8: Table of Land Application Site Requirements		
Crop Harvested (tons/yr)	H	As measured based on harvest records
Land Application Area (acres)	A	Total area of land application site
Annual Crop Yield Equation: $H / A = Y$		
Annual Crop Yield (tons/acre/yr)	Y	Amount of alfalfa grown per acre in one growing season
Crop Nutrient Concentration Value (lbs N/ton)	C	Amount of Nitrogen contained within the alfalfa at harvest time
Crop Nitrogen Uptake: $Y * C = NU$		
Crop Nitrogen Uptake (lbs N/acre/yr)	NU	The average of the first year of Nitrogen Uptake Rates
Average Nitrogen Uptake Rate (lbs N/acre/yr)	ANU	The average of the past three years of Nitrogen Uptake Rates
Applied Nitrogen Equation: $(TIN * Q * CF / A) + F = AN$		
Treated Effluent Total Nitrogen (mg/L)	TN	As measured at 001R
Average Flow to Land Application Site (million gallons/yr)	Q	Volume of wastewater applied to the Land Application Site during growing season
Conversion Factor	CF	$8.34 \left(\frac{lb/MG}{mg/L} \right)$
Fertilizer (lbs N/acre/yr)	F	Amount (if any) of nitrogen applied as fertilizer to application site
Applied Nitrogen Percent: $AN/ANU = ANP$		
Applied Nitrogen (lbs N/acres/yr)	AN	
Applied Nitrogen Percent	ANP	Percent comparison of Applied Nitrogen to the Nitrogen Uptake Rate.

This permit requires that the Table 8 measurements and calculations be made for all wastewater land application cropping activity and be reported annually.

6. Compliance Schedule

- a. A Sampling and Analysis Plan (SAP) will be required to be submitted to DWQ within 90 days of permit issuance for review and approval.
 - (1) A project-specific SAP should address the purpose of monitoring, data quality objectives, frequency of sample collection, sample types, collection methods, analytical methods, sample handling, chain of custody, quality assurance requirements, assessment and review, record keeping, data handling, data storage, and project team roles and responsibilities.
 - (2) Please refer to DWQ's SAP checklist for a formal list of SAP requirements.
 - (3) Project-specific SAPs will be reviewed and approved by DWQ before project implementation.

<https://documents.deq.utah.gov/water-quality/monitoring-reporting/cooperative-monitoring/DWQ-2017-001770.pdf>

7. Acute/Chronic Whole Effluent Toxicity (WET) Testing

- a. A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2.

The permittee is a minor industrial facility that will be discharging an infrequent amount of effluent, in which toxicity is neither an existing concern, nor likely to be present. Also, the facility will be using land application for disposal. Based on these considerations, and the absence of receiving stream water quality monitoring data, there is no reasonable potential for toxicity in the permittee's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

D. Operations

1. Effective immediately and lasting the duration of this permit, a SCADA system will be installed to monitor operations and to alert the operator of any malfunctions.
2. Inspections:
 - a. A State of Utah Certified Wastewater Treatment Plant Operator of at least Grade II will inspect the facility once per quarter.
 - b. An employee of the resort will inspect the facility at least once per week.

E. Management Practices for Land Application of Treated Effluent

- (1) The application of treated effluent to frozen, ice-covered, or snow-covered land is prohibited.
- (2) No person shall apply treated effluent where the slope of the site exceeds 6 percent.
- (3) The use should not result in a surface water runoff.
- (4) The use must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.
- (5) Any irrigation with treated effluent must be at least 300 feet from a potable well and must comply with R309-600 requirements.
- (6) For Type I reuse, any irrigation must be at least 50 feet from any potable water well and must comply with R309-600 requirements.
- (7) For Type II reuse, any irrigation must be at least 300 feet from any potable water well and must comply with R309-600 requirements.
- (8) For Type II reuse, spray irrigation must be at least 100 feet from areas intended for public access. This distance may be reduced or increased by the Director.
- (9) Impoundments of treated effluent must be sealed.

- (10) Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.

F. Reporting of Monitoring Results.

1. Reporting of Groundwater and Reuse Monitoring Results.

Monitoring results obtained during the previous month shall be summarized for each month and filed on site in a Monthly Operational Report (MOR). MORs shall be available to DWQ on request.

The biannual monitoring results from the groundwater monitoring well must only be included in the annual report. Monitoring results obtained during the previous calendar year shall be summarized and submitted in an Annual Report by May 1st. The report shall include all results culminated from Tables 1-6 in a tabular summary of the monthly minimum, average, and maximum values of all samples and analyses required by this permit. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the requirements of Signatory Requirements (see Part VII.G), and submitted to the Division of Water Quality via the Division of Water Quality – Water Quality Electronic Submissions portal at:

<https://deq.utah.gov/water-quality/water-quality-electronic-submissions>

With e-Delivery Submittal Purpose of Submission:

Emery Valley Sewer Annual Report – Operating Permit No. UTOP9004.

2. A Sampling and Analysis Plan (SAP) will be required to be submitted to DWQ within 90 days of permit issuance for review and approval.

The SAP shall be signed and certified in accordance with the requirements of Signatory Requirements (see Part VII.G), and submitted to the Division of Water Quality via the Division of Water Quality – Water Quality Electronic Submissions portal at:

<https://deq.utah.gov/water-quality/water-quality-electronic-submissions>

With e-Delivery Submittal Purpose of Submission:

Emery Valley Sewer SAP – Operating Permit No. UTOP9004.

II. BIOSOLIDS REQUIREMENTS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. Emery Valley Sewer must apply for a biosolids permit by completing *Part I and Part VIII. Biosolids Information* in the UPDES Municipal POTW Permit Application on the Utah DWQ Website:

<https://documents.deq.utah.gov/water-quality/surface-water/updes/DWQ-2019-012792.pdf>

III. PRETREATMENT REQUIREMENTS

- A. Definitions. For this section the following definitions shall apply:
1. *Indirect Discharge* means the introduction of pollutants into a publicly-owned treatment works (POTW) from any non-domestic source regulated under section 307 (b), (c) or (d) of the CWA.
 2. *Interference* means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
 - a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
 - b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
 3. *Local Limit* is defined as a limit designed to prevent pass through and/or interference. And is developed in accordance with 40 CFR 403.5(c).
 4. *Pass Through means* a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
 5. *Significant industrial user (SIU)* is defined as an industrial user discharging to a POTW that satisfies any of the following:
 - a. Has a process wastewater flow of 25,000 gallons or more per average work day;
 - b. Has a flow greater than five percent of the flow carried by the system receiving the waste;
 - c. Is subject to Categorical Pretreatment Standards, or
 - d. Has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.
 6. *User or Industrial User (IU)* means a source of Indirect Discharge

B. Pretreatment Monitoring and Reporting Requirements.

1. Because the wastewater treatment facility is not a POTW the permittee will not be required to develop an approved industrial pretreatment program. However, in order to determine the need for pretreatment assistance, the permittee shall conduct an **industrial waste survey**, as described in *Part III.C.1*, and submit it to the Director within **sixty (60) calendar days** of the effective date of this permit.
2. Monitoring will not be required of the permittee at this time. If changes occur monitoring may be required for parameters not currently listed in the permit or current monitoring requirements may be required to be increased to determine the impact of an industrial user or to investigate sources of pollutant loading. This could include but is not limited to sampling of the influent and effluent of the wastewater treatment plant and within the collection system.

C. Industrial Wastes.

1. The "Industrial Waste Survey" as required by *Part III.B.1*. consists of;
 - a. Identifying each industrial user (IU) and determining if the IU is a significant industrial user (SIU),
 - b. Indicate if the IU has the potential to discharge process wastewater,
 - c. Determination of the qualitative and quantitative characteristics of each discharge, and
 - d. Appropriate production data.
2. The IWS must be maintained and updated with IU information as necessary, to ensure that all IUs are properly controlled at all times. Updates must be submitted to the Director sixty (60) days following a change to the IWS.
3. It is recommended that the permittee do the following:
 - a. Evaluate all significant industrial users at least once every two years to determine if they need to develop a slug prevention plan. If a slug prevention plan is required, the permittee shall notify the Director.
 - b. Notify all industrial users of their obligation to comply with applicable requirements under *Subtitles C and D* of the *Resource Conservation and Recovery Act (RCRA)*.
 - c. Report to the Director any challenges with inspecting or notifying industrial users of pretreatment requirements.
4. The permittee must notify the Director of any new introductions by new or existing SIUs or any substantial change in pollutants from any major industrial source. Such notice must contain the information described in 1. above, and be forwarded no later than sixty (60) days following the introduction or change.

- D. General and Specific Prohibitions.** The permittee should ensure that no IU violates any of the general or specific standards. If an IU is found violating a general or specific standard the permittee should notify the Director within 24 hours of the event. The general prohibitions and the specific prohibitions apply to each User introducing pollutants into a POTW whether or not

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the User is subject to other Pretreatment Standards or any national, State or local Pretreatment Requirements. The general prohibitions and the specific prohibitions apply to each User introducing pollutants into a POTW whether or not the User is subject to other Pretreatment Standards or any national, State or local Pretreatment Requirements.

1. General prohibition Standards. The permittee may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph 2. of this section apply to the introducing pollutants into a POTW whether or not the permittee is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.
2. Specific Prohibited Standards. Developed pursuant to *Section 307 of The Water Quality Act of 1987* require that under no circumstances shall the permittee allow introduction of the following pollutants into the waste treatment system from any User (*40 CFR 403.5*):
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste-streams with a closed cup flashpoint of less than 140°F (60°C);
 - b. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
 - d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at such volume or strength as to cause interference in the POTW;
 - e. Heat in amounts, which will inhibit biological activity in the POTW, resulting in interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104°F (40°C);
 - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems; or,
 - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
 - i. Any pollutant that causes pass through or interference at the POTW.
 - j. Any prohibited standard which the permittee has adopted in an ordinance or rule to control IU discharge to the POTW.
 - k. In addition to the general and specific limitations expressed above, more specific pretreatment limitations have been and will be promulgated for specific industrial categories under *Section 307 of the Water Quality Act of 1987 as amended (WQA)*. (*See 40 CFR, Subchapter N, Parts 400 through 500, for specific information*).

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- E. Categorical Standards. In addition to the general and specific limitations expressed in Part II. D. of this section, applicable National Categorical Pretreatment Standards must be met by all industrial users discharging into a POTW. These standards are published in the federal regulations at 40 CFR 405 through 471.
- F. Discharge to POTW. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of The Water Quality Act of 1987, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at 40 CFR 403, the State Pretreatment Requirements at UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters. At a minimum the discharge, into a POTW, must meet the requirements of Part II of the permit.
- G. Hazardous Waste Notification. The permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under 40 CFR 261. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).
- H. Significant Industrial Users Discharges. The permittee shall provide adequate notice to the Director and the Division of Water Quality Industrial Pretreatment Coordinator of;
1. Any new introduction of pollutants into the treatment works from an indirect discharger (i.e., industrial user) which would be subject to *Sections 301 or 306* of the *WQA* if it were directly discharging those pollutants;
 2. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit; and
 3. For the purposes of this section, adequate notice shall include information on:
 - a. The quality and quantity of effluent to be introduced into such treatment works; and,
 - b. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from such publicly owned treatment works.
 4. Any IU that must comply with applicable requirements under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA).
- I. Change of Conditions. At such time as a specific pretreatment limitation becomes applicable to an industrial user of the permittee, the Director may, as appropriate, do the following:
1. Amend the permittee's UPDES discharge permit to specify the additional pollutant(s) and corresponding effluent limitation(s) consistent with the applicable national pretreatment limitation;
 2. Require the permittee to specify, by ordinance, contract, or other enforceable means, the type of pollutant(s) and the maximum amount which may be discharged to the permittee's

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facility for treatment. Such requirement shall be imposed in a manner consistent with the POTW program development requirements of the *General Pretreatment Regulations* at 40 CFR 403; and/or,

3. Require the permittee to monitor its discharge for any pollutant, which may likely be discharged from the permittee's facility, should the industrial user fail to properly pretreat its waste.
 4. Require the permittee to develop an approved pretreatment program.
- J. Legal Action. The Director retains, at all times, the right to take legal action against the industrial user and/or the treatment works, in those cases where a permit violation has occurred because of the failure of an industrial user to discharge at an acceptable level. If the permittee has failed to properly delineate maximum acceptable industrial contributor levels, the Director will look primarily to the permittee as the responsible party.

IV. STORM WATER REQUIREMENTS.

A. Industrial Storm Water Permit. Based on the type of industrial activities occurring at the facility, the permittee may be required to maintain separate coverage or an appropriate exclusion under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). The Utah Administrative Code (UAC) R-317-8-3.9 requires storm water permit provisions to include the development of a storm water pollution prevention plan for wastewater treatment facilities if the facility meets one or both of the following criteria.

1. Wastewater treatment facilities with a design flow of 1.0 MGD or greater, and/or,
2. Wastewater treatment facilities with an approved pretreatment program as described in 40 CFR Part 403,

Emery Valley Sewer does not meet either of the above criteria; therefore, this permit does not include storm water provisions. The permit does however include a storm water re-opener provision.

B. Construction Storm Water Permit. Any construction at the facility that disturbs an acre or more of land, including less than an acre if it is part of a common plan of development or sale, is required to obtain coverage under the UPDES Construction General Storm Water Permit (UTRC00000). Permit coverage must be obtained prior to land disturbance. If the site qualifies, a Low Erosivity Waiver (LEW) Certification may be submitted instead of permit coverage.

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MONITORING, RECORDING AND REPORTING REQUIREMENTS

V. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sample for reuse shall be collected after the storage reservoir prior to being pressurized in to the irrigation system. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10 and 40CFR Part 503*, unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- E. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10 and 40 CFR 503* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Reports or the Biosolids Report Form. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.
- F. Records Contents. Records of monitoring information shall include:
- i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) and time(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and,
 - vi. The results of such analyses.
- G. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this permit must be maintained on site during the duration of activity at the permitted location

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H. Twenty-four Hour Notice of Noncompliance Reporting.

- i. The permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24-hour answering service (801) 536-4123.
- ii. The following occurrences of noncompliance shall be reported by telephone (801) 536-4300 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
 1. Any noncompliance which may endanger health or the environment;
 2. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part VI.G, Bypass of Treatment Facilities.*);
 3. Any upset which exceeds any effluent limitation in the permit (See *Part VI.H, Upset Conditions.*);
 4. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit; or,
 5. Violation of any of the metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
- iii. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 1. A description of the noncompliance and its cause;
 2. The period of noncompliance, including exact dates and times;
 3. The estimated time noncompliance is expected to continue if it has not been corrected;
 4. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
 5. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
- iv. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.

PART V
OPERATING PERMIT NO. UTOP9004
MONITORING, RECORDING AND REPORTING REQUIREMENTS

- v. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results*.

- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part V.H.3*

- J. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 - i. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;
 - iv. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,
 - v. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

VI. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions or the Act is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding \$50,000 per day. Except as provided at *Part VI.G, Bypass of Treatment Facilities* and *Part VI.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.
- G. Bypass of Treatment Facilities.
 - i. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.

**PART VI
OPERATING PERMIT NO. UTOP9004
COMPLIANCE RESPONSIBILITIES**

ii. Prohibition of Bypass.

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - a. Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - c. The permittee submitted notices as required under *section VI.G.3*.
2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *sections VI.G.2.a (1), (2) and (3)*.

iii. Notice.

1. *Anticipated bypass.* Except as provided above in *section VI.G.2* and below in *section VI.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
 - a. Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
 - b. A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
 - c. Description of specific measures to be taken to minimize environmental and public health impacts;
 - d. A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
 - e. A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
 - f. Any additional information requested by the Director.

**PART VI
OPERATING PERMIT NO. UTOP9004
COMPLIANCE RESPONSIBILITIES**

2. *Emergency Bypass.* Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *section VI.G.3.a.(1) through (6)* to the extent practicable.
3. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part V.H, Twenty-Four Hour Reporting.* The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

- i. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
- ii. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 1. An upset occurred and that the permittee can identify the cause(s) of the upset;
 2. The permitted facility was at the time being properly operated;
 3. The permittee submitted notice of the upset as required under *Part V.H, Twenty-four Hour Notice of Noncompliance Reporting;* and,
 4. The permittee complied with any remedial measures required under *Part VI.D, Duty to Mitigate.*
- iii. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

VII. GENERAL REQUIREMENTS

- A. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of parameters discharged or pollutant sold or given away. This notification applies to pollutants, which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.
- B. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.
 - i. All permit applications shall be signed by either a principal executive officer or ranking elected official.
 - ii. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to the Director, and,

**PART VII
OPERATING PERMIT NO. UTOP9004
GENERAL REQUIREMENTS**

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
- iii. Changes to authorization. If an authorization under *paragraph VII.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph VII.G.2* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
- iv. Certification. Any person signing a document under this section shall make the following certification:

"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 manage 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 and imprisonment for knowing violations."

- H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.
- I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held

**PART VII
OPERATING PERMIT NO. UTOP9004
GENERAL REQUIREMENTS**

invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

- M. Transfers. This permit may be automatically transferred to a new permittee if:
- i. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;
 - ii. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
 - iii. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117* and *Section 510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
- i. Water Quality Standards for Waters of the State to which the permittee discharges or Reuse Standards are modified in such a manner as to require different effluent limits than contained in this permit.
 - ii. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
 - iii. Revisions to the current CWA § 208 areawide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.
- P. Biosolids – Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate biosolids limitations (and compliance schedule, if necessary), management practices, other appropriate requirements to protect public health and the environment, or if there have been substantial changes (or such changes are planned) in biosolids use or disposal practices; applicable management practices or numerical limitations for pollutants in biosolids have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined that the permittees biosolids use or land application practices do not comply with existing applicable state or federal regulations.

PART VII
OPERATING PERMIT NO. UTOP9004
GENERAL REQUIREMENTS

- Q. Storm Water-Reopener Provision. At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317-8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-State".
- R. Toxicity Limitation - Reopener Provision.
This permit may be reopened and modified (following proper administrative procedures) to include WET testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

VIII. DEFINITIONS

A. Wastewater.

- i. The “7-day (and weekly) average”, other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
- ii. The "30-day (and monthly) average," other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
- iii. “Act,” means the *Utah Water Quality Act*.
- iv. “Acute toxicity” occurs when 50 percent or more mortality is observed for either species at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the effluent results to be considered valid.
- v. “Aquifer Classification” R317-6 define ground water classes based on existing ground water quality, establish allowable levels of contaminants based on ground water class, and define procedures for formal classification of aquifers.
- vi. "BOD" means 5-day, 20 degrees C. biochemical oxygen demand.
- vii. “Bypass,” means the diversion of waste streams from any portion of a treatment facility.
- viii. “Chronic toxicity” occurs when during a chronic toxicity test, the 25% inhibition concentration (IC₂₅) calculated on the basis of test organism survival and growth, or survival and reproduction, is less than or equal to the effluent dilution designated as the receiving water concentration (RWC).
- ix. "IC₂₅" is a point estimate of the toxicant concentration that would cause a 25% reduction in a biological measurement of the test organism, such as reproduction or growth.

**PART VIII
OPERATING PERMIT NO. UTOP9004
DEFINITIONS**

- x. “Composite Samples” shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
 - 1. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
 - 2. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
 - 3. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every “X” gallons of flow); and,
 - 4. Continuous sample volume, with sample collection rate proportional to flow rate.

- xi. “CWA,” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.

- xii. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.

- xiii. “EPA,” means the United States Environmental Protection Agency.

- xiv. “Director,” means Director of the Division of Water Quality.

- xv. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.

- xvi. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

- xvii. “Severe Property Damage,” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- xviii. “Upset,” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

**FACT SHEET STATEMENT OF BASIS
EMERY VALLEY SEWER, LLC
OPERATING PERMIT FOR TREATMENT AND REUSE OF TREATED WASTEWATER
PERMIT NUMBER: UTOP9004**

FACILITY CONTACTS

Person Name:	Steve Pitts	Person Name:	Brad Rasmussen
Position:	Manager	Position:	Engineer
Phone Number:	(435) 319-0421	Phone Number:	(801) 299-1327

Facility Name: Emery Valley Sewer, LLC
Facility Mailing Address: 14 North University Ave. #411
Provo, UT 84604

Telephone: TBD
Actual Address: TBD

DESCRIPTION OF FACILITY

Emery Valley Sewer will consist of a head works, followed by a Sequencing Batch Reactor (SBR) system to treat the wastewater from the hotels, RV resort, restaurants, cabins, and retail stores. The system will be able to perform primary and secondary treatment. Waste sludge will be held in a holding tank, dewatered and landfilled. The effluent from the SBR will be disinfected and sent to the winter storage pond where it will be either pumped to the land application site (during the growing season) or stored (during the winter). The design flow of the facility will be 60,000 gallons per day. The treatment facility will be located on the far east side of the property.

The winter storage pond will be located on the east side of the property, next to the treatment facility. The land application site will be located on the far northwest side of the property. The storage pond capacity will be 10.8 million gallons, which is equivalent to 180 days of the design flow of the facility. After the treated wastewater goes through UV disinfection, the treated effluent will discharge into the winter storage pond. The specified treatment process will allow for the effluent to meet Type II reuse standards.

DESCRIPTION OF DISCHARGE

The discharge point to the Winter Storage Ponds.

Land Application from Winter Storage Ponds

The discharge from the pivot system sprinkler heads is known as Outfall 001R. The land application site is 40 acres in area and will have a 100-foot buffer zone.

RECEIVING WATERS AND CLASSIFICATION

Reuse of Winter Storage Pond Water for Land Application

The land application site sits over a drinking water aquifer within the East Fork Sevier River Watershed. According to R317-2-12.1, the aquifer underneath the land application site is a Category 1A Water of the State. A monitoring well will be installed to measure the groundwater quality downslope of the land application site.

Spray irrigation is not permitted over any surface Waters of the State. Spray irrigation will be applied at agronomic rates and should not result in a surface runoff and must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.

BASIS FOR EFFLUENT LIMITATIONS FOR THE WASTEWATER TREATMENT PLANT

Monitoring is required to demonstrate compliance with all effluent limitations. A SCADA system will be installed to monitor operations and to alert the operator of any malfunctions. A Level II operator will inspect the facility once per month and a trained employee of the resort will inspect the facility once per week. The influent monitoring requirements are shown in Table 1.

a. **Influent** Self-Monitoring and Reporting Requirements for Treatment Plant

Table 1: Influent - Wastewater Treatment Plant			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD

b. **Effluent** Limitations for Treatment Plant

The effluent limitation in Table 2 is being set based on the design report for the treatment system.

Table 2: Effluent - Wastewater Treatment Plant				
	Average Monthly Discharge Limit	Average Weekly Discharge Limit	Daily Minimum	Daily Maximum
Total Flow, MGD	0.060			

c. **Effluent** Self-Monitoring and Reporting Requirements for Treatment Plant in Table 3.

¹ See Part VIII of the Permit, for definition of terms.

² Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained

³ If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

Table 3: Effluent - Wastewater Treatment Plant			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder or calculated ^{2, 3}	MGD

The inclusion of biological oxygen demand (BOD₅), total suspended solids (TSS), *E. coli*, and pH as pollutants of concern (POC) requiring effluent limits and the effluent limitations are based on current Utah Use, Land Application and Alternate Methods for Disposal of Treated Wastewater Effluents, *UAC R317-3-11.4*.

BASIS FOR EFFLUENT LIMITATIONS FOR THE LAND APPLICATION SITE

The effluent limits for the Reuse Outfall 001 are shown in Table 4. The inclusion of Total Inorganic Nitrogen and Total Dissolved Solids (TDS) as POC requiring effluent limits is based on BPJ and the protection of an underlining Class 1A aquifer.

Table 4: Reuse of Treated Effluent for Land Application				
Parameter	Outfall 001R Effluent Limitations²			
	Average Monthly Discharge Limit	Average Weekly Discharge Limit	Daily Minimum	Daily Maximum
BOD ₅ , mg/L	25	35		
TSS, mg/L	25	35		
<i>E. coli</i> , No./100 mL	126			500
pH, SU			6.5	9.0
TDS, mg/L				1,000
Total Inorganic Nitrogen, mg/L				10.0

The monitoring requirements for the treated effluent that is transported from the winter storage pond and applied to the land application site are shown in Table 5. Monitoring frequencies have been reduced to monthly due to the small design capacity of the treatment facility, remote nature of the site, the use of a SCADA system capable of being monitored remotely, and having a Level II wastewater treatment plant operator responsible for the operation of the treatment plant. Zinc, Phenol, and Formaldehyde monitoring requirements are included because of the potential for R/V waste to be accepted by the Emery Valley Sewer system.

Table 5: Reuse of Treated Effluent for Land Application			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder or Calculated ^{2, 3}	MGD
BOD ₅	Monthly	Composite ⁴	mg/L
TSS	Weekly	Composite ^{4, 6}	mg/L
<i>E. coli</i>	Weekly	Grab ⁴	No./100 mL
pH	Weekly	Grab ⁴	SU
TDS	Monthly	Grab ⁴	mg/L
Total Inorganic Nitrogen	Monthly	Grab ⁴	mg/L
Total Nitrogen	Monthly	Grab ⁴	mg/L
Zinc	Monthly	Grab ⁴	mg/L
Phenol	Monthly	Grab ⁴	mg/L
Formaldehyde	Monthly	Grab ⁴	mg/L

- a. Self-Monitoring Requirements for Groundwater at the Land Application Site. Monitoring Well 001 shall be installed at the first saturated water below ground surface with a screen interval to maintain saturated conditions throughout seasonal variations.

Table 6: Groundwater Monitoring Requirements			
Self-Monitoring and Reporting Requirements ¹			
Parameter	Frequency	Sample Type	Units
Depth	Biannual	Measured	ft
TDS	Biannual	Grab ⁵	mg/L
pH	Biannual	Grab ⁵	SU
<i>E. coli</i>	Biannual	Grab ⁵	No./100 mL
Total Inorganic Nitrogen (TIN)	Biannual	Grab ⁵	mg/L
Total Nitrogen (TN)	Biannual	Grab ⁵	mg/L

The groundwater sample taken before irrigation season will determine the background concentration of Total Nitrate/Nitrite. Following R317-6-4.2-B.3, when the groundwater sample is taken after the growing season, the concentration of Total Nitrate/Nitrite in the groundwater must not exceed 1.25 times the background concentration as established by the Utah Geological Survey 2021 Groundwater Quality

¹ See Part VIII of the Permit, for definition of terms.

² Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

³ If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

⁴ Samples shall be collected after the industrial wastewater holding ponds prior to pressurization in the distribution lines.

⁵ Groundwater sample will be taken before and after growing season.

⁶ Properly calibrated, continuous monitoring of turbidity may be substituted for the suspended solids testing.

Classification, Bryce Canyon Area, Garfield County, Utah, or 0.25 times the ground water quality standard of 10 mg/L of Total Nitrate/Nitrite. The underlining aquifer is anticipated to be a Class 1A pristine aquifer thus the groundwater should not be increased above 2.5 mg/L of Total Nitrate/Nitrite.

b. Land Application Site

To prevent nitrogen loading to the aquifer, the effluent must be applied to the land application site at an agronomic rate. The State of Idaho has shown that this is an effective method to prevent effluent discharge to the aquifer. Along with Idaho's Guidance, and BPJ, DWQ staff determined that 150% is an acceptable Applied Nitrogen Percent.

Table 7: Nutrient Loading Limits for Land Application	
	Maximum
Applied Nitrogen Percent	150% of average nitrogen uptake rate from crops as calculated below in Table 8.

(1) Self-Monitoring and Reporting Requirements for Land Application Site

Table 8: Table of Land Application Site Requirements		
Crop Harvested (tons/yr)	H	As measured based on harvest records
Land Application Area (acres)	A	Total area of land application site
Annual Crop Yield Equation: $H / A = Y$		
Annual Crop Yield (tons/acre/yr)	Y	Amount of alfalfa grown per acre in one growing season
Crop Nutrient Concentration Value (lbs N/ton)	C	Amount of Nitrogen contained within the alfalfa at harvest time
Crop Nitrogen Uptake: $Y * C = NU$		
Crop Nitrogen Uptake (lbs N/acre/yr)	NU	The average of the first year of Nitrogen Uptake Rates
Average Nitrogen Uptake Rate (lbs N/acre/yr)	ANU	The average of the past three years of Nitrogen Uptake Rates
Applied Nitrogen Equation: $(TIN * Q * CF / A) + F = AN$		
Treated Effluent Total Inorganic Nitrogen (mg/L)	TN	As measured at 001R
Average Flow to Land Application Site (million gallons/yr)	Q	Volume of wastewater applied to the Land Application Site during growing season
Conversion Factor	CF	$8.34 \left(\frac{lb/MG}{mg/L} \right)$
Fertilizer (lbs N/acre/yr)	F	Amount (if any) of nitrogen applied as fertilizer to application site
Applied Nitrogen Percent: $AN/ANU = ANP$		
Applied Nitrogen (lbs N/acres/yr)	AN	
Applied Nitrogen Percent	ANP	Percent comparison of Applied Nitrogen to the Nitrogen Uptake Rate.

This permit requires that the Table 8 measurements and calculations be made and included in the annual report.

Also, these management practices must be followed for land application of treated effluent:

- (1) The application of treated effluent to frozen, ice-covered, or snow-covered land is prohibited.
- (2) No person shall apply treated effluent where the slope of the site exceeds 6 percent.
- (3) The use should not result in a surface water runoff.
- (4) The use must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.
- (5) Any irrigation with treated effluent must be at least 300 feet from a potable well and must comply with R309-600 requirements.
- (6) For Type I reuse, any irrigation must be at least 50 feet from any potable water well must comply with R309-600 requirements.
- (7) For Type II reuse, any irrigation must be at least 300 feet from any potable water well and must comply with R309-600 requirements.
- (8) For Type II reuse, spray irrigation must be at least 100 feet from areas intended for public access. This distance may be reduced or increased by the Director.
- (9) Impoundments of treated effluent must be sealed, and must be at least 500 feet from any potable well.
- (10) Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.

A Sampling and Analysis Plan (SAP) will be required to be submitted to DWQ within 90 days of permit issuance for review and approval. A project-specific SAP should address the purpose of monitoring, data quality objectives, frequency of sample collection, sample types, collection methods, analytical methods, sample handling, chain of custody, quality assurance requirements, assessment and review, record keeping, data handling, data storage, and project team roles and responsibilities. Please refer to DWQ's SAP checklist for a formal list of SAP requirements. Project-specific SAPs will be reviewed and approved by DWQ before project implementation. <https://documents.deq.utah.gov/water-quality/monitoring-reporting/cooperative-monitoring/DWQ-2017-001770.pdf>

BIOSOLIDS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. Emery Valley Sewer must apply for a biosolids permit by completing *Part I and Part VIII. Biosolids Information* in the UPDES Municipal POTW Permit Application on the Utah DWQ Website: <https://documents.deq.utah.gov/water-quality/surface-water/updes/DWQ-2019-012792.pdf>.

PRETREATMENT

The permittee has not been designated to develop a pretreatment program since the facility is not a body politic therefore is not a publicly owned treatment works (POTW). Although the facility is not a POTW the need for information related to pollutants of concern must be provided to adequately permit the facility therefore an industrial waste survey (IWS) is required. Part III of the permit includes the requirements for the IWS. The IWS is also to assess the needs of the permittee regarding pretreatment assistance. The IWS is required to be submitted within sixty (60) days after the issuance of the permit. If an industrial user

begins to discharge or an existing industrial user changes their discharge the permittee must resubmit an IWS no later than sixty days following the introduction or change as stated in Part III of the permit.

Any wastewater discharged to a POTW, either as a direct discharge or as a hauled waste, is subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of the CWA, the permittee shall comply with all applicable Federal Pretreatment Regulations promulgated at 40 CFR Part 403, the State Pretreatment Requirements at UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with 40 CFR Part 403.12(p)(1), the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if the permittee discharges any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under 40 CFR Part 261. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

STORM WATER REQUIREMENTS

Based on the type of industrial activities occurring at the facility, the permittee may be required to maintain separate permit coverage, or an appropriate exclusion, under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). The Utah Administrative Code (UAC) R-317-8-3.9 requires storm water permit provisions to include the development of a storm water pollution prevention plan for waste water treatment facilities if the facility meets one or both of the following criteria.

1. Waste water treatment facilities with a design flow of 1.0 MGD or greater, and/or,
2. Waste water treatment facilities with an approved pretreatment program as described in 40CFR Part 403,

Emery Valley Sewer does not meet either of the above criteria; therefore this permit does not include storm water provisions. The permit does however include a storm water re-opener provision.

Separate permit coverage under the Construction General Storm Water Permit (CGP) may be required for any construction at the facility which disturbs an acre or more of land, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water permit prior to the period of construction. This can also be accomplished online: <https://deq.utah.gov/water-quality/general-construction-storm-water-updes-permits>.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority

to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2.

The permittee is a minor industrial facility that will be discharging an infrequent amount of effluent, in which toxicity is neither an existing concern, nor likely to be present. Also, the facility will be using land application for disposal. Based on these considerations and the absence of receiving stream water quality monitoring data, there is no reasonable potential for toxicity in the permittee's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

REPORTING REQUIREMENTS

Monitoring results obtained during the previous month shall be summarized for each month and filed on site in a Monthly Operational Report (MOR). MORs shall be available to DWQ on request. The biannual monitoring results from the groundwater monitoring well must only be included in the annual report. Monitoring results obtained during the previous calendar year shall be summarized and submitted in an Annual Report by May 1st. The report shall include a tabular summary of the monthly minimum, average, and maximum values.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Andrew Pompeo E.I.T., Discharge Permit
Sarah Ward, Reuse
Dan Griffin, Biosolids
Jennifer Robinson, Pretreatment
Lisa Stevens, Stormwater
Lonnie Shull, Biomonitoring
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: March 19, 2021
Ended: June 1, 2021

Comments will be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Noticed of the draft permit was published on the Department of Environmental Quality Division of Water Quality Public Notice website.

During the public comment period provided under R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in R317-8-6.12.

ADDENDUM TO FACT SHEET

During finalization of the Permit certain dates, spelling edits and minor language corrections may be completed. Due to the nature of these changes they are not considered major and the permit was not required to be Public Noticed again.

RESPONSIVENESS SUMMARY

Comments were received during the public comment period and a public hearing was held. The comments received at the public hearing were also received as written comments. Therefore, those comments are answered in the Emery Valley Sewer, LLC, UTOP9004 Public Comment Responsiveness Summary document (DWQ-2021-015940).

**Emery Valley Sewer, LLC
UTOP9004
Public Comments Responsiveness Summary**

Comment Number	Public Commenter First Name	Public Commenter Last Name	Comment Date	Public Comment Document No.	Public Comment to Respond to (UDWQ sometimes splits the original public comments to make sure each comment within a larger comment submission is addressed).	DWQ's Response
1.1.	Pio	Lombardo	2-Apr-21	DWQ-2021-012477	HolmBrands is a nearby property owner to the subject project and has significant concerns that the proposed permit will cause irreparable damages to the use of its property. HolmBrands and LAI/Pio Lombardo, P.E. are of the opinion that the permit documents provided at the Utah Department of Environmental Quality (UDEQ)'s project permit website https://deq.utah.gov/businesses-facilities/emery-valley-sewer-llc are insufficient for a proper public review. We respectfully request that the permit processing be delayed until all engineering and environmental reports are made publicly available and sufficient time provided for public review to enable meaningful public comment.	In accordance with R317-8-6.5-2, DWQ initially publicized a 30-day public comment period. In response to requests and interest, a public hearing was held on May 19, 2021 and the comment period was extended from March 19, 2021 and closed June 1st for a total of 75 days. During this time the Operating Permit and FSSOB were made available on the DWQ website for public comment; other documents were made available on the DWQ website for convenience. Any additional documents were, and continue to be, available- although the public comment period for this permit has ended, in accordance with GRAMA requirements. DWQ is satisfied that reasonable opportunity to access, review and comment on the documents was provided in accordance with the rule requirements. Emery Valley Sewer's Project Plan, Operating Permit Application, and DEQ rules were used to establish permit parameters as documented in the FSSOB and Operating Permit. The FSSOB and Operating Permit are the only documents open for public comment. The Operating Permit sets the parameters for which Emery Valley Sewer must meet to remain in compliance. Specific design criteria are not required for the Operating Permit, but are required for the Construction Permit. Design criteria of the system, sampling methods, and its operation are not open for public comment. The Construction Permit will contain design criteria which will allow Emery Valley Sewer to meet the requirements of the Operating Permit.
1.2.					Our overall comment is that the Utah Division of Water Quality needs to either withdraw or place the permit on pause.	The Division does not have the discretion to delay or deny a permit for matters not related to protecting waters of the state. Accordingly, only comments related to protection of waters of the state are relevant to whether the DWQ shall: 1) issue the permit; 2) issue with modifications to the draft version, or; 3) deny issuance. As the comment does not provide any factual basis for DWQ to assess or determine possible impacts to water quality, DWQ does not have the authority to withdraw (deny) or delay the permit based on these comments as further described herein.
1.3.					Any further consideration of the permit should only occur after full disclosure of the project documents of Site Evaluation & Conceptual Plan, Design Basis Report, Plans & Specifications and providing a minimum of four (4) weeks for review after being publicly available via the web. Insufficient information is available to assess the proposed permit's compliance with the numerous statutory requirements, such as R309-600 and R317-3-11. Rather the information provided indicates violations and noncompliance will occur on important pristine groundwater protection and public health matters.	The Draft Permit requires compliance with all applicable rules and statutes, any noncompliance with the Water Quality Act or Rules or the Draft Permit will constitute grounds for enforcement action. See also Response 1.1
1.4.					UDEQ Public Notice Document March 19, 2021 document states "Public Notice of Renewal of an Operating Permit" Clarification on the history and basis for the previously issued operating permit that is being renewed is needed.	Thank you for catching the error, the word "Renewal" was a typo and was fixed in the public notice extension. This Operating Permit is for a new project and is the first issuance. There is no history for this facility.
1.5.					Facility Location: TBD on the east side of the Emery Valley property in the Bryce Area We respectfully request that the permit consideration be withdrawn as To Be Determined (TBD) for Facility Location is inappropriate for a permit application to be considered. Clearly the public cannot comment on an important matter whose location has not been determined.	The design parameters of the of the Emery Valley Sewer development, such as facility location, treatment system design, sludge handling procedures, etc., do not affect any of the factors in determining operating permit requirements or compliance criteria in the operating permit (see Operating Permit Part I.C). Therefore, DWQ is satisfied that the term "TBD" as used in this context is adequate for compliance with the applicable rules. Figure 2 in the Project Plan indicates the location of the treatment facility, although the final location will be determined in the Construction Permit per R317-3-1.3. Specifically, R317-3-11.3 requires items that must be in a Project Plan submitted and approved by the Director, some of which must be provided prior to construction, but are not required to be provided prior to Operating Permit approval.
1.6.					Background - No documents are provided to provide the design basis for the representations on wastewater collection and treatment, and land application system sizing. Consequently, due to this lack of transparency and full disclosure, the public is prevented from providing comments. Therefore, permit consideration must be withdrawn until full public disclosure is made.	Please see responses 1.1 and 1.5. The Project Plan and Permit Application were the documents provided to base the operating permit requirements. The Fact Sheet describes the basis for the permit requirements. Documentation on the design basis is required for the construction permit application, which is a separate process. Design basis is not required for an operating permit.
1.7.					UDEQ Fact Sheet Statement of Basis Document a. Design Flow 60,000 gpd - no design basis provided	The design flow is based on the anticipated flows from the commercial facilities stated in the Fact Sheet: hotels, RV resort, restaurants, cabins, and retail stores.
1.8.					b. Winter storage (6 months) volume 10,800,000 gallons – no dimensions or maps showing location are provided	Please see response 1.5.

**Emery Valley Sewer, LLC
UTOP9004
Public Comments Responsiveness Summary**

Comment Number	Public Commenter First Name	Public Commenter Last Name	Comment Date	Public Comment Document No.	Public Comment to Respond to (UDWQ sometimes splits the original public comments to make sure each comment within a larger comment submission is addressed).	DWQ's Response
1.9.					c. Type II reuse standards are to be achieved with treatment system of SBR + UV disinfection to treat wastewater from the hotels, RV resort, restaurants, cabins, and retail stores. RV facilities are notorious for having very high strength wastewater with chemicals, such as formaldehyde and zinc, that inhibit wastewater treatment and whose disposal can cause groundwater contamination. The Project needs to describe how RV waste will be managed so as not to cause wastewater treatment plant to malfunction and not to cause groundwater contamination of the pristine drinking water Class 1 aquifer.	Thank you for your comment. DWQ agrees with the monitoring for RV disposal and has added monitoring for formaldehyde, zinc, and phenol to the Operating Permit.
1.10.					d. Waste sludge will be held in a holding tank, dewatered and landfilled. Clarification needed on whether dewatering will be done with on-site equipment and odor control measures.	Please see response 1.5.
1.11.					e. Spray irrigation of Alfalfa 40 acres – Need clarification if 100-foot buffer is included in 40 acres and what is net irrigation acres. Spray irrigation water and nutrient balances, on a no less frequent than weekly basis, are needed for public to be assess efficacy of proposed permit / project. There are numerous conflicts / inconsistencies with the proposed land application system. As an example, with the Emery facilities producing wastewater at full design flow for every day of the year, at best, there would be only 1.6 feet of water to irrigate the alfalfa. Alfalfa water demands are significantly greater than this quantity. Applicant needs to document that they have the required water rights for the project. However, this volume of wastewater would be reduced due to evapotranspiration at storage lagoon (to which no dimensions were provided) and seasonally based upon variability of wastewater production. No provision is made for storage on non-permit compliant effluent, as required by 317-3-11.5.D.1.	Please see response 1.5. Separation distances are not a requirement of the Project Plan. R317-3-11.5.D requires that item D be submitted prior to construction, but not prior to operating permit approval
1.12.					f. The land application site sits over a drinking water aquifer within the East Fork Sevier River Watershed. According to R317-2-12.1, the aquifer underneath the land application site is a Category 1A Water of the State. A monitoring well will be installed to measure the groundwater quality downslope of the land application site. Location map of monitoring well is needed. Groundwater elevations at multiple (minimum of 5) and flow direction is required to ensure that monitoring wells are properly sited to capture groundwater discharge from spray irrigation. Monitoring wells need to have screened intervals such that the land application percolate is captured, monitored and required to not exceed groundwater standards. Monitoring wells throughout the spray irrigation area are needed to be compliant with R317-6-4.2.	As described in the responses for comment 2.9 and 2.10 a ground water discharge permit is not required. The monitoring wells will be located and constructed as required in the Construction Permit. Therefore, details of the monitoring wells do not need to be covered in the Operating Permit.
1.13.					g. Basis for Effluent Limitations for the Municipal Wastewater Treatment Plant – page 2 Facility is a private not a municipal wastewater treatment Plant	The word "municipal" was a typo and will be fixed in the final permit.
1.14.					SCADA system will be installed to monitor operations and to alert the operator of any malfunctions. The components of the SCADA system need definition. In particular the monitoring of nitrogen concentrations in discharge and process monitoring and control features – a key requirement for SBR systems, especially in consideration that the operator visits of once per month are proposed. Examples of achieving required treatment performance in a similar environment and operator visirs are needed.	This will be provided by Emery Valley Sewer LLC in the Construction Permit Application which must be submitted and approved by the Director prior to Construction. See also response to comment 1.5
1.15.					A Level II operator will inspect the facility once per month and a trained employee of the resort will inspect the facility once per week. Basis of system treatment level designation and operator level requirements needs to be presented. Demonstrated compliance with R317-10-5 is needed. Once per month visit by a Level II operator is woefully inadequate for a 60,000 gpd activated sludge SBR. The proposed staffing plan is in violation of R317-10-5.	The requirements outlined in the Operating Permit are sufficient to meet the requirements in R317-10-5.
1.16.					BASIS FOR EFFLUENT LIMITATIONS FOR THE LAND APPLICATION SITE Demonstrated compliance with all of the terms of R317-3-11.4 is not provided.	See response 1.5. For the purposes of issuing an Operating Permit, the Emery Valley does not need to provide information on how they will achieve compliance. The Operating Permit is only setting the limits Emery Valley must meet upon operation of their facility. Details on the design and their process to meet the limits specified in the Operating Permit will be evaluated in the their Construction Permit Application.

**Emery Valley Sewer, LLC
UTOP9004
Public Comments Responsiveness Summary**

Comment Number	Public Commenter First Name	Public Commenter Last Name	Comment Date	Public Comment Document No.	Public Comment to Respond to (UDWQ sometimes splits the original public comments to make sure each comment within a larger comment submission is addressed).	DWQ's Response
1.17.					The quality of treated effluent before use (i.e., before spray irrigation per note 4 of Table 5 not discharge to storage lagoon) must meet the Table 4 standards. While UV disinfection can be effective, it is well known that UV does not produce a residual disinfectant and regrowth of pathogenic organisms occurs in the storage lagoon. For UV to be effective, filtration to remove TSS/Turbidity is essential. Without engineering documents demonstrating proper system engineering one cannot assess the reliability of the proposed system to achieve permit requirements. Consequently, effluent permit violations are likely.	See response 1.5. These design parameters will be addressed in the Construction Permit which must be submitted and approved by the Director prior to construction.
1.18.					With long term storage of wastewater, significant algal growth will occur with concomitant effects on BOD, pH and odors. Also, with the proposed spray irrigation, odors and aerosol transmission of pathogen organisms are of concern and need to be proactively addressed.	Storage of treated effluent in a winter storage pond is a common practice in the State of Utah. DWQ does not anticipate odors greater than any other wastewater treatment method. With proper operation and maintenance, the odors from the treatment system and storage pond will be minimal. Spray irrigation is an approved use under R317-11 for Type II effluent and requires fencing and setbacks. DWQ believes these standards are sufficient to contain spray irrigation on the application site.
1.19.					We respectfully disagree with the basis for reducing monitoring frequencies in light of the pristine aquifer at the site. Also, as discharge is to occur only for 6 months/year more frequent monitoring during that period is warranted and not an overdue burden.	The monitoring required by the Draft Permit is consistent with other permits across the state. The reduced monitoring frequency to monthly for BOD, TDS, TIN, and TN is based upon the assumption that there will be no discharge to the groundwater. If there is a discharge to the groundwater, indicated by higher concentrations of TDS, E. coli, TIN, and TN in the monitoring well, then the permit will be violated. There will be weekly sampling of TSS, E. coli, and pH.
1.20.					Samples shall be collected after the industrial wastewater holding ponds prior to pressurization in the distribution lines. 317-3-11.5.C.5 states "At the discretion of the Director, the sampling frequency to determine compliance with water quality limits for effluent from lagoon systems used to irrigate agricultural crops, may be reduced to monthly grab sampling for BOD, and weekly grab sampling for E. coli, TSS and pH." There is no regulatory provision to allow monthly sampling of grab sampling for E. coli, TSS and pH. Consequently Table 5 is in violation of 317-3-11.5.C.5.	The Division will require weekly grab sampling of TSS, <i>E. coli</i> , and pH in the Draft Permit and Fact Sheet.
1.21.					Also 317-3-11.5.D.1 states "1. An alternative disposal option or diversion to storage must be available in case quality requirements are not met." This is not addressed in the permit documents and consequently is a violation of 317-3-11.5.D.1.	The winter storage pond is a "diversion to storage". The treated effluent storage pond can store effluent, in the event it does not comply with permit standards.
1.22.					In reference to note 4, there is no industrial wastewater holding pond. Total Inorganic Nitrogen (TIN) sampling, as stated on Table 5, is an under reporting of Total Nitrogen as it does not include Organic Nitrogen. TN is the constituent that is regulated. It is well known that organic nitrogen will oxidize to inorganic nitrogen during wastewater land application. Consequently, the proposed permit monitoring requirement is significantly deficient.	DWQ agrees there is no industrial wastewater pond. There was a typo in the Fact Sheet in the paragraph below Table 6. Total Nitrogen and Total Inorganic Nitrogen was changed to the proper term: Total Nitrate/Nitrite. The commenter's assertion that TN is the constituent regulated is misplaced- Ground Water Quality Standards are defined in UAC R317-6-2. These standards include: Nitrate (as N) 10.0 mg/L, Nitrite (as N) 1.0 mg/L, Total Nitrate/Nitrite (as N) 10.0 mg/L. There is no Total Nitrogen standard for ground water.
1.23.					Existing background groundwater quality data should have been required to be provided by the applicant. At an absolute minimum background concentration as established by the Utah Geological Survey 2021 Groundwater Quality Classification, Bryce Canyon Area, Garfield County, Utah. The underlining aquifer is a Class 1A pristine aquifer. Also, groundwater fluctuations need to be documented (easily done with low-cost monitoring equipment) to ensure that groundwater wells screened intervals are at the proper elevation – as multiple screened intervals are likely needed to cover the range of groundwater elevations. Soil lysimeters could be used along with remote monitoring.	Emery Valley Sewer is not permitted to discharge to groundwater, therefore, R317-6 would only apply if there were an unpermitted discharge to groundwater. This operating permit does not allow any discharge to groundwater. Therefore, no groundwater discharge permit is necessary. Also, see response 2.9.
1.24.					Documentation of background concentration of important constituents and calculations demonstrating compliance with all the provisions of R317-6-4.2 are missing.	Please see response 1.23
1.25.					It is doubtful that the proposed project can comply with the TDS requirement of R317-6-4.2.B-1.	Please see response 1.23
1.26.					Demonstrated ability to comply with R317-6-4.2.B-1 is absent.	Please see response 1.23
1.27.					Consequently, there is no information to support any position that violations of statutory requirements will not occur.	The Draft Permit requires that the operator not violate the Water Quality Act or Rules. Any permit violations or violations of the Water Quality Act will result in enforcement action(s) and potential shut downs.(Permit VI.5 Duty to Comply)

**Emery Valley Sewer, LLC
UTOP9004
Public Comments Responsiveness Summary**

Comment Number	Public Commenter First Name	Public Commenter Last Name	Comment Date	Public Comment Document No.	Public Comment to Respond to (UDWQ sometimes splits the original public comments to make sure each comment within a larger comment submission is addressed).	DWQ's Response
1.28.					To prevent nitrogen loading to the aquifer and causing a violation of R317-6-4.2, the effluent must be applied to the land application site at an agronomic rate. However, 150% of average nitrogen uptake rate from crops is the proposed permit as stated on Table 7. Clearly, the excess nitrogen application will discharge to groundwater with a high likelihood of violating R317-6-4.2-B.3.	The Fact Sheet indicates that an Applied Nitrogen Percent of 150% is an acceptable amount as the extra 50% will be lost to the environment before the plant utilizes the other 100%.
1.29.					Furthermore, it is well known that alfalfa water and nutrient requirements vary seasonally. The proposed permit provides no information on how a proper groundwater protecting spray irrigation program will be implemented. Additionally, hay harvesting and offsite use needs to be described to confirm compliance with regulations. As an example, hay use for milking animals is not allowed. Nitrogen leaching from harvested hay is significant see USDA report at https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs_143_012756.pdf	Thank you for that information. The information you are requesting will be required in an updated Project Plan from Emery Valley Sewer.
1.30.					Also, standard irrigation practice is to irrigate a minimum excess of 10% of plant irrigation requirements for soils leaching - to avoid accumulation of salts in the soil with the associated damage to crops. The impact of this leaching on groundwater quality requires documentation.	See response 1.23
1.31.					While Table 6 TIN in groundwater will be close to TN, the groundwater standard is TN. Consequently, TN must be measured. The Table 6 frequency of groundwater sampling is insufficient to assess impact. Groundwater velocities and flow direction need to be documented for defining an accurate groundwater monitoring program. At a minimum, monthly sampling for eight months per year should be performed for a minimum of three (3) years, after which, frequency could be adjusted should no adverse impact be documented.	See response 1.22
1.32.					Our overall comment is that the Utah Division of Water Quality needs to either withdraw or place the permit on pause.	Please see response 1.2
1.33.					Any further consideration of the permit should only occur after full disclosure of the project documents of Site Evaluation & Conceptual Plan, Design Basis Report, Plans & Specifications. Insufficient information is available to assess the proposed permit's compliance with the numerous statutory requirements, such as R309-600 and R317-3-11. Rather the information provided indicates violations and noncompliance will occur on important pristine groundwater protection and public health matters.	Please see response 1.1
2.1.	Pio	Lombardo	17-May-21	DWQ-2021-012479	Subsequent to my April 2, 2021 letter, I requested, received and have reviewed the following project documents that presumably are the basis of the Utah Department of Environmental Quality (UDEQ) referenced permit: 1. Emery Valley Sewer Permit Application for Treated Effluent Land Disposal, Garfield County, Utah, August 2020, unsigned Steve Pitts. 2. The Canyons at Bryce Development Wastewater Alternatives, Preliminary Engineering Report, May 2020, Aqua Engineering, Bountiful UT or Greenwood, CO, aquaeng.com, unsigned.	Please see response 1.1
2.2.					Based upon our below comments, in my professional opinion, the Permit Application and Preliminary Engineering Report are severely deficient with numerous errors critical to wastewater system permit compliance reliability and compliance with UDEQ permitting regulations, as well as a disregard for addressing environmental protection.	Please see response 1.1
2.3.					Consequently, it is respectfully requested that the permit be withdrawn and project application rejected as incomplete.	Please see response 1.2

**Emery Valley Sewer, LLC
UTOP9004
Public Comments Responsiveness Summary**

Comment Number	Public Commenter First Name	Public Commenter Last Name	Comment Date	Public Comment Document No.	Public Comment to Respond to (UDWQ sometimes splits the original public comments to make sure each comment within a larger comment submission is addressed).	DWQ's Response
2.4.					<p>It is noted that the Application and Engineering Report are woefully deficient on addressing the requirements of: Emery Valley Sewer Permit Application for treated Effluent Land Disposal, Garfield County, Utah, August 2020, unsigned document by Steve Pitts</p> <p>1. Page 1 1.1 Project Location Figure 2 illustrates the general site plan of the project site with a preliminary layout of mechanical treatment facility, winter storage pond, and land application area. Figure 2 is a wastewater system concept plan. It is not a site plan as it does not include proposed development layout and collection system, practical and legal restrictions from environmentally sensitive area. East Fork Sevier River runs through the development How the River and development co-exist and is viable should be shown on the site plan. There are no ditches or swales located in the proposed land application area that may provide a pathway for the water to reach a water body. The Plan needs to have a professionally surveyed topographic map – no less than 2-foot contours along with registered land surveyor certification of this statement.</p>	Please see response 1.1
2.5.					<p>2. Page 5 - 2.2 Constituents There are no existing data for any of the constituents including BOD, TSS, TKN nor phosphorus. It was assumed that it will be typical municipal waste strength. Table below is summary of constituents and concentration, and daily load to the treatment.</p>	Please see response 1.1
2.5.					<p>There is existing data on the wastewater from the proposed uses from comparable locations. In my professional experience, all wastewater systems for new development are engineered based upon comparable and not assumptions. Critically, the assumed wastewater strength is significantly lower than what, in my professional engineering opinion, is to be expected at the site. Consequently, in my professional engineering opinion, a wastewater system engineered with the proposed parameters is likely to not achieve permit requirements. Rather than using typical municipal wastewater, a blended wastewater strength must be calculated based upon a flow weighted values for the proposed development establishments. While the Hotel and cabins would have municipal wastewater strength, it is well known that RVs in particular have extremely high strength wastewater (BOD & TSS 3,000 +/- mg/L) as well as chemicals that could inhibit treatment processes. Restaurants are known to have very high BOD values – closer to 800 mg/L, due to high kitchen flows. TKN values for actual wastewater is now known to be 65 mg/L for municipal/domestic wastewater, in large part due to water conservation devices which are legally required in construction since the early 1990s. Also, TKN values for Retail stores are known to be 125+ mg/L as the wastewater is virtually entirely bathroom wastewater – i.e., no showers/washing wastewater for dilution. Seasonality and flow/strength variations are critically important considerations, especially for an activated sludge treatment system that could receive slugs of high strength RV wastes such as proposed which requires a start-up period. To support these comments, references are readily available in US EPA, national Water Environment Research Federation https://www.waterrf.org/search?topic=Decentralized%20Systems and peer reviewed journals on this matter. See http://onlinepubs.trb.org/Onlinepubs/trr/1984/995/995-001.pdf for</p>	Please see response 1.1
2.6.					<p>3. Page 6 - 3.0 Wastewater Treatment “It is anticipated” Is widely used in this section. In my professional opinion, an application based upon anticipations, that may or may not be achieved, is incomplete.</p>	Please see response 1.1

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2.7.					Bottom of page 6 It is anticipated that this facility will have certified operator that is overseeing the process and inspect equipment, as well as taking monitoring samples. The grade of required certified operator should be stated as well as the frequency of visits, as subsequently discussed.	Please see response 1.1
2.8.					In general, the primary water quality requirements are: It is assumed that these limits will need to be reached at the end of the treatment system, not necessary the end of the distribution system. The assumption is incorrect. 31-11.5C states "Water Quality Limits. The quality of effluent before use must meet the following standards." Use is spray irrigation. Storage is not final use. The facility will have the winter storage and the water quality may change within. There is no doubt the quality of winter stored wastewater effluent will be adversely affected by algal growth. The disinfection technique is not described. Consequently, the application is incomplete.	Please see response 1.1. The Operating Permit states that the point of compliance is the outlet of the Storage Pond to the distribution system. Disinfection technique will be reviewed and approved for the Construction Permit.
2.9.					Page 7 4.0 Land Application 4.1 Ground Water Protection The application is fatally silent on the requirements of R317-6-6 and the pending groundwater classification of 1A. The following administrative permitting deficiencies are noted. No groundwater discharge permit application, as required by R317-6-6.1 has been submitted by the applicant. In particular, compliance with R317-66.3 APPLICATION REQUIREMENTS FOR A GROUND WATER DISCHARGE PERMIT is required, not the least of which requires the following: R31-6.3R. All applications for a groundwater discharge permit must be performed under the direction, and bear the seal, of a professional engineer or professional geologist. Consequently, the application is legally deficient and incomplete. "R317-6-6.	Operating Permit No. UTOP9004 (Permit) and its application are not fatally silent on the R317-6 in whole or in part for the following reason: •R317-6-6(6.1)(A) states- "No person may construct, install, or operate any new facility or modify an existing or new facility, not permitted by rule under R317-6-6.2, which discharges or would probably result in a discharge of pollutants that may move directly or indirectly into ground water, including, but not limited to land application of wastes ..." (emphasis added) •However, the Permit states on the very first page- "In compliance with provisions of the Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended (the "Act"), EMERY VALLEY SEWER, LLC is hereby directed to have no discharge to Waters of the State is hereby authorized to discharge treated effluent from its wastewater treatment facility to its land application site, in accordance with specific limitations, outfalls, and other conditions set forth herein." (emphasis added) •Therefore, R317-6 does not apply and a groundwater application and/or groundwater discharge permit are not required. Additionally, as defined in the Permit, the discharge is to the land; see Permit Part I.A in its entirety for the authorization and particularly, as the discharge outfall is defined under Reuse Outfall Number 001R. The intent of the reuse project plan and the Permit are to reuse the liquids and associated nutrients such that the requirement of no discharge to waters of the state is met. To that end, the Permit also contains monitoring and reporting requirements including a groundwater monitoring point to assure the Permit requirements are being met. In the unlikely event noncompliance with the permit requirements indicates that a discharge is occurring, or is likely to occur as a result of the operation, the Director may call for a groundwater discharge permit application in accordance with R317-6-6. Lastly, although it does not apply in any case, there is no regulatory relationship between a formal aquifer classification under R317-5(5.1)(A thru G) and groundwater permitting since R317-6-5(5.1)(H) already allows for a site specific classification to be made by the Director for purposes of making permitting decisions: "H. Ground water proximate to a facility for which an application for a ground water discharge permit has been made may be classified by the Director for purposes of making permitting decisions."

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2.10.					<p>6.1 DUTY TO APPLY FOR A GROUND WATER DISCHARGE PERMIT</p> <p>A. No person may construct, install, or operate any new facility or modify an existing or new facility, not permitted by rule under R317-6-6.2, which discharges or would probably result in a discharge of pollutants that may move directly or indirectly into ground water, including, but not limited to land application of wastes..... without a ground water discharge permit from the Director. A ground water discharge permit application should be submitted at least 180 days before the permit is needed.”</p> <p>Given the environmental sensitivity of the area as evidenced by the pending Garfield County Commission requested petition to the Utah Water Quality Board to classify the ground water of the Bryce Canyon Area in Garfield County, Utah and UDEQ’s April 28, 2021 recommendation for groundwater classification of 1A (copy attached), any UDEQ action should follow final action on the petition or the applicant should be required to address the requirements of R317-6-4.2 Ground Water Class Protection Levels for CLASS IA PROTECTION LEVELS, presented below for convenience.</p>	Please see response 2.9
2.11.					<p>4.2 CLASS IA PROTECTION LEVELS</p> <p>A. Class IA ground water will be protected to the maximum extent feasible from degradation due to facilities that discharge or would probably discharge to ground water.</p>	Please see response 2.9
2.12.					<p>B. The following protection levels will apply:</p> <p>1. Total dissolved solids may not exceed the greater of 1.25 times the background or background plus two standard deviations.</p> <p>2. When a contaminant is not present in a detectable amount as a background concentration, the concentration of the pollutant may not exceed the greater of 0.1 times the ground water quality standard value, or the limit of detection.</p> <p>3. When a contaminant is present in a detectable amount as a background concentration, the concentration of the pollutant may not exceed the greater of 1.25 times the background concentration, 0.25 times the ground water quality standard, or background plus two standard deviations; however, in no case will the concentration of a pollutant be allowed to exceed the ground water quality standard.</p>	Please see response 2.9
2.13.					<p>The Preliminary Engineering Report states Page 4. Section 3.2. SUBSURFACE DISPOSAL</p> <p>The UGS is currently working on a groundwater characterization study. The study has not concluded, however, because of the sensitivity of the area the DWQ is requiring that all large groundwater discharges meet the background level of contaminants. At this point it is assumed that a subsurface disposal alternative would require a total nitrogen limit of 2.5 mg/L. This would require a higher level of treatment than any of the large municipal systems in the State. Because of the low limits it would be difficult to design a treatment system and have it operated to meet the required limit.</p> <p>While challenging, achieving effluent N of 2.5 mg/L is doable and has been achieved in comparable locations. It is noted that UDEQ has permitted a wastewater system in Bryce to achieve Total Nitrogen < 2.5 mg/L, based upon 20 years of achieving that performance level in comparable locations, including at US EPA and State controlled / monitored sites.</p>	<p>This Operating Permit is for land application and not subsurface disposal. Land application is to occur at the determined agronomic rates in compliance with the basis of the permit, i.e. no discharge. Additionally, the permit requires treatment down to 10 mg/L TIN. The residual amount of nutrients in the treated wastewater, including primarily Nitrate, is insufficient for the crop grown. This means that not only will all of the nutrients be utilized from the wastewater, but that additional chemical fertilizer will need to be added for the crop. Therefore, DWQ is satisfied that when, in accordance with permit conditions and requirements, the total nutrients from the wastewater and fertilizer are added at the specified amount the land application of wastewater will not result in a discharge to waters of the state. See response 2.9 and 1.22.</p> <p>The performance level of a comparable location is misplaced on two critical issues:</p> <p>First- as already stated, this permit is for Land Application and Reuse- not SUBSURFACE DISPOSAL. This fact alone does not make the two situations comparable even if they were next door neighbors.</p> <p>Second- Again the statement that Total Nitrogen is the standard is in error, the standard for the both systems is Total Inorganic Nitrogen at the end of treatment and Nitrate for ground water as described in 1.22 above.</p>
2.14.					<p>Page 7 UV system will be installed for disinfection. The water will be clear enough to use this system.</p> <p>In LAI’s opinion, solids filtration is required prior to UV to achieve reliable disinfection. As UV does not have a residual, bacterial regrowth in the storage pond is likely to occur. Waterfowl droppings will also adversely impact stored water E coli concentrations. Consequently, it is unlikely that the system will meet the e coli standard before use.</p>	Please see response 1.1 . Design parameters of the system are not open for comment.

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2.15.					Also as stated in R317-3-11.4C.4 "If an alternative disinfection process is used, it must be demonstrated to the satisfaction of the Director that the alternative process is comparable to that achieved by chlorination with a 1 mg/l residual after 30 minutes contact time. If the effectiveness cannot be related to chlorination, then the effectiveness of the alternative disinfection process must be demonstrated by testing for pathogen destruction as determined by the Director. A 1 mg/l total chlorine residual is recommended after disinfection and before the treated effluent goes into the distribution system."	Please see response 1.1
2.16.					Page 7 Land Application The Application is silent on the Engineering Report on a nitrogen balance to document the groundwater impacts from the proposed spray irrigation. The applicant should be required to address this matter per R317-6-6. Application is incomplete without it.	Please see responses 1.1 and 2.9.
2.17.					4.3 Record Keeping The operator inspects the facility to prevent any failure of equipment and/or deterioration quarterly. If the application is stating that only quarterly visits will be made, in my opinion, the application should be outright rejected as incomplete. In my professional opinion, no SBR can operate and meet permit requirements with such infrequent visits. Many states require daily operator visits for a comparable to the proposed wastewater treatment system	Please see response 1.1
2.18.					A nominal 2-inch monitoring well will be installed on the south side of the land application area to observe ground water quality. The well will be pulling samples from aquifer at approximately 98 ft below the surface of the ground. A groundwater study by a professional geologist / hydrologist needs to be presented to provide basis for the proposed well. Our comments on the inadequacy of the groundwater sampling program were stated in my April 2, 2021 letter.	Please see response 1.1 and 2.9. As pointed out by the commentor, previous studies on this aquifer have been completed, namely by the UGS, and indicate flow direction. With this report and others, DWQ is satisfied that the downgradient location is well placed within the information known. As for these or any wells, it is worth pointing out that many of the comments suggest that somehow monitoring wells are a perfect indicator for subsurface conditions when in truth they are a small hole in a large 3 dimensional heterogeneous puzzle. As it relates to this permit and overall water quality protection, DWQ has instead used the wells as a monitoring check where the primary permit conditions and determinants of compliance are at the surface rather than the subsurface. In this case DWQ has determined that treating the wastewater and the reusing the water and nutrients at the surface at 10 mg/L TIN is reasonable and better than subsurface disposal at such a treatment level. For anyone wishing to take an expedited path through permitting (i.e., no ground water discharge permit is required since the discharge will meet Class I protection levels at the end of the pipe) and utilize SUSURFACE DISPOSAL along with an actual discharge to waters of the state DWQ has set the standard at 2.5 mg/L TIN at the end of the treatment pipe. The value at the end of treatment is a reasonable and conservative approximation of the highest concentration of Total Nitrate in the subsurface. It is conservative since all of the Nitrogen is assumed to convert to Nitrate and behave in a perfectly conservative manner.
2.19.					SUMMARY Respectfully, in my professional opinion, the proposed permit needs to be withdrawn and the Applicant's application rejected as incomplete. Thank you for the opportunity to comment on this matter. If you have any questions on our comments, please do not hesitate to contact me by telephone (617) 964-2924 or E-mail Pio@LombardoAssociates.com.	Please see response 2.18.
3.1.	Scout	Holm	1-Jun-21	DWQ-2021-012485	Hello Sarah , Attached are the well locations and the delineation lines for the Tru north water system . Tru north water system is a public water supplier in Bryce Canyon. Tru north wells are located On the neighboring property to the west of the proposed emery valley sewer project. Our concern is the proximity to the wells from emery valleys proposed system. We believe the proposed sewer system would have a negative effect on the public wells . Please use this information as part of the review and please let me know if you have any questions. Scout Holm 435-690-0519	Thank you for the well locations. These locations will be used in evaluating the set back distance from wells in the Engineering documents to be provided for Director approval and will comply with R317-3-11.5-D-2.

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4.1.	Scout	Holm	3-Apr-21	DWQ-2021-012489	From reading the notice sent out for public comment it says 30 days are open to comment . In addition that if there were comments within the first 15 days that a public hearing would be scheduled. After consulting with my engineer I would like to request this draft permit be withdrawn . A detailed summary was emailed from him to you earlier today giving a detailed explanation.	The Division has responded to all public comments received in accordance with the public comment process in this comment document. A public hearing was held May 19, 2021
4.2.					In response to the notice for public comment regarding the proposed wastewater treatment system of Emery Valley Water llc I would like to give you an idea of how this relates to me and my family . I am the owner of Bryce Uptop Lodge located in the same area in which the emery valley system is proposed. I also own commercial land in this area with permits to build hotels of which I have invested large amounts of capital and would depend on the aquifers long term well being to have a successful business for years to come . The water system I rely on sources it's water from wells located in the area of which this sewer treatment is proposed. The well being and livelihood of my family and business is based on the water quality and protection of this aquifer. It is well known that the aquifer is a class 1A pristine aquifer and has a very strict standard for wastewater treatment that is recognized by Garfield county and the state of Utah .	The Draft Permit does not authorize any discharge to groundwater, has monitoring requirements in place and prohibits violations of the Utah Water Quality Act and regulations, including unauthorized discharge to groundwater. See also responses 1.23 and 1.27
4.3.					I notice that the draft does not include the location information for where the “ winter storage” will be . It also doesn't specify where the irrigation operation will take place . This raises a big concern and is very hard to understand without knowing the location as mentioned in our previous email.	The winter storage location and irrigation location will be defined by the facility in the Engineering documents and facility Reuse Project Plan which must be submitted for Director approval before said operations commence
4.4.					One main concern I have is the damage odor will cause to my businesses and residents in the area . With that being said this area is the main corridor to Bryce Canyon National park which receives millions of tourists per year .	With proper operation and maintenance, the odors from the treatment system and storage pond will be minimal. Additionally, the Division does not have the authority to deny a permit based on the potential for odors.
4.5.					From speaking to the residents and businesses owners located within this general area I have found that we all agree this type of system is not wanted because of the proposed wastewater storage / irrigation concept. This proposed system can not coincide with hotels , resorts , restaurants, and campers near by. The odor from the lagoon / irrigation will force us out of business . Please consider withdrawing this application as it doesn't specify many important details of the system. Once again , Please take serious consideration to the letter we sent earlier today . Thanks	The DWQ does not have the discretion to delay or deny a permit for matters not related to protecting waters of the state. Accordingly, only comments related to protection of waters of the state are relevant to whether the DWQ shall: 1) issue the permit; 2) issue with modifications to the draft version, or; 3) deny issuance. As the comment does not provide any factual basis for DWQ to assess or determine possible impacts to water quality, DWQ does not have the authority to withdraw (deny) or delay the permit based on these comments. In regards to the odor, if the treatment system is properly operated, the odors will be minimal.
5.1.	Steve	Twyman	2-Apr-21	DWQ-2021-012493	As a business owner adjacent to the proposed project I am writing you to express my concerns that this project will negatively impact the area in several ways - the water table in the area is already strained and a sewer lagoon will negatively impact the Bryce experience (due to the smell) and there has to be other ways to address sewage than making the entrance to Bryce Canyon National Park (a National Treasure) be exposed to such a negative experience. It really will detract from the area and reduce a Utah jewel.	See response 4.4
5.2.					If I can be heard at a piublic hearing I would greatly appreciate the opportunity.	Public Hearing held May 19, 2021
6.1.	Diane	Jacob	27-May-21	DWQ-2021-012497	I am an owner of property (250+ acres along highway 20) and water rights (100+ acre feet) in the area where the Sewer Operating permit is being proposed. As mentioned in the public hearing for being one of the most environmentally responsible methods applied for to date, I fully support the permit made by the State and the Permittee who have designed an environmentally friendly facility that will protect the Proposed Class 1A Pristine Aquifer as well as serve the needs of the permittee. I fully support the issuance of the Permit! Please feel free to contact me if you have any questions.	Thank you for your comment.
7.1.	Robert & Terri	Dreidonks	2-Apr-21	DWQ-2021-012499	We are writing you regarding the public hearing for the application below. I feel my property, and the Bryce Canyon area, will be negatively impacted by proposed lagoons. We would greatly appreciate a chance to be heard during public hearings.	Public Hearing held May 19, 2021

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8.1.	Dave	Amin	2-Apr-21	DWQ-2021-012501	I feel my property (exterior corridor) will be negatively impacted by proposed lagoons. I will greatly appreciate a chance to be heard during public hearings. I missed letting you know about myself and my business for the purpose of public hearing. My name is Devang Amin and I am owner of Bryce Canyon Resort, a 72 room hotel in Bryce Utah at corner of Highway 12 and 63.	Public Hearing held May 19, 2021
9.1.	John	Jacob	27-May-21	DWQ-2021-012505	My name is John Jacob, I am a trustee of Bristolcone Water Improvement District (BWID). My wife and I own more than 320 acres of commercial ground and about 100 acre feet of water, that is in BWID area. My wife sent a comment already and said we were near HWY 20 and meant HWY 12. We have sold some ground and water already and have more under contract to sell. I was on zoom for the hearing on 5/19/21 for UTOP9004, I did listen to the meeting but did not make a comment thinking I would do so after and would like to make some comments now. In real life I am a water snob! I love and will only drink pristine water. A study by UGS just put out an article in the Utah geological survey publication, Current Issue: May 2021, The role of water quality and quantity on future development near Bryce Canyon Nation Park. The article talks how the aquifer is classified as Pristine. As I understand this sewer it will help us keep the water Pristine. I felt that most who said anything in the hearing did not understand the sewer that was presented. Please approve the UTOP9004.	Thank you for your comment.
10.1.	Matthew	Ekins	19-May-21	DWQ-2021-010487	COMMENTS OF HOLMBRANDS, LLC and HOLM, LLC HolmBrands, LLC and Holm, LLC pursuant to Utah Administrative Code R-317, submits comments in opposition to the issuance of the referenced permit as set out hereinbelow. In summary, the Application for the Permit does not meet the regulatory requirements. References are to rules and regulations in the Utah Administrative Code. It should be noted that the land application site sits over pristine drinking water aquifer within the East Fork Sevier River Watershed. The UDEQ Fact Sheet Statement of Basis provides that a monitoring well will be installed to measure the groundwater quality, but the Preliminary Engineering Report does not provide a location map of the well.1 The effectiveness of the monitoring process has a correlation to the location of the monitoring well. There is no hydrological data to support the location of a monitoring well. The site plan in the application suggests a monitoring location in Mud Spring Creek. Without siting the well, the Application is deficient.	The Utah Water Quality Act and regulations has no requirement for a monitoring well for land application of treated effluent. The monitoring well is included at the election of the permittee.
10.2.					R317-3 – DESIGN REQUIREMENTS FOR WASTEWATER COLLECTION, TREATMENT AND DISPOSAL SYSTEMS • R317-3-1.1(E) Construction Permit and Approvals o A construction permit may be issued when the application has met all of the requirements of this Rule. The Applicant has failed to satisfy all of the design requirements.	The language in this comment is pulled from the Construction Permit application, which was provided in response to a Government Records Access and Management Request. It refers to Construction Permit requirements, not Operating Permit requirements. This public notice pertains to the Draft Operating Permit, not the Construction Permit, which has not yet been approved by the Director.
10.3.					• R317-3-1.2 Engineering Report o The Rule requires the Applicant to submit all pertinent and relevant material to aid in the review process. The proposed spray irrigation will impact nitrogen balance, but the Engineering Report does not report nitrogen balance.2 The report fails to provide financing methods and anticipated charges. The report fails to provide preliminary architectural, structure, mechanical and electrical designs.	See response 1.1
10.4.					• R317-3-1.3 Predesign Report o The Rule requires a Predesign Report, which must contain a summary process of design criteria, the basis of design, process and hydraulic profiles, outline of all appurtenant facilities and supporting information. The UDEQ Fact Sheet Statement of Basis Document does not contain a design basis for the projected Design Flow of 60,000 gpd. Likewise, the projected six-month winter storage quantity of 10,800,000 gallons does not contain any dimensions or maps showing location or design basis. The Report is insufficient because it does not contain a design basis to demonstrate how the Design	The Predesign Report was provided through GRAMA Request and is not part of the Draft Permit package available for public comment as it was not created by the Division. See also response 1.1

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10.5.					Flow and winter storage quantity will be achieved. ³ <ul style="list-style-type: none"> • R317-3-1.4 Construction Plans <ul style="list-style-type: none"> o The Rule requires a complete set of construction drawings submitted for review in fulfillment of the Rule's requirements. One drawing shows a treatment building and treatment lagoons. Another drawing shows treatment lagoons without a treatment building. As presented, the Application is deficient. 	The Construction Plans were provided through GRAMA Request and are not part of the Draft Permit package available for public comment as they were not created by the Division. The Draft Permit represents the Division's approval and is available for public comment. See also response 1.1
10.6.					<ul style="list-style-type: none"> • R317-3-3.2(E)(2) Design <ul style="list-style-type: none"> o Odor and Corrosion Control – The UDEQ Fact Sheet of Basis document provides that water sludge will be held in a holding tank, dewatered and landfilled. Generally, engineering projections would show a pumping station designed to incorporate measures for mitigating the effects of sulfide corrosion to equipment and effective proximity odor control. The Application fails to meet this requirement.⁴ 	See response 1.1
10.7.					<ul style="list-style-type: none"> • R317-3-11.4 Use of Treated Domestic Wastewater Effluent Where Human Exposure is Likely (Type I) <ul style="list-style-type: none"> o Demonstrated compliance with all the terms of this Rule is not provided. The quality of treated effluent before use, (i.e., before spray irrigation per note 4 of Table 5 not discharge to storage lagoon) must meet the Table 4 standards. UV does not act as a residual disinfectant and regrowth of pathogenic organisms occurs in the storage lagoon. Without engineering documents to demonstrate proper system engineering, one cannot assess the reliability of the proposed system to achieve permit requirements. In fact, effluent permit violations are very likely. With long term storage of wastewater, significant algal growth will occur with concomitant effects on BOD, pH and odors. Also, with the proposed spray irrigation, odors and aerosol transmission of pathogen organisms are of concern and need to be proactively addressed. In addition, because discharge will occur only for six months of the year, more frequent monitoring during that period is warranted.⁵ 	Facility has not proposed Type I reuse, therefore the Type I requirements do not apply and are not in the Draft Permit.
10.8.					<ul style="list-style-type: none"> o Also as stated in R317-3-11.4(C)(4) "If an alternative disinfection process is used, it must be demonstrated to the satisfaction of the Director that the alternative process is comparable to that achieved by chlorination with a 1 mg/l residual after 30 minutes contact time. If the effectiveness cannot be related to chlorination, then the effectiveness of the alternative disinfection process must be demonstrated by testing for pathogen destruction as determined by the Director. A 1 mg/l total chlorine residual is recommended after disinfection and before the treated effluent goes into the distribution system."⁶ Page 7 of the Application provides that a UV system will be installed for disinfection. In LAI's opinion, bacterial regrowth in the storage pond is likely to occur and, importantly, waterfowl droppings will also adversely impact stored water E. coli concentrations. The Application is defective in that it is unlikely that the system will meet the E. coli standard before use. 	See response 10.7
10.9.					R317-3-11.4(C) Water Quality Limits - The Applicant proposes spray irrigation which constitutes a "use". The quality of effluent before use must meet the requisite standards. It appears that the Applicant has assumed that the regulatory limits will need to be reached at the end of the treatment system, but not necessarily the end of the distribution system. Storage is not final use. ⁷	Permit Page 4 defines the point of compliance as the discharge from the winter storage pond to the distribution system. Therefore, the regulatory limits will apply at the inlet to the distribution system. DWQ believes this compliance point is adequate.
10.10.					<ul style="list-style-type: none"> • R317-3-11.5(C)(5) Use of Treated Domestic Wastewater Effluent Where Human Exposure is Unlikely (Type II) <ul style="list-style-type: none"> o The requirements relating to the frequency of testing for water quality limits are set out in R317-3-11.5(C)(1)-(4). The UDEQ Fact Sheet Statement of Basis Document, Table 5, sets out testing frequencies which do not meet the Rule. While the Rule at 317-3-11.5(C)(5) would allow the Director to set difference frequency intervals, application for interval testing which differs from those set out in R317-3-11.5(C)(1)-(4), there is no indication that application has been made by the Applicant for the Director to exercise his discretion in this regard. 	See response 1.19
10.11.					There is no regulatory provision to allow monthly sampling of grab sampling for E. coli, TSS and pH as set out in Table 5. Consequently, the Application does not meet the requirements of R317-3-11.5(C)(5). ⁸ <ul style="list-style-type: none"> • R317-3-11.5(D)(1) Use of Treated Domestic Wastewater Effluent Where Human Exposure is Unlikely (Type II) <ul style="list-style-type: none"> o This Rule states "An alternative disposal option or diversion to storage must be available in case quality requirements are not met." The permit documents do not meet the requirements of this Rule.⁹ 	See response 1.19

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10.12.					o The Fact Sheet Statement of Basis does not clarify whether the 100-foot buffer, required by R317-3-11.5(D)(2), is included in the 40 acres described in the Application, nor does it define what area will be included in the net irrigation acres. Spray irrigation water and nutrient balances, on a basis no less frequent than weekly, are needed in order to assess the efficacy of the Project. If the Project facilities produce wastewater at full design flow daily, the Project will produce only 1.6 acre feet of water to irrigate the proposed alfalfa. For the size of the proposed spray area, the water demands are likely to be significantly greater than the maximum quantity which the Project could produce, and it must be considered that even this volume of wastewater would be reduced due to evapotranspiration at the proposed, but not-yet designed storage lagoon. The UDEQ Fact Statement of Basis contains no provision for non-permit compliant effluent, as is required by this Rule.10	The 100-foot buffer zone will be addressed in the Reuse Project Plan which must be submitted and approved by the Director prior to reuse.
10.13.					o There is no data on how Applicant intends to provide the remaining water sufficient to irrigate the 40 acres and keep the alfalfa crop viable for the wastewater system. Typically, three acre-feet of water is required to irrigate one acre of alfalfa. For 40 acres of crops, approximately 120 acre-feet of water is needed for irrigation.	See response 1.5. These design parameters will be addressed in the construction permit.
10.14.					o The entire 40 acres designated in the Application for the pivot system is not viable for agriculture use due to elevation changes. From the south side to the north side, the elevation change is approximately 35 to 45 feet going up Pine Hills, with most of the elevation change on the north side. Furthermore, the southwest corner of the designated pivot system has Mud Spring Creek flowing through it.11 For these two reasons the pivot system area is not adequate for the proposed wastewater system.	See response 1.5. These design parameters will be addressed in the construction permit.
10.15.					R317-6 – GROUNDWATER QUALITY PROTECTION • R317-6-4.2 Ground Water Class Protection Levels; Class IA Protection Levels o Groundwater elevations at multiple no less than five sites and flow direction of the monitoring wells are not provided. Thus, it is not possible to ensure that the monitoring wells would be properly sited to capture groundwater from the proposed spray irrigation. The plans described in the UDEQ Fact Sheet Statement of Basis do not contain this information.12 The actual location of the wells also differs from the location shown in the UPDES Permit.13	See Response 1.23. Ground Water Quality Rules do not apply to this Draft Permit because it does not allow discharge to ground water. See also response 2.9.
10.16.					o Existing background groundwater quality data should be provided by the Applicant. Groundwater fluctuations should be documented to ensure that ground water wells screen intervals are at the proper elevation, as multiple screened intervals are likely needed to cover the range of ground water elevations.14	See response 1.5. These data will be provided in the construction permit.
10.17.					o Documentation of background concentration of important constituents and calculations demonstrating compliance with all provisions of this Rule are not provided in the Application.15	See response 1.5. These design parameters will be addressed in the construction permit.
10.18.					o The proposed permit, at Table 7, shows 150% of average nitrogen uptake rate from crops. The excess nitrogen application will discharge to groundwater with a high likelihood of violating R317-6-4.2-B.3.16	See response 1.23. See also response 2.9.
10.19.					• R317-6-6.1 Duty to Apply for a Ground Water Discharge Permit o (A) No person may construct, install, or operate any new facility or modify an existing or new facility, not permitted by rule under R317-6-6.2, which discharges or would probably result in a discharge of pollutants that may move directly or indirectly into ground water, including, but not limited to land application of wastes... without a ground water discharge permit from the Director. A ground water discharge permit application should be submitted at least 180 days before the permit is needed.” It does not appear that the appropriate application has been made for the discharge permit.17	See response 1.23 and response 2.9. This facility is not permitted to discharge to groundwater
10.20.					• R317-6-6.3(R) Application Requirements for a Ground Water Discharge Permit o All applications for a groundwater discharge permit must be performed under the direction, and bear the seal, of a professional engineer or professional geologist. The Application does not bear the seal of a professional engineer. The lack of signature of a qualified professional makes the Application deficient.18	See response 2.9.
10.21.					R317-10 – CERTIFICATION OF WASTEWATER WORKS OPERATORS • R317-10-5 Wastewater Works Owner Responsibilities o The Fact Sheet provides that a level II operator will inspect the facility once per month and a trained employee will inspect the facility once per week. The Fact Sheet does not provide enough information regarding the operator level requirements. The proposed staffing plan is likely in violation of this Section.19	R317-10-5 does not apply to this facility.

**Emery Valley Sewer, LLC
UTOP9004
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10.22.					R309-600 – SOURCE PROTECTION: DRINKING WATER SOURCE PROTECTION FOR GROUND WATER SOURCES R309-600 sets forth minimum requirements to protect ground-water sources of drinking water. Recently the Utah Geological Survey petitioned the Utah Water Quality Board to classify groundwater quality in the valley-fill aquifers in the Bryce area, including specifically aquifer underlying the Emery Valley where the Application proposes to install the Project facilities. See Wallace and Schlossnagle, Utah Geological Survey, Petition for Groundwater Quality Classification, Bryce Canyon Area, Garfield County, Utah, April 14, 2021. Specifically, the Utah Geological Survey concluded that the waters in the Emery Valley meet Class IA, Pristine Water Quality and noted that the classification document “helps Garfield County recognize the value of their groundwater resource.” Id., page 4. The underlying aquifer is of the highest groundwater quality class: Class IA. Class IA aquifers are considered pristine, ecologically important, and irreplaceable. The rule mandates: “Public Water Systems (PWSs) are responsible for protecting their sources of drinking water from contamination.” Applicant has identified the location of its proposed well, but has failed to provide the required information regarding the source protection zone.	This comment does not pertain to the Permit that was public noticed.
10.23.					The Application is deficient in that the Applicant has not provided information sufficient to allow for determination as to whether the Applicant will meet compliance with the statutory requirements.	This comment does not pertain to the Permit that was public noticed.
10.24.					Although there is a well diversion source on the property for which a Preliminary Evaluation Report is needed, the Applicant has failed to submit a Preliminary Evaluation Report as is required for a new Public Water System. The information which Applicant has submitted to support the Application clearly indicates that the Applicant will not achieve protection compliance with respect to the pristine groundwater, which would negatively affect public health.20	This comment does not pertain to the Permit that was public noticed.
10.25.					Based on the foregoing, it is respectfully requested that the application be rejected as incomplete. The application should also be denied due to severe and various failures to comply with the applicable requirements.	This comment does not pertain to the Permit that was public noticed.
10.26.					May 19, 2021 Bowen, Collins & Associates (BC&A) has assisted Travis Holm and the Tru North Water System with Division of Drinking Water approvals for 5 new public water supply wells. The proposed new wells are located in proximity to the above referenced UPDES Permit. Travis Holm provided us with GPS coordinates of the actual locations of the Tru North wells, and requested we compare them to the well shown in the UPDES Permit. The actual Tru North locations are different than shown in the UPDES Permit. The actual Tru North well locations are shown on Figure 1 and their coordinates provided by Travis Holm are below: • Well No. 1 – Lat 37.7062158° North, Long 112.1929907° West • Well No. 2 – Lat 37.7044500° North, Long 112.1892671° West • Well No. 3 – Lat 37.7044598° North, Long 112.1905425 ° West • Well No. 4 - Lat 37.6992555° North, Long 112.1826316° West • Well No. 5 – Lat 37.7064474° North, Long 112.1890934° West	The set back distances will be addressed in the Facility's Reuse Project Plan which must be submitted and approved by the Director prior to reuse.
11.1.	Shawn	Draney	1-Jun-21	DWQ-2021-012475	Ruby's has a number of rights to divert and beneficially use ground water from the Emery Valley alluvial aquifer. Ruby's provides drinking water to the many visitors to, and the permanent residents of, Bryce Canyon City. We write to comment on the draft permit described above. We appreciate this opportunity to be heard. It is clear the draft permit was thoughtfully crafted to protect the quality of the pristine groundwater of the small and shallow Emery Valley alluvial aquifer that Ruby's and others depend upon. Ruby's appreciates your attention and competence. Item I. C. 5. states: “To prevent nitrogen loading to the aquifer, the effluent must be applied to the land application site at an agronomic rate.” Ruby's suggests this could be more specific. The permittee should be required to apply effluent such that the effluent, together with predictable natural precipitation, is prevented from reaching soil levels below the root zone, as confirmed by appropriately placed soil moisture monitors. The data from such monitors should be available to, and periodically reviewed by, your office.	Water being applied at agronomic rates helps prevent water from passing the root zones. Crops will have treated effluent applied at agronomic rates to prevent water from passing root zones. Downgradient groundwater monitoring well is in place and data is required to be reported to the Division annually.

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11.2.					Item I. C. 2. requires certain inspections, but no detail is provided about what such inspections should include, or how such inspections should be documented and reported. Please consider being specific about the details for inspections, or, in the alternative, make it clear that your office will set mandatory specifics for inspections and reporting of the same from time to time.	DWQ does not provide specific details for self-monitored inspections. DWQ does perform facility inspections.
11.3.					As you know, reuse of water as described in the draft permit requires the appropriate State Engineer approval. This should be a requirement of any permit issued by your office as well.	DWQ does not provide specific details for self-monitored inspections. DWQ does perform facility inspections. In accordance with Utah Admin Code R317, all facilities are required to keep daily reports. The facility will provide the DWQ with a summary of monitoring data as required by the permit in Part I.F.1.
11.4.					Last, but far from least, Ruby's observed the Bristlecone Improvement District, something of a predecessor to the applicant here, was seriously non-compliant with drinking water requirements, to the point that the Environmental Protection Agency ultimately filed suit. Ruby's was disappointed with the oversight of the Division of Drinking Water. Ruby's hopes and expects your department will be much more diligence, as well as transparent, in the unflagging oversight of the future operations of this applicant. The health and safety of many depends upon your continued commitment to the protection of the quality of water in the Emery Valley aquifer.	Thank you for your comment. The Draft Permit terms are protective of water quality and the Division will be diligent in ensuring that the permittee complies.