

**FACT SHEET AND STATEMENT OF BASIS
JORDANELLE SPECIAL SERVICE DISTRICT WATER RECLAMATION FACILITY
MODIFIED DISCHARGE PERMIT
UPDES PERMIT NUMBER: UT0025747
MUNICIPAL FACILITY**

FACILITY CONTACT INFORMATION

Name:	Max Covey
Position:	General Manager
Name:	Drew Robinson
Position:	Wastewater Treatment Plant Manager
Telephone:	(435) 940-0475
Facility Name:	Jordanelle Special Service District
Facility Location:	5400 North Old Hwy 40 Heber City, UT 84032
Facility Mailing Address:	PO Box 519 Heber City, UT 84032

DESCRIPTION OF FACILITY

The Jordanelle Special Service District Water Reclamation Facility (JSSDWRF) is a domestic waste water treatment plant and Publicly Owned Treatment Works (POTW) that has a design flow rate of 1.0 million gallons per day (MGD). The facility was built in 2008 to serve the future developments in the area of Jordanelle Reservoir north of Heber City in Wasatch County, Utah and first became operational in the Summer of 2020. The facility's treatment flow is as follows; raw influent passes through fine screens, and then through a series of anaerobic and aerobic tanks (as a biological aid in the removal of phosphorous), then through a membrane bio-reactor, which includes the addition of alum for further phosphorous removal, then through an ultra violet (UV) disinfection system prior to any discharges. The solids handling process consists of an aerated basin and belt press for dewatering prior to off-site disposal.

DESCRIPTION OF PERMIT MODIFICATION

JSSDWRF has requested a permit modification to formally address elevated concentrations of total dissolved solids (TDS) by including an interim TDS effluent limitation for a period of 2 years. This interim period will allow for JSSDWRF to further investigate and address the elevated TDS concentrations coming into the facility through the collections system. The unexpected influent TDS concentrations at JSSDWRF since initial startup in September 2020 and through December 2021, has averaged 1377 mg/L with concentrations ranging from approximately 800-3500 mg/L during that time period. The effluent concentrations for TDS during that same time period has averaged 1345 mg/L with concentrations ranging from 1090-1760 mg/L as reported monthly. The unexpected elevated influent TDS concentrations at JSSDWRF has made it difficult to achieve the TDS effluent limit and Utah Water Quality Standard (WQS) of 1200 mg/L since start up, as TDS is typically not a parameter that is part of treatment design and operations at POTWs.

Therefore, JSSDWRF is working to investigate the source(s) of the incoming TDS and once it is better understood, JSSDWRF will take measures to reduce the incoming TDS and will be able to better identify possible alternative discharge options. Until that time, JSSDWRF requests that its permit be modified to increase the daily maximum TDS limit to 1800 mg/L as an interim limit for the next two years, which is essentially the remainder of the 5-year permit cycle. This request is based upon the monthly effluent data as mentioned above, which will help facilitate compliance for JSSDWRF during this time and is considered a reasonable request as determined by the permitting authority, especially considering the interim limit is below a previous WQS of 2000 mg/L TDS for stock-watering agricultural practices. Even though this standard has since been obviated, it is being referenced herein as a benchmark for the protection of downstream water uses, as the effluent discharges from JSSDWRF are primarily utilized for agricultural purposes.

Aside from adding a TDS interim limit and accompanying footnote with compliance provisions, the only other change being proposed with this permit modification is to clarify verbiage in the Self-Monitoring and Reporting Requirements permit table that both influent and effluent TDS sampling shall be conducted at least monthly as appropriate, as the previous permit did not specifically mention that.

The permit limitations & self-monitoring requirements with proposed changes highlighted are as follows:

Effluent Limitations (for all Outfalls unless stated otherwise) a/						
Parameter	Yearly Maximum	90 Day Average	Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Total Flow, MGD	NA	NA	1.0	NA	NA	NA
BOD5, mg/L	NA	NA	10	10	NA	NA
BOD5, Minimum % Removal	NA	NA	85	NA	NA	NA
TSS, mg/L	NA	NA	10	10	NA	NA
TSS, Minimum % Removal	NA	NA	85	NA	NA	NA
E. Coli, no./100mL	NA	NA	126	157	NA	NA
Dissolved Oxygen, mg/L	NA	NA	NA	NA	5.0	NA
TDS, mg/L (Interim) i/	NA	NA	NA	NA	NA	1800
TDS, mg/L (Final) i/	NA	NA	NA	NA	NA	1200
Total Phosphorous, mg/L (Interim) e/	NA	NA	NA	NA	NA	0.15
Total Phosphorous, mg/L (May-Oct), (Final)	NA	0.03	Report	NA	NA	0.08
Total Phosphorous, mg/L (Nov-April), (Final)	NA	0.06	Report	NA	NA	0.10
Total Phosphorous, lbs/year h/	91	NA	NA	NA	NA	NA
Oil & Grease, mg/L	NA	NA	NA	NA	NA	10.0
pH, Standard Units	NA	NA	NA	NA	6.5	9.0
WET, Acute Biomonitoring g/	NA	NA	NA	NA	NA	LC ₅₀ > 100% effluent

NA – Not Applicable

MGD – million gallons per day

mg/L – milligrams per liter

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow b/ c/	Continuous	Recorder	MGD
BOD5, Influent d/	2 x Week	Composite	mg/L
BOD5, Effluent	2 x Week	Composite	mg/L
BOD5, Minimum % Removal	2 x Week	Calculation	%
TSS, Influent d/	2 x Week	Composite	mg/L
TSS, Effluent	2 x Week	Composite	mg/L
TSS, Minimum % Removal	2 x Week	Calculation	%
E. Coli f/	2 x Week	Grab	mg/L
Dissolved Oxygen	2 x Week	Grab	mg/L
TDS, Influent & Effluent d/	Monthly	Grab	mg/L
Total Phosphorus, Influent	Monthly	Grab	mg/L
Total Phosphorus, Effluent h/	2 x Week	Grab	mg/L
Orthophosphate (as P), Effluent only	Monthly	Grab	mg/L
Total Kjeldahl Nitrogen (as N), Influent & Effluent	Monthly	Grab	mg/L
Nitrate (NO3), Effluent only	Monthly	Grab	mg/L
Nitrite (NO2), Effluent only	Monthly	Grab	mg/L
Ammonia	2 x Week	Grab	mg/L
Oil & Grease	Monthly if Sheen is Observed	Grab	mg/L
pH	2 x Week	Grab	SU
WET, Acute Biomonitoring g/	Quarterly	Composite	Pass/Fail
Metals, Influent	2 x Year	Composite	mg/L
Metals, Effluent	2 x Year	Composite	mg/L
Organic Toxics, Influent and Effluent	1 st , 3 rd & 5 th Year	Grab	mg/L

a/ See Permit Definitions, *Part VIII*, for definition of terms.

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

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

d/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge.

e/ The interim limit is provided to allow a period of time to optimize the process upon start-up of the facility. The interim limit will expire 2 years after the start-up of the facility. Prior to start-up, JSSDWRF must submit documentation of anticipated initial discharge date, to

DWQ.

- f/ In order to ensure multiple treatment barriers for the removal of pathogens for human health protection, JSSDWRF will be required to continually operate the Ultra Violet (UV) disinfection system at the manufacturers recommended intensity.
- g/ Discharges to either outfall 001 or outfall 002 are not required to monitor or report for WET. If any discharge occurs to either outfall 003 or outfall 004 for any duration during the reporting period JSSDWRF is required to sample, monitor, and report for WET.
- h/ For calculating the yearly Total Phosphorous load use the following equation: Total load for outfall 001*0.05 + total load for outfall 002*0.50 + total load for outfall 003 + total load for outfall 004. This flow proportioned data is based on average flow data from CUWCD, who operate the canals.
- i/ The TDS interim effluent limit shall be for a 2-year period starting on the effective date of this permit to allow a period of time for JSSDWRF to address elevated influent TDS concentrations. The interim limit shall expire 2 years after the effective date of this permit. Additionally, and within 6 months after the effective date of this permit, JSSDWRF shall submit a written report to the Director outlining TDS influent reduction efforts to date and future efforts planned to achieve the final effluent limit.

These changes as highlighted above are the only changes being proposed with this permit modification that are subject to public comment during the public notice period. All other permit provisions remain unopened and unchanged.

PERMIT DURATION

It is recommended that this modified permit be effective for the remainder of the five (5) year permit cycle, which is set to expire at midnight on March 31, 2024.

Drafted by
Jeff Studenka, Discharge
Utah Division of Water Quality, (801) 536-4300
January 24, 2022

PUBLIC NOTICE INFORMATION (to be updated after)

Began: **Month Day, Year**
Ended: **Month Day, Year**

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

The Public Notice of the draft permit and the draft permit documents will be published on the DWQ website for at least 30 days as required per UAC R317-8-6.5.

During the public comment period provided under UAC 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 UAC R317-8-6.12.

DWQ-2018-11348

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