

Official Draft Public Notice Version **March 19, 2021**

The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

**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  
**Position:** Manager  
**Phone Number:** (435) 319-0421

**Person Name:** Brad Rasmussen  
**Position:** Engineer  
**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.

**Municipal Wastewater Treatment Plant Discharge to Winter Storage Pond**

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**

**Municipal Wastewater Treatment Plant Discharge to Winter Storage Ponds**

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 to minimize any use 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 MUNICIPAL 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

<b>Table 1: Influent - Municipal Wastewater Treatment Plant</b>			
<b>Self-Monitoring and Reporting Requirements <sup>1</sup></b>			
<b>Parameter</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
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.

<sup>1</sup> See Part VIII of the Permit, for definition of terms.

<sup>2</sup> 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

<sup>3</sup> If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

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

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

<b>Table 3: Effluent - Municipal Wastewater Treatment Plant</b>			
<b>Self-Monitoring and Reporting Requirements <sup>1</sup></b>			
<b>Parameter</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Total Flow	Continuous	Recorder or calculated <sup>2, 3</sup>	MGD

The inclusion of biological oxygen demand (BOD<sub>5</sub>), 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 inclusion of Total Nitrogen and Total Dissolved Solids (TDS) as POC requiring effluent limits is based on BPJ and the protection of an underlining Class 1A aquifer. The effluent limits for the reuse Outfall 001 are shown in Table 4.

<b>Table 4: Reuse of Treated Effluent for Land Application</b>				
<b>Parameter</b>	<b>Outfall 001R Effluent Limitations<sup>2</sup></b>			
	<b>Average Monthly Discharge Limit</b>	<b>Average Weekly Discharge Limit</b>	<b>Daily Minimum</b>	<b>Daily Maximum</b>
BOD <sub>5</sub> , 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.

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

a. Self-Monitoring Requirements for Groundwater at the Land Application Site

A monitoring well shall be installed at the first saturated water below ground surface with a screen interval to maintain saturated conditions throughout seasonal variations. Table 6 shows the monitoring and reporting requirements for the monitoring well.

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

The groundwater sample taken before irrigation season will determine the background concentration of Total Nitrogen. Following R317-6-4.2-B.3, when the groundwater sample is taken after the growing season, the concentration of Total Nitrogen in the groundwater must not exceed 1.25 times the background concentration as established by the Utah Geological Survey 2021 Groundwater Quality Classification, Bryce Canyon Area, Garfield County, Utah, or 0.25 times the ground water quality standard of 10mg/L of Total Nitrogen. 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 Nitrogen.

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

<sup>1</sup> See Part VIII of the Permit, for definition of terms.

<sup>2</sup> 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.

<sup>3</sup> If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

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

<sup>5</sup> Groundwater sample will be taken before and after growing season.

to the aquifer. Along with Idaho’s Guidance, and BPJ, DWQ staff determined that 150% is an acceptable Applied Nitrogen Percent and is shown in Table 7. This Applied Nitrogen Percent will determine the proper agronomic rate at which treated effluent can be applied.

<b>Table 7: Nutrient Loading Limits for Land Application</b>	
	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

<b>Table 8: Table of Land Application Site Requirements</b>		
Crop Harvested (tons/yr)	H	As measured based on harvest records
Land Application Area (acres)	A	Total area of land application site
<b>Annual Crop Yield Equation: <math>H / A = Y</math></b>		
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
<b>Crop Nitrogen Uptake: <math>Y * C = NU</math></b>		
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
<b>Applied Nitrogen Equation: <math>(TN * Q * CF / A) + F = AN</math></b>		
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
<b>Applied Nitrogen Percent: <math>AN/ANU = ANP</math></b>		
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.

PND DRAFT

**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:  
Ended:

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**