Water Quality Division
Montana Pollutant Discharge Elimination System (MPDES) ▪ Fact Sheet

Permit Number:	MT0021385
Permittee:	Town of Jordan
Receiving Water:	Big Dry Creek
Facility Information:	Jordan WWTF PO Box 484, Jordan, MT 59337
Facility Contact:	Bret Hellyer, Public Works Director PO Box 484, Jordan, MT 59337
Type of Facility:	Minor Publicly Owned Treatment Works
Type of Treatment:	3-Cell Facultative Lagoon System
Number of Outfalls:	1
Outfall Name:	001
Outfall Location:	47.3199 N, 106.8915 W
Fact Sheet Date:	February 2021

I. Summary of Proposed Changes

Montana Department of Environmental Quality (DEQ) proposes to renew the Montana Pollutant Discharge Elimination System (MPDES) permit for Jordan Wastewater Treatment Facility (Jordan), MT0021385. This fact sheet documents the legal requirements and technical rationale that serve the decision-making process involved with developing effluent limits, monitoring and reporting requirements, and special conditions which are specific to Jordan.

A. Proposed Changes

DEQ proposes the following changes:

- Add seasonal average monthly total nitrogen and total phosphorus limits.
- Require that Jordan work with EPA to identify industrial users and develop an approved pretreatment program.

II. Facility Information

A. Permit Status

- October 1, 2011 — 2011-issued permit became effective
- September 30, 2016 — 2011-issued permit expired
- May 25, 2016 — 2011-issued permit administratively extended

B. Facility Description

Current Conditions	Historical Conditions

• Three cells
• One outfall (001)
  ○ Discharges to Big Dry Creek
• Continuous Discharge
• No disinfection
• Design population: 423
• Jordan population: 396 (2017 census)
• Detention time: 180 days
	• Constructed in 1951
	• Permitted in 1970
	• Average daily design flow 0.080 mgd
	• Upgraded 2008
	  ○ Reconfigured into three-cell system
	  ○ Constructed new lift station
	  ○ Replaced sections of sanitary sewer
	  ○ Cleaned and removed sludge
	  ○ Average daily design flow 0.0465

C. Existing Permit Requirements

Table 1: 2011 Permit Limits for Jordan WWTF – Outfall 001

Parameter	Units	Average Monthly Limit	Average Weekly Limit	Maximum Daily Limit
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	-
	% removal	85	-	-
	lb/day	11.6	17.5	-
Total Suspended Solids (TSS)	mg/L	45	65	-
	% removal	65	-	-
	lb/day	17.5	25.2	-
pH	s.u.	6.0 – 9.0 instantaneous		
E. coli Bacteria, Summer	cfu/100mL	126	252	-
E. coli Bacteria, Winter	cfu/100 mL	630	1260	-
Total Residual Chlorine	lb/day	-	-	0.011

D. Effluent Quality

The Jordan effluent history is comprised of the last five years of monitoring data. Table 2 summarizes effluent quality as reported on discharge monitoring reports. The minimum, maximum, and average values in Table 2 are the reported monthly minimum average, weekly or daily maximum, and average of the reported monthly average values, respectively.

Table 2: Jordan Effluent Characteristics, May 2015 – May 2020[1]

Parameter	Units	Minimum Value	Maximum Value	Average Value	Sample Size
Flow Rate, Monthly Average	mgd	0.0014	0.058	0.027	46
Temperature	°F	36.0	75.0	52.0	46
Conventional Pollutants:					

Table 2: Jordan Effluent Characteristics, May 2015 – May 2020[1]					
Parameter	Units	Minimum Value	Maximum Value	Average Value	Sample Size
5-Day Biochemical Oxygen Demand (BOD_5)	mg/L	3.7	150	37.1	46
	% removal	73.0	100	91.3	46
	lb/day	0.015	56.5	7.6	46
Total Suspended Solids (TSS)	mg/L	7.75	224	53.6	46
	% removal	40.0	99.9	87.9	45
	lb/day	0.66	73.8	9.6	46
E. coli, April – October	org/100 mL	120	77,000	10,000	23
E. coli, November – March	org/100 mL	390	120,000	21,000	25
Oil and Grease	mg/L	1.0	8.1	2.8	23
pH	s.u.	8.2	10.6	9.2	46
Nonconventional Pollutants:					
Total Ammonia	mg/L	0.35	27.5	7.8	45
Nitrate + Nitrite[2]	mg/L	0.010	0.59	0.073	25
Total Kjeldahl Nitrogen	mg/L	7.1	35.4	19.2	46
Total Nitrogen	mg/L	4.3	35.4	18.1	46
	lb/day	0.24	24.2	5.1	46
Total Phosphorus	mg/L	1.5	12.8	8.2	46
	lb/day	0.060	11.1	2.1	46

[1] All data is for effluent characteristics, unless indicated as influent.
[2] Values were reported as Nitrate as N due to a database coding error.

E. Compliance History

Jordan has a complex compliance history, as summarized below.

Jordan has had near-continuous permit violations following the 2008-facility upgrade. This includes 264 permit violations over the period of record May 2015-May 2020. During this timeframe DEQ issued 47 violation letters to Jordan. DEQ completed an inspection on January 29, 2015.

Administrative Order on Consent (AOC, FID #2159). On November 9, 2012, Jordan entered an Administrative Order on Consent with DEQ Enforcement. This AOC is still ongoing today.

Wastewater Evaluation. On July 15, 2019, H&S Environmental, LLC conducted a wastewater treatment optimization study for Jordan. Representatives from DEQ and Jordan attended. The evaluation determined that:

- Ryan's Processing, a local meat processing plant, is overloading the system with untreated influent.
- Potential solutions include:
  - Installing aeration, UV, or chlorination systems for further treatment.
  - Requiring Ryan's Processing to pre-treat their effluent before Jordan accepts it.

Current Conditions. Jordan plans a facility upgrade by converting the three existing cells into primary treatment cells and adding a 23-acre total retention pond. However, Jordan has not received funding after applying to various state funding sources in 2017, 2018, and 2019.

III. Receiving Water: Big Dry Creek

Jordan discharges wastewater to Big Dry Creek, an intermittent stream that flows to Fort Peck Reservoir.

A. Receiving Water Summary

The following information was used to develop water quality based effluent limits.

- Water Use Classification: C-3, Intermittent
- Watershed: Big Dry
- Waterbody Name/Location Big Dry Creek, Steves Fork to mouth (Fort Peck)
- Montana Stream Segment: MT40D001_10
- USGS Hydrologic Unit Code: 10040105
- USGS Stream Gage: 06131000
- Ecoregion: Northwestern Great Plains
- Impairment: Primary contact recreation, aquatic life
- TMDL: No
- 7Q10: 0

B. Water Use Classification

According to Montana Water Use Classifications, Big Dry Creek is classified as C-3. The goal of the state of Montana is to maintain C-3 class waters suitable for:

- bathing, swimming, and recreation;
- growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl and furbearers.

The quality of these waters is naturally marginal for drinking, culinary and food processing purposes, agriculture, and industrial water supply.

C. Impairments

Big Dry Creek is listed on the draft 2020 Montana 303(d) List as not fully supporting primary contact recreation and aquatic life. This is due to the probable causes and sources listed below.

Probable Cause	Probable Source
• Alteration in stream side or littoral vegetation • Ammonia • Nitrate + Nitrite • Total Nitrogen • Total Phosphorus	• Agriculture • Municipal point source discharges

Jordan, as a municipal point source discharge, is likely contributing to the impairment listings of ammonia, nitrate + nitrite, total nitrogen, and total phosphorus.

D. Ambient Stream Conditions

1. Instream Pollutant Concentrations

Ambient instream monitoring data collected by Jordan from Big Dry Creek at Outfall 001 is summarized in Table 3 below.

Table 3: Big Dry Creek Instream Data, May 2015 – May 2020 (1)					
Parameter	Units	Minimum Value	Maximum Value	Average Value	Sample Size
pH	s.u.	6.0	9.5	8.2	18
Temperature	F	36.7	78.0	55.6	18
Total Ammonia as N	mg/L	0.060	0.12	0.085	6
(1) Instream data collected from Jordan Outfall 001.					

2. Low Flow

The USGS monitoring station 06131000, approximately 26 miles downstream of Jordan, has a 7Q10 low flow of zero. The Big Dry Creek is intermittent as it flows though Jordan.

IV. Technology Based Effluent Limits

Technology-based effluent limits (TBELs) represent the minimum treatment requirements implemented in MPDES permits. The limits are based on actual, available control technologies to treat pollutants, and must be met prior to dilution. The Montana Board of Environmental Review has adopted 40 CFR 133 by reference, which defines minimum requirements for secondary treatment for publicly owned treatment works.

A. Applicable Effluent Limits

Secondary treatment standards are defined in terms of effluent quality as measured by pH, 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and percent removal of BOD_5 and TSS. These standards are based on biological treatment technologies.

1. National Secondary Standards, *40 CFR 133.102*

There are two secondary treatment standards that may be applied to waste stabilization ponds with biological treatment: National Secondary Standards (NSS) and Treatment Equivalent to Secondary Standards (TES). NSS is the minimum level of effluent quality attainable by secondary treatment for BOD_5, TSS, and pH. TES is an alternative for BOD_5 and TSS, and is only available to waste stabilization ponds that consistently exceed NSS with proper operation and maintenance.

The 2011 permit granted Jordan NSS for BOD_5 and pH, and TES for TSS. Table 4 displays these permit limits, compared to the 95th percentile of their effluent data and the number of permit exceedances.

Table 4: Jordan TBEL data				
Parameter	Units	2011 permit limits	95th percentile (1)	Number of permit exceedances (1)
BOD_5 (2)	mg/L	30	68	25
TSS (2)	mg/L	45	103	22
pH (3)	s.u.	9	9.6	39
(1) Data from 2015-2020			(2) Monthly concentration (3) Daily maximum	

Although the 95th percentile for BOD_5 and TSS exceed NSS limits, Jordan is ineligible for TES because:

- Jordan allows high strength influent, which is overloading the system. Accepting this waste stream without pretreatment is interfering with proper operation and maintenance of the lagoon.

Jordan will be held to National Secondary Standards for BOD_5, TSS, and pH:

- **BOD_5 and TSS monthly average**: must not exceed 30 mg/L
- **BOD_5 and TSS weekly average**: must not exceed 45 mg/L
- **BOD_5 and TSS percent removal**: must not be less than 85%
- **pH**: must be maintained within the range of 6.0 to 9.0.

2. Mass-Based Effluent Limits

Effluent limits must be expressed in terms of mass, and are quantified as load (lb/day). Load limits are calculated by multiplying the facility's average daily design flow, the TBELs discussed in Section IV.A.1 for each pollutant, and a conversion factor.

Prior to the 2008 facility update, the average daily design flow was 0.080 mgd. The 2008 facility upgrade lowered the design flow to 0.0465 mgd, which was used to develop mass-based limits in the 2011 Fact Sheet. To comply with nondegradation load allocations, the 0.0465 mgd design flow will be used to calculate mass-based effluent limits.

- BOD_5 and TSS monthly average load = 0.0465 mgd x 30 $\frac{mg}{L}$ x 8.34 $\frac{lb \bullet L}{Mgal \bullet mg}$ = 11.6 $\frac{lb}{day}$
- BOD_5 and TSS weekly average load = 0.0465 mgd x 45 $\frac{mg}{L}$ x 8.34 $\frac{lb \bullet L}{Mgal \bullet mg}$ = 17.5 $\frac{lb}{day}$

Load limits for BOD_5 and TSS will apply to the effluent and will be maintained at the more stringent of the nondegradation load allocations or mass-based loading limits, as discussed next.

B. Nondegradation Load Allocations

Montana's Nondegradation Policy prevents degradation of state waters and ensures that existing uses continue to be achieved. Facilities that comply with the conditions of their permit and do not exceed the limits are not considered new or increased sources.

Nondegradation load values are compared to the actual average loads discharged from the facility from the past five years. The long-term averages in Table 5 demonstrate that Jordan discharges within the nondegradation load allocations; therefore, this facility is not considered a new or increased source. In 2018, the average monthly load of BOD_5 exceeded the nondegradation load; however, this is due to the high strength influent, rather than being a new or increased source.

Table 5: Nondegradation Limits		Actual Average Monthly Load (lb/day)				
Parameter	Load (lb/day)	2015	2016	2017	2018	2019
BOD_5	11.6	1.7	5.9	9.4	11.9	7.3
TSS	17.5	8.8	11.1	3.8	6.2	15.0

C. Final Technology-Based Effluent Limits

The renewed permit will retain TBELs based on National Secondary Standards for BOD_5 and TSS, as shown in Table 6**.** Technology-based limits for pH remain between 6.0-9.0 standard units.

Table 6: Technology-Based Effluent Limits [(1)] for Outfall 001			
Parameter	Units	Average Monthly Limit	Average Weekly Limit
Biochemical Oxygen Demand (BOD_5)	mg/L	30	45
	%	85	-

Table 6: Technology-Based Effluent Limits [1] for Outfall 001			
Parameter	Units	Average Monthly Limit	Average Weekly Limit
	lb/day	12	17
Total Suspended Solids (TSS)	mg/L	30	45
	%	85	-
	lb/day	12	17
pH	s.u.	6.0 - 9.0 (instantaneous)	
[1] See Definition section at end of permit for explanation of terms.			

V. Water Quality Based Effluent Limits

Permits are required to include water quality-based effluent limits (WQBELs) when TBELs are not adequate to protect state water quality standards. WQBELs are developed for each parameter demonstrating reasonable potential to cause or contribute to an excursion from any water quality standard, including narrative criteria. The purpose of this section is to provide a basis and rationale for establishing effluent limits that will protect designated uses of the receiving water.

A. Scope and Authority

The Montana Water Quality Act states that a permit may only be issued if DEQ finds that it will not result in pollution of any state waters. No wastes may be discharged that can reasonably be expected to violate any state water quality standards. Montana water quality standards define both water use classifications for all state waters and numeric and narrative standards that protect those designated uses.

B. Applicable Water Quality Standards

1. C-3 Classification Standards

Jordan's discharge to Big Dry Creek is subject to the specific water quality standards of C-3 waters.

2. General Prohibitions

Jordan' discharge must comply with general prohibitions (narrative standards) which require that state waters be free from substances which will:

- Settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines.
- Create floating debris, scum, a visible oil film (or be present in concentrations at or in excess of 10 mg/L), or globules of grease or other floating materials.
- Produce odors, colors, or other conditions which create a nuisance or render undesirable tastes to fish flesh or make fish flesh inedible.
- Create concentrations or combinations of materials which are toxic or harmful to human, animal, plant, or aquatic life.
- Create conditions which produce undesirable aquatic life.

C. Pollutants of Concern for WQBELs

Pollutants and parameters are identified as a pollutant of concern for the following reasons:

- Listed as TBELs
- Identified as needing WQBELs in the previously issued permit
- Associated with a total maximum daily load

Table 7 includes parameters typically present in sanitary wastewater. Identification of a pollutant of concern is not an indication that WQBELs are necessary, but an indication that further evaluation is required.

Table 7: Identification of Pollutants of Concern WQBEL	
Parameter	**Basis for Identification**
Conventional Pollutants:	
BOD_5, TSS, and pH	TBEL in Previous Permit
Oil & Grease	Permit Monitoring
E. coli	WQBEL in Previous permit
Nonconventional Pollutants:	
Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Phosphorus	Permit Monitoring
Total Residual Chlorine	WQBEL in Previous Permit

D. Mixing Zone

A mixing zone is not granted under this permit. All effluent limits must be met at the end of the discharge pipe before the effluent reaches the receiving water.

E. Water Quality-Based Effluent Limits Development

WQBELs are expressed as maximum daily limits and average monthly limits.

- The **maximum daily limit** (MDL) is the highest allowable discharge measured during a calendar day or 24-hour period representing a calendar day.
- The **average monthly limit** (AML) is the highest allowable value for the average of daily discharges over a calendar month.

WQBEL development is detailed on a parameter-by-parameter basis in Section V.H, Final Pollutant Evaluation.

F. Reasonable Potential Analysis

The reasonable potential (RP) analysis predicts the impact of the discharge on the receiving water under design conditions, and WQBELs are developed for each parameter that demonstrated RP to cause an exceedance of a water quality standard. DEQ uses a statistical approach outlined in Chapter 3 of EPA's Technical Support Document for Water Quality-based Toxics Control (TSD) to determine RP for individual pollutants:

1. The **TSD 3-2 multiplier** is calculated from dataset statistics: the data set, coefficient of variation (CV), and sample size (n) at the 95% confidence interval.
2. The **critical effluent concentration** is calculated by multiplying the maximum effluent concentration reported by the facility and the TSD 3-2 multiplier.
3. **Reasonable potential** to exceed a water quality standard is found where calculated critical effluent concentration is greater than the water quality standard.

The process analysis is detailed below and in Table 8:

Table 8: Reasonable Potential Analysis for Jordan WWTF

	1.				2.		3.		
	CV	n	→	TSD 3-2 Multiplier	× Maximum Effluent Concentration	= Critical Effluent Concentration	Water Quality Standard	→	RP?
Nitrate + Nitrite	1.70	25		1.66	0.59 mg/L	0.98 mg/L	< 10.0 mg/L		no
Oil and Grease	0.585	23		1.30	8.1 mg/L	10.5 mg/L	< 10.0 mg/L		yes

Because Big Dry Creek is impaired for both Total Nitrogen (TN) and Total Phosphorus (TP), with municipal point source discharges found to be a probable cause of impairment, DEQ will cap the current loading for both pollutants (2020 draft 303(d) list).

G. Final Pollutant Evaluation

Below is a summary of each parameter's reasonable potential analysis and WQBEL development, if applicable.

1. **BOD_5, TSS, and pH:** These parameters are typical effluent quality indicators and are regulated as TBELs.
   - No additional limits are necessary - TBELs adequately control these pollutants and protect the beneficial uses of the receiving water.

2. ***Escherichia coli* (*E. coli*) Bacteria:** Pathogens are known municipal wastewater contaminants. *E. coli* standards protect beneficial uses of receiving waters for pathogens. State waters must be free from substances that are harmful or toxic to humans. The standards for C-3 classified waters are:
   - Summer: April 1 through October 31 of each year
     - The geometric mean must not exceed 126 organisms per 100 mL
     - 10% of the total samples may not exceed 252 organisms per 100 mL during any 30-day period
   - Winter: November 1 through March 31 of each year
     - The geometric mean number of E. coli must not exceed 630 organisms per 100 mL
     - 10% of the total samples may not exceed 1,260 organisms per 100 mL during any 30-day period
   - The existing permit limits and monitoring requirements for *E. coli* are maintained in this renewal.

3. **Oil and Grease:** The 2011-issued permit required monthly monitoring to determine if Jordan has reasonable potential to exceed the water quality standard found in general prohibitions.
   - Reasonable potential exists. The projected maximum effluent concentration (10.5 mg/L) exceeds the water quality standard (10 mg/L).
   - The MDL for Jordan is set to the water quality standard of 10 mg/L.
   - Oil and grease monitoring is required quarterly, plus any time a visual sheen is observed in the effluent.

4. **Total Residual Chlorine:** The 2011 permit developed a WQBEL for Jordan in case the town chose to include chlorination to treat effluent. Since Jordan does not use chlorination, this WQBEL will be removed and no monitoring will be required.

5. **Ammonia, as N:** The overloading and short-circuiting of the wastewater lagoons by high strength influent creates both high nutrient and anaerobic conditions within the lagoons that convert nitrogen to ammonia. Jordan may reduce ammonia through aeration, but that would simply convert ammonia to nitrate, and thus create a nitrate problem instead of an ammonia one. Jordan may try some things to reduce all forms of nitrogen, but the high TP concentrations stimulate nitrogen-fixing cyanobacteria that add nitrogen back into the system. Because an ammonia limit does not address the big picture challenges and could simply result in Jordan to converting one problem into another, DEQ is having Jordan address the pretreatment and performance optimization of the lagoons this permit cycle. Monthly monitoring of ammonia will continue to be required.

6. **Nitrate Plus Nitrite (N+N):** Nitrate and nitrite are toxic components of total nitrogen. The human health standard for N+N is 10 mg/L.
   - Reasonable potential does not exist. The projected maximum effluent concentration (0.98 mg/L) does not exceed the human health standard (10 mg/L).
   - Monthly monitoring of N+N will be required.

7. **Nutrients, Total Nitrogen (TN) and Total Phosphorus (TP):** State surface waters must be free from substances attributable to municipal, industrial, agricultural practices or other discharges that will create conditions which produce undesirable aquatic life. This includes TN and TP from Jordan.

   Because Jordan has RP to violate the narrative standard above, the average monthly WQBEL is determined and then converted to load. The calculation is outlined in Table 9 and described below:
   1. Calculate the arithmetic **long-term average (LTA)** from representative facility date of 3-5 years, using only data from the summer season (July-September).
   2. Calculate the **TSD 5-2 multiplier** from the **CV** of reported data for chronic conditions.
   3. Find the **average monthly load limit (AML)** by multiplying the LTA with the TSD 5-2 multiplier.

Table 9: Nutrient Load Limit Calculations

	1.		2.		3.
	LTA (lb/d)	× CV	TSD 5-2 multiplier	=	AML (lb/d)
Total Nitrogen	1.6	1.1	2.0		3.2
Total Phosphorus	0.59	1.3	2.2		1.3

   a. **Total Nitrogen, as N**
      - Reasonable potential exists.
      - This results in a TN seasonal monthly load = 3.2 lb/d
      - Monthly monitoring is required.
      - Monthly monitoring for Kjeldahl nitrogen will be required, as it is a component of total nitrogen.

   b. **Total Phosphorus, as P**
      - Reasonable Potential Exists.
      - This results in a seasonal monthly load = 1.3 lb/d
      - Monthly monitoring is required.

VI. Final Effluent Limits

The final effluent limits are a combination of the more stringent of the technology-based and water quality-based effluent limits developed. The final effluent limits in Table 10 will be applied to the discharge at Outfall 001 beginning on the permit effective date and lasting through the term of the permit.

Table 10: Final Effluent Limits – Outfall 001

Parameter	Units	Average Monthly Limit [1]	Average Weekly Limit [1]	Maximum Daily Limit [1]
5-Day Biochemical Oxygen Demand (BOD_5)	mg/L	30	45	-
	lb/day	12	17	-
	% Removal	85	-	-
Total Suspended Solids (TSS)	mg/L	30	45	-
	lb/day	12	17	-
	% Removal	85	-	-
E. coli, April – October	org/100 mL	126	252	-
E. coli, November - March	org/100 mL	630	1,260	-
Total Nitrogen [2,3]	lb/day	3.2	-	-
Total Phosphorus[2]	lb/day	1.3	-	-
Oil & Grease	mg/L	10	-	-
pH	s.u.	6.0-9.0 Instantaneous minimum and maximum		

[1] See Definitions section at the end of the permit for explanation of terms.
[2] Seasonal limit applies July 1 – September 30.
[3] Calculated as the sum of Total Kjeldahl Nitrogen and nitrate plus nitrate as N concentrations.

VII. Monitoring and Reporting Requirement

A. Requirement to Monitor and Report

Jordan will be required to monitor. The samples collected and analyzed must be representative of the volume and nature of the facility's discharge. The Required Reporting Value (RRV) is DEQ's best determination of a level of analysis that can be achieved by the majority of commercial, university, or governmental laboratories using EPA-approved methods or methods approved by DEQ.

- Monitoring will start with the effective date of the permit and last for the duration of the permit cycle.
- All analytical procedures must comply with the specifications of 40 CFR Part 136.
- Jordan must submit NetDMR results for each month by the 28th of the following month.

B. Monitoring Locations, Frequency, Sample Type, and Calculations

The monitored parameters, their respective monitoring locations, and the reporting requirements are presented in Table 11. Reporting is required monthly for all parameters.

1. **Influent Monitoring** is needed to calculate percent removal for BOD_5 and TSS. Influent samples must be taken at the last sewer connection before discharge into the lagoon cells.

2. **Effluent Monitoring** shall be conducted at the discharge location prior to entering Big Dry Creek at Outfall 001.

Table 11: Monitoring and Reporting Requirements

Parameter [(1)]	Units	Minimum Frequency	Type [(2)]	Reporting Requirements	RRV [(3)]
Effluent Flow Rate	mgd	1/Week	Instantaneous	Monthly Average, Daily Maximum	-
Biochemical Oxygen Demand (BOD_5)	mg/L	1/Month	Grab	Monthly Average, Weekly Maximum	2
	% Removal [(4)]	1/Month	Calculated	Monthly Minimum	-
	lb/day	1/Month	Calculated	Monthly Average, Weekly Maximum	-
Total Suspended Solids (TSS)	(mg/L)	1/Month	Grab	Monthly Average, Weekly Maximum	10
	% Removal [(4)]	1/Month	Calculated	Monthly Minimum	-
	(lb/day)	1/Month	Calculated	Monthly Average, Weekly Maximum	-
Influent BOD_5	mg/L	1/Quarter	Composite	Monthly Average	10
Influent TSS	mg/L	1/Quarter	Composite	Monthly Average	10
E. coli	org/100 mL	1/ Month	Grab	Monthly and Weekly Geometric Mean	1/100mL
Total Ammonia	mg/L	1/Month	Composite	Monthly Average Daily Maximum	0.07
Total Phosphorus	mg/L	1/Month	Composite	Monthly Average	.003
	lb/day	1/Month	Calculated	Monthly Average	-
Total Nitrogen	mg/L	1/Month	Composite	Monthly Average	.07
	lb/day	1/Month	Calculated	Monthly Average	-
Nitrate + Nitrite	mg/L	1/Month	Composite	Monthly Average	.020
Total Kjeldahl Nitrogen	mg/L	1/Month	Composite	Monthly Average	.225
Oil Sheen Presence	Presence	1/Week	Observation	Present/Absent	-
Oil and Grease	mg/L	1/Quarter [(5)]	Grab	Monthly Maximum	1.0
Effluent pH	s.u.	1/Month	Instantaneous	Daily Minimum, Daily Maximum	0.1

[(1)] Monitoring for all parameters are effluent unless otherwise stated.
[(2)] See Definition section at end of permit for explanation of terms.
[(3)] See Circular DEQ-7 for more information on RRVs. If reporting non-detects, analyses must achieve these, or lower, RRVs.
[(4)] Percent removal shall be calculated using the monthly average values.
[(5)] Oil and grease analysis must be conducted quarterly, plus any time a visual sheen is observed in the effluent.

3. **Upstream Monitoring** is necessary to calculate ambient ammonia water quality standards. Upstream samples will be conducted 500-1000 ft upstream of Outfall 001.

Table 12: Upstream Monitoring and Reporting Requirements

Parameter	Units	Minimum Frequency	Type [1]	Reporting Requirements	RRV [2]
Upstream pH	s.u.	1/Quarter	Instantaneous	Daily Minimum, Daily Maximum	0.1
Upstream Temperature	°C	1/Quarter	Instantaneous	Daily Maximum	0.1

[1] See Definition section at end of permit for explanation of terms.
[2] See Circular DEQ-7 for more information on RRVs. If reporting non-detects, analyses must achieve these, or lower, RRVs.

VIII. Special Conditions

A. Development of an EPA-Approved Pretreatment Program

Jordan must work with EPA's Pretreatment program to determine if Jordan must develop and implement an approved pretreatment program. Jordan must contact EPA at the address below within one year of the effective date of this permit to begin discussions regarding the applicability of a pretreatment program:

Pretreatment Coordinator
USEPA Region 8; 8WD-CW-W
1595 Wynkoop
Denver, CO 80202

Jordan must submit annual reports to DEQ beginning in January 2022 documenting the discussions, development and if applicable the implementation of an approved pretreatment program. These annual reports must include a summary of all information EPA requires that Jordan collect including the identification of non-domestic or industrial users in the town's service area and the character and volume of pollutants contributed by the industrial users.

Upon approval by the EPA, this Permit will be modified or, alternatively, upon request, revoked and reissued to incorporate the conditions of that Pretreatment Program.

IX. Public Participation

A. Public Notice

DEQ issued a public notice stating that a tentative decision has been made to issue an MPDES permit to Jordan, and that a draft permit, fact sheet and environmental assessment (EA) have been prepared. Details are below:

- Public Notice No. MT-21-04 dated March 22, 2021
- Public comments are invited any time prior to the close of the business April 21, 2021.
- Comments may be directed to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620

or DEQWPBPublicComments@mt.gov

- All comments received or postmarked prior to the close of the public comment period will be considered in the formulation of the final permit.
- DEQ will respond to all substantive comments and issue a final decision within sixty days of the close of the public comment period or as soon as possible thereafter.

All persons, including the applicant, who believe any condition of the draft permit is inappropriate shall raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period.

B. Notification of Interested Parties

Copies of the public notice were mailed to the discharger, state and federal agencies and interested persons who have expressed an interest in being notified of permit actions. A copy of the distribution list is available in the administrative record for this permit.

- In addition to mailing the public notice, a copy of the notice and applicable draft permit, fact sheet and EA were posted on DEQ's website for 30 days.

Any person interested in being placed on the mailing list for information regarding this MPDES permit should contact DEQ, reference this facility, and provide a name, address, and email address.

C. Public Hearing

During the public comment period provided by the notice, DEQ will accept requests for a public hearing. A request for a public hearing must be in writing and must state the nature of the issue proposed to be raised in the hearing.

D. Permit Appeal

After the close of the public comment period DEQ will issue a final permit decision, which is a final decision to issue, deny, modify, revoke and reissue, or, terminate a permit. A permit decision is effective 30 days after the date of issuance unless a later date is specified in the decision, a stay is granted, or the applicant files an appeal.

Jordan may file an appeal within 30 days of DEQ's action to the following address:

Secretary, Board of Environmental Review
Department of Environmental Quality
1520 East Sixth Avenue
PO Box 200901
Helena, Montana 59620-0901

E. Additional Information

Requests for additional information or questions regarding this permit should be directed to the Water Protection Bureau at 406-444-6747.

X. Information Sources

Administrative Rules of Montana Title 17 Chapter 30 – Water Quality

- Subchapter 2 - *Water Quality Permit and Application Fees*
- Subchapter 5 - *Mixing Zones in Surface and Ground Water*
- Subchapter 6 - *Montana Surface Water Quality Standards and Procedures*
- Subchapter 7 - *Nondegradation of Water Quality*
- Subchapter 12 - *Montana Pollutant Discharge Elimination (MPDES) Standards*

- Subchapter 13 - *Montana Pollutant Discharge Elimination (MPDES) Permits*

CWAIC: Clean Water Act Information Center, Department of Environmental Quality. Accessed July 2020.

Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. §§ 1251-1387, October 18, 1972, as amended 1973-1983, 1987, 1988, 1990-1992, 1994, 1995 and 1996.

H&S Environmental, LLC. Steven M. Harris. *Jordan Montana – Wastewater Lagoon Performance Evaluation*. September 2019.

Integrated 303(d) Draft Water Quality Report for Montana (2020).

Montana Code Annotated (MCA), Title 75-5-101, *et seq.*, "Montana Water Quality Act."

Montana DEQ. 2019. *Department Circular DEQ-7, Montana Numeric Water Quality Standards.*

Montana DEQ. 2014: *Department Circular DEQ-12A, Montana Base Numeric Nutrient Standards.*

Montana DEQ. Montana Pollutant Discharge Elimination System (MPDES) Permit Number MT0021385
- Administrative Record
- Renewal Application Forms DEQ-1 and EPA Form 2A, 2016
- Administrative Order on Consent Report
- 2015 Compliance Inspection Report

US Code of Federal Regulations, 40 CFR Parts 122-125, 130-133, & 136.

US EPA *Technical Support Document for Water Quality-Based Toxics Control*, EPA/505/2-30-001, March 1991.

Prepared by: Melinda Horne
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