

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT FACT SHEET**

April 2, 2021

Permittee Name: **RGJ, Inc., DBA Goulding’s Lodge Wastewater Treatment Lagoon**
NPDES Permit No.: **NN0025178**
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I. STATUS OF PERMIT

RGJ, Inc. DBA Goulding’s Lodge (a.k.a., Goulding’s Lodge, the “permittee”) applied for the renewal of their National Pollutant Discharge Elimination System (NPDES) permit to authorize the discharge of treated domestic wastewater from its treatment lagoon to an unnamed wash, a tributary to Mitchell Butte Wash, which is a tributary to Oljeto Wash and eventually drains to the San Juan River. The facility is in the Monument Valley, in San Juan County, Utah. EPA Region 9 developed this permit and fact sheet pursuant to the Clean Water Act (CWA), which requires point source dischargers to control the pollutants that are discharged to waters of the United States by obtaining and operating in compliance with an NPDES permit.

The permittee’s application dated October 24, 2019, was deemed complete on November 10, 2020, after the permittee provided additional information.

The permittee is currently discharging under NPDES permit No. NN0025178, which expired on April 30, 2020. Pursuant 40 CFR §122.6, the terms of the existing permit were administratively extended until EPA issues a new permit.

This permittee is classified as a minor discharger.

II. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

The permit includes a new requirement to develop a sludge management plan and to submit annual biosolids reports electronically using EPA’s NPDES Electronic Reporting tool (“NeT”). The permit does not change the flow limit from the previous permit, but it clarifies that if the flow rate exceeds 0.1 MGD, the discharger must complete a Priority Pollutant Scan prior to applying for permit reissuance. Reporting requirements for the five-day biochemical oxygen demand test (BOD₅) and total suspended solids (TSS) have been changed from kg/day to lb/day. To be consistent with 40 CFR §133.05 (treatment equivalent to secondary treatment), the TSS limit has been changed to 45 mg/L monthly average and 65 mg/L weekly average.

Table 1. Significant Changes to Previous Permit

Permit Condition	Previous Permit (2014 – 2020)	Re-issued permit (2021 – 2026)	Reason for change
Mass-based reporting for BOD ₅	84.5 kg/day monthly; 122.0 kg/day weekly	187.7 lb/day monthly; 271.2 lb/day weekly	Standardize units
Total Suspended Solids (TSS) Concentration	90 mg/L monthly; 135 mg/L weekly	45 mg/L monthly; 65 mg/L weekly	40 CFR §133.05(b) and (f). Treatment equivalent to secondary is achievable.
Mass-based reporting for TSS	90 kg/day monthly; 169.0 kg/day weekly	188 lb/day monthly; 271 lb/day weekly	Consistent with change in concentration limits
Influent Monitoring	Influent monitoring required	Specifies both influent locations INF-001 and INF-002	Clarity
Sewage Sludge (biosolids)	No specific requirements	Lagoon survey and plan for sludge removal required	Biosolids requirements in 40 CFR §503
Electronic reporting (NeT)	Requirement to submit paper copies	Requirement to submit electronically	Implements EPA’s NPDES Electronic Reporting Rule (which was effective 2015)
Priority Pollutant Scan	Not explicitly required	Required if discharge flow exceeds 0.10 MGD	Required under 40 CFR §122.21 (j)(3) to (5)

III. GENERAL DESCRIPTION OF FACILITY

The Goulding’s Lodge wastewater treatment lagoon facility is in Monument Valley, San Juan County, Utah, within the northern portion of the Navajo Nation. Goulding’s Lodge consists of a hotel, café, RV park/campground, cabins, grocery store, car wash, a gas station, laundromat, and offices in what used to be a hospital. The old hospital now serves as a learning center, with offices run by the State of Utah and San Juan County.

During the peak tourist season from April to October, the facility usually serves a population averaging 2,500 per day; the population totals about 400 per day during the off-season from November to March. The lodge employs 250 people year-round, and 25 to 30 residents live in the teacherage for the abandoned Monument Valley SDA Mission School. In the past, the facility occasionally allowed contractors to reuse effluent for construction dust control, but that practice ceased. The car wash includes an oil/water separator and the restaurant includes a grease trap to remove excess oil and grease.

The wastewater treatment system includes four facultative lagoons in series (Lagoons 1 to 4). Lagoons 1 and 2 were constructed in 2001. Prior to 2001, there were six lagoon cells (numbered 1 to 6). After construction of two new lagoons (currently Lagoons 1 and 2), the original Lagoon 1 was relabeled Lagoon 3 and the original Lagoons 2 through 6 were combined to form Lagoon 4. There is no primary treatment or disinfection at the facility. Bubblers in all the lagoons enhance evaporation and exposure to sunlight: Lagoon 1 has four bubblers, Lagoon 2 has six bubblers, Lagoon 3 has three bubblers, and Lagoon 4 has six bubblers.

Figure 1 shows an overview of the facility. Note that this figure shows the original six small lagoons. Within the dark green line are the original Lagoons 2 through 6, which became Lagoon 4 (prior to the previous permit reissuance). The original Lagoon 1 is shown on the figure as the current Lagoon 3. Figure 2 shows the current configuration of the four lagoons.

**Site Location Map
Goulding's Lodge
Monument Valley, UT**



- **New Sewer Line** (Locations approximate and not to scale. Area served in pale green. The old line up the canyon abandoned)
- **Old Sewer Line** (Area served in pale orange.) (Locations approximate and not to scale)
- **Land Leased from or Donated by Goulding's**
- **Land Owned by Goulding's**
- **Land Leased by Goulding's from the Navajo Nation**
- **Land Leased by the Seventh Day Adventist School from the Navajo Nation**

Sewage Lagoon Permit Renewal
 Site: Goulding's Lodge
 Monument Valley, Utah
 Source: USGS Goulding, UT, Topographic Map

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Client: RGJ, Inc.
 Sendero LLC
 Approximate Scale: 1" : 1381'
 Figure 1

**Lagoon Configuration
Goulding's Lodge
Monument Valley, UT**



**Sewage Lagoon Permit Renewal
Site: Goulding's Lodge
Monument Valley, Utah
Source: Google Maps 2018**



**Client: RGJ, Inc.
Sendero, LLC**

Figure 2

The facility receives domestic and commercial sewage with an estimated design flow of 0.07 million gallons per day (MGD). Design flow was calculated for the original configuration of six small lagoons. Accurate discharge flow measurements were not collected during previous Lagoon 4 discharges. Because the discharge consisted of emptying Lagoon 4, the flow rate was estimated by calculating a total volume of Lagoon 4 based on the size of the lagoon and dividing that volume over the total number of hours, resulting in flow estimates that exceeded the design flow. Thus, the March 2017 discharge estimate exceeded the original design flow, suggesting that the design flow changed when the configuration changed. As a minor discharger, the facility normally has a Compliance Evaluation Inspection every five years. Although the facility is a privately-owned treatment facility and not a publicly owned treatment works (POTW), U.S. EPA proposed federal discharge limits applicable to POTWs.

Wastewater flows by gravity via two inlets into Lagoon 1; the original 4-inch inlet (INF-001) is in the middle of the south end of Lagoon 1 and delivers wastewater from the maintenance shops, private residences, and the small cabins. A new 10-inch inlet (INF-002) delivers the remainder of the wastewater and is in the southeast corner of Lagoon 1. Solids settle in the first lagoon, while the liquid portion evaporates to the atmosphere and microorganisms begin to digest the solids. “Bio-gel Microblend G” is added to Lagoon 1 to help digest the sludge and minimize odor.

Flow reaches Lagoons 2 and 3 when valves are opened. Lagoon 4 is fed by gravity through transfer pipes. Final treatment, polishing and additional evaporation take place prior to any discharge, through a 6-inch pipe at Outfall No. 001 to receiving waters. The discharge pipe has a shutoff valve that is opened to drain Lagoon 4 by siphon when the total volume of the four lagoons is estimated to be nearly at capacity. Discharges are episodic and short-termed—currently three to five days, once or twice during the permit period. Goulding’s Lodge placed cobblestone or similar material at the discharge point to minimize erosion and potential damage to the cell wall. Effluent sampling and monitoring are performed at Outfall No. 001.

Prior to RGJ’s purchase of the Goulding’s property, the original lagoons were designed to accept 0.07 MGD, based on the estimated daily usage per person for the population at the time. During the March 2017 discharge release, influent was monitored with an in-pipe flow meter during the 24-hour sample period. Goulding’s Lodge plans to install permanent external sensing flow monitoring for the two inlet pipes to monitor the annual inlet flow volumes. The influent flow may exceed the original 0.07 MGD design flow. The current effluent monitoring system is a valve-siphon system, which results in variable flow during the releases, requiring estimates of the discharge flows based on the calculated volume of Lagoon 4 and the time required to empty the lagoon, as described above. Future discharges will be through a 2-inch pipe to a pump with a pumping rate of 45 gallons per minute or less, so the actual discharge flow will be recorded using an external sensing flow device after the pump. This combination will result in accurate flow measurements and will prevent the discharge rate from exceeding the 0.07 MGD design flow.

IV. DESCRIPTION OF RECEIVING WATER

The facility discharges domestic wastewater from Outfall 001 into an unnamed wash, a tributary to Mitchell Butte Wash, a tributary to Oljeto Wash, and eventual tributary to the San Juan River, all waters of the United States.

V. DESCRIPTION OF DISCHARGE

Discharges from this facility typically occur once or twice over the duration of the permit, when the lagoons are near or at capacity. The last discharge occurred in March 2017 over a period of 108 to 130 hours. Maximum daily flow was calculated at 0.108 MGD. The discharge resulted in exceedance of the Ammonia Impact Ratio (AIR) monthly average (no limit was established for AIR weekly average). No other discharges occurred during the permit period. The most recent discharge prior to this occurred in May 2011, during the previously issued permit period.

Table 2 shows data related to discharge from Outfall 001, based on the permittee's NPDES renewal application and supplemental data, including data reported on discharge monitoring reports (DMRs). More information is available on Enforcement and Compliance History Online (ECHO) at <https://echo.epa.gov/detailed-facility-report?fid=110010134363> (note: the site may not be updated).

EPA conducted a virtual compliance evaluation inspection at the facility on October 15, 2020. This inspection noted several areas of concern and recommendations:

- Most of the solids settle in Lagoon 1. Lack of sludge removal suggests a failure to meet NPDES permit conditions 40 CFR §122.41(e) for proper operation and maintenance. EPA recommended that Goulding's Lodge consider determining sludge levels and develop a sludge management plan.
- Failure to meet NPDES effluent limitations for BOD₅ (mass), TSS (mass), and AIR. The magnitude of the exceedances suggests that the permittee could have difficulty meeting effluent permit limits without making process changes to the lagoon system. The effluent limitation exceedances noted in the report for BOD₅ (mass) and TSS (mass) were the result of calculation errors; the errors were corrected in the DMRs on February 18, 2021.

The Navajo Nation EPA (NNEPA) conducted a compliance evaluation inspection at the facility on June 26, 2018. This inspection noted:

- A lack of flow measuring devices at the facility;
- Unknown sludge levels, with visible indications that the sludge may need to be addressed soon; and
- The facility operators expressed an interest in exploring reuse of the treated effluent.

VI. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

EPA developed effluent limitations and monitoring requirements in the permit based on an evaluation of the technology used to treat the pollutant (e.g., "technology-based effluent limits") and the water quality standards applicable to the downstream receiving water (e.g., "water quality-based effluent limits"). EPA established the most stringent of applicable technology-based or water quality-based effluent limitations in the permit, as described below.

Table 2. Effluent Data for Outfall 001 During Permit Period Discharge in March 2017

Parameter	Units	2015 Permit Effluent Limitations			Effluent Data (not shown if nondetect)			
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Average	Highest Weekly Average	Highest Daily Maximum	No. Samples
Flow Rate ⁽¹⁾	mgd	0.5	--	0.5	0.108 ⁽¹⁾	--	0.108 ⁽¹⁾	Est. ⁽¹⁾
Temperature	°C	--	--	--	10.45	--	10.45	1
Biochemical Oxygen Demand; 5-day (BOD ₅) ⁽²⁾	mg/L	45	65	--	38	--	38	1
	kg/day ⁽³⁾	84.5 ⁽³⁾	122.0 ⁽³⁾	--	15.5 ⁽³⁾	15.5 ⁽³⁾	15.5 ⁽³⁾	
	Removal	65%			81% ⁽²⁾			1
pH ⁴	SU	6.5-9 at all times			7.3-7.98			2
Total Ammonia ⁽⁴⁾	mg-N/L	--	--	--	13	--	13	1
Ammonia Impact Ratio (AIR) ⁽⁴⁾	--	1.0	--	--	1.55	--	1.55	1
<i>E. coli</i> ⁽⁵⁾	MPN/100mL	126	--	575	34.2	34.2	34.2	1
Nitrate (as N)	mg/L	5	--	7.5	4.6	--	4.7	1
Total Suspended Solids (TSS) ⁽²⁾	mg/L	90	135	--	19	--	19	1
	kg/day ⁽³⁾	169.0 ⁽³⁾	253.5 ⁽³⁾	--	7.77 ⁽³⁾	7.77 ⁽³⁾	7.77 ⁽³⁾	
	Removal	65%			84% ⁽⁶⁾			1
Total Dissolved Solids (TDS)	mg/L	--	--	--	988	--	988	1
Total Residual Chlorine ⁽⁵⁾	µg/L	--	--	11	0	0	0	1

NOTES:

- ⁽¹⁾Effluent flow rate was estimated using the calculated Lagoon 4 volume and flow duration. Estimate may be incorrect, given that the rate is higher than the facility design flow. Flow estimate during the discharge was estimated using the total volume and duration.
- ⁽²⁾Both the influent and the effluent were to be sampled and reported. The incremental removal is the difference between the two sample analyses. The effluent value, intake water supply value, and incremental removal value were to be reported.
- ⁽³⁾Mass-based limits were calculated using the 0.50 MGD flow limit. As noted in Section V., mass values in the DMRs are calculated from the concentration limits and flow data. Mass can be calculated using the following conversion formula:
 (*Flow rate*) MG/d x (*concentration*) mg/L x 8.345 (lb/MG)/(mg/L) x 0.45 (kg/lb)
- ⁽⁴⁾When monitoring for total ammonia (as nitrogen), measurements for pH were to be conducted concurrently with measurements for temperature and ammonia, at the same location as the water samples for laboratory analysis of ammonia.
- ⁽⁴⁾Monthly: Geometric mean of samples collected during the calendar month. Daily: single sample maximum.
- ⁽⁵⁾Limit applied only if chlorination was used. If chlorination was used, the permittee was required to operate the plant to achieve the lowest possible residual chlorine while still complying with permit limits for *E. coli*.
- ⁽⁶⁾TSS removal value was not reported in DMRs; value calculated based on reported 120 mg/L influent and 19 mg/L effluent.

A. Applicable Technology-Based Effluent Limitations (TBELs)

EPA developed technology-based treatment standards for municipal wastewater treatment plants in accordance with Section 301(b)(1)(B) of the CWA. The minimum levels of effluent quality attainable by secondary treatment for BOD₅, TSS, and pH, as defined in the implementing regulations at 40 CFR §133.105, are listed below. TBELs in this section are the equivalent to secondary treatment standards as defined by 40 CFR §122.45(f) for BOD₅ and TSS. Section VI.C., below, summarizes the final effluent limitations.

BOD₅

Concentration-based Limits

- 30-day average: 45 mg/L
- 7-day average: 65 mg/L
- Removal Efficiency: 65% minimum

Mass-based Limits

- 30-day average – (45 mg/L)(0.5 MGD)(8.345 conversion factor) = 188lbs/day
- 7-day average – (65 mg/L)(0.5 MGD)(8.345 conversion factor) = 271 lbs/day

TSS

Concentration-based Limits

- 30-day average – 45 mg/L
- 7-day average – 65 mg/L
- Removal efficiency – Minimum of 65%

Mass-based Limits

- 30-day average – (45 mg/L)(0.5 MGD)(8.345 conversion factor) = 187 lbs/day
- 7-day average – (65 mg/L)(0.5 MGD)(8.345 conversion factor) = 271 lbs/day

pH

Instantaneous Measurement: 6.5 – 9.0 standard units (S.U.)

Technology-based treatment requirements may be imposed on a case-by-case basis under Section 402(a)(1) of the CWA, to the extent that EPA-promulgated effluent limitations are inapplicable (i.e., the regulation allows the permit writer to consider the appropriate technology for the category or class of point sources and any unique factors relating to the applicant) (40 CFR §125.3(c)(2)).

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations (WQBELs) are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard (40 CFR §122.44(d)(1)). In making this determination, the permitting authority uses procedures accounting for:

- Existing controls on point and non-point sources of pollution;
- Variability of the pollutant or pollutant parameter in the effluent;
- Sensitivity of species to toxicity testing (when evaluating whole effluent toxicity); and, where appropriate,
- Dilution of the effluent in the receiving water (40 CFR §122.44(d)(1)(ii)).

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control (TSD)* (Office of Water, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers' Manual* (Office of Water, U.S. EPA, September 2010). These factors include:

- Applicable standards, designated uses and impairments of receiving water
- Dilution in the receiving water
- Type of industry
- History of compliance problems and toxic impacts
- Existing data on toxic pollutants for a Reasonable Potential Analysis

1. Applicable Standards, Designated Uses and Impairments of Receiving Water

Navajo Nation Surface Water Quality Standards

In accordance with 40 CFR 122.44(d), the need for discharge limitations for all pollutants that may impact applicable water quality criteria and water quality standards must be evaluated. As part of this evaluation, discharge limitations are based on applicable water quality standards.

EPA approved the 1999 Navajo Nation Surface Water Quality Standards (“NNSWQS”) on March 23, 2006. The NNSWQS were later revised in 2007 and approved by EPA on March 26, 2009. EPA partially approved the 2015 NNSWQS revisions on October 5, 2020. The criteria for TSS, pH, temperature, and *E. coli* did not change in the 2020 approval. NNSWQS do not include criteria for BOD₅ or TDS. Criteria for Ammonia did change, as shown in Attachment D of the permit (Table 207.20 from the 2015 NNSWQS). This permit implements the ammonia criteria as an Ammonia Impact Ratio (AIR), calculated as the ratio of the measured ammonia to the ammonia limit, which is determined by measuring pH and temperature concurrently and looking up the associated criteria (see Attachment E in the permit, which is Table 207.20 from the 2015 NNSWQS).

No designated beneficial uses exist for the unnamed wash, which the effluent discharges to, or for Mitchell Butte Wash to which the unnamed wash drains. Mitchell Butte Wash drains to Oljeto Wash, where designated beneficial uses include Primary Human Contact (PrHC) and Agricultural Water Supply (AgWS). Standards applied as limits are based on the most protective approved NNSWQS criteria, where they exist. The most protective criteria, when they differ, are for the PrHC use. The requirements contained in the permit are necessary to prevent violations of applicable water quality standards.

The following water quality criteria from the NNSWQS are applied as effluent limitations:

<i>E. coli</i>:	126 MPN/100 mL (geometric mean, minimum four samples in 30 days) 575 MPN/100 mL (single sample maximum)
pH:	6.5-9.0 (2015 NNSWQS PrHC beneficial use)
Ammonia:	Based on Attachment D of the permit (Table 207.20 from the 2015 NNSWQS)
AIR:	AIR (Ammonia Impact Ratio) ≤ 1. NNSWQS do not have AIR criteria, but the ammonia limit is expressed as AIR. An AIR of less than or equal to 1 meets the NNSWQS Ammonia criteria.

The waterbodies potentially affected by discharge from this facility are not identified as water-quality limited under CWA §303(d).

2. Dilution in the Receiving Water

Discharge from Outfall 001 is to an unnamed wash, tributary to Mitchell Butte Wash, which may have no natural flow during certain times of year. Accordingly, no dilution of the effluent has been considered in the development of water quality-based effluent limits applicable to the discharge.

3. Type of Industry

Typical pollutants of concern in treated and untreated domestic wastewater include ammonia, nitrate, oxygen demand, pathogens, temperature, pH, oil & grease, turbidity and solids.

4. Compliance History and Toxic Impacts

The last discharge occurred over a period of approximately 108 to 130 hours in March 2017. The March 2017 Discharge Monitoring Report (DMR) indicated that the maximum daily flow was estimated to be 0.108 million gallons per day (MGD). While this is higher than the design flow of 0.07 MGD, the design flow is based on estimates made during the previous lagoon configuration (prior to Lagoons 4-8 being combined into a single lagoon). The flow was initiated by opening the valve on the lower lagoon, and the discharge was gravity-fed. During that discharge, the facility exceeded the Ammonia Impact Ratio (AIR) limit of 1, with a value of 1.55 (a 55% exceedance).

The Ammonia Impact Ratio (AIR) is calculated as a ratio of the ammonia criteria in the NNSWQS to the measured sample. NNSWQS criteria for ammonia are dependent on temperature and pH. The discharger reported 13 mg-N/L. For the reported pH of 7.98 and temperature of 11°C, the acute ammonia criteria would be 8.40 mg/L, while the chronic criteria would be 2.43. The AIR of 1.55 is based on the acute criteria. If chronic criteria were used, the AIR would be 5.35.

The facility reported two instances of the lagoons breaching following heavy rains. In 2008 (during the period of the previous permit reissuance), a severe thunderstorm produced flow that washed out the southeast corner of Lagoon 3. The discharge was reported to the Navajo Nation Environmental Protection Agency (“NNEPA”). The lagoon berm was repaired, built up, compacted and fortified with riprap to prevent future damage from storm runoff. In 2016, a similar event washed out the northeast corner of Lagoon 2, which allowed wastewater in Lagoons 1 and 2 to drain at a high flow rate into the unnamed wash. That breach was also reported to NNEPA. A site investigator estimated that approximately four million gallons of wastewater from both lagoons may have been released in that event, although no visible debris was evident in the wash downstream of the breach. The breach in the lagoon was repaired, built up, and compacted to prevent another release. Additionally, small berms have been placed in the wash to help slow and/or break up the flow to prevent future erosion damage.

EPA’s inspection (EPA 2020) also cited the operation and maintenance responsibilities and recommended the discharger determine sludge levels in the lagoons and develop a sludge management plan to prevent future lagoon spills or failures.

Discharger Plans to Address Compliance Issues

To address AIR compliance, the discharger has proposed raising the intake pipe to Lagoon 4 to minimize disturbance of sludge during the discharge; utilizing a pump to regulate the discharge rate to 45 gallons per minute (gpm); and hold discharge in Lagoon 4 for four to six weeks, with bubblers functioning to amplify

evaporation prior to discharge, to allow settling of the residual solids. Keeping the discharge rate to 45 gpm or less will also correspond to a discharge rate less than 0.1 MGD.

The discharger has also proposed determining sludge levels and sludge contaminant levels in the lagoons prior to the return of the tourist season in 2021, and proposes a plan to remove the sludge prior to filling the lagoons, to either be disposed in a landfill that accepts biosolids, sent to a facility for composting, or applied to land on Goulding’s property, according to requirements (Hunter 2021).

5. Existing Data and Reasonable Potential Analysis

For pollutants with effluent data available EPA conducted a reasonable potential analysis based on statistical procedures outlined in EPA’s *Technical support Document for Water Quality-based Toxics Control*, herein after referred to as EPA’s TSD (EPA 1991). These statistical procedures result in the calculation of the projected maximum effluent concentrations based on monitoring data to account for effluent variability and a limited data set. The projected maximum effluent concentrations were estimated assuming an effluent coefficient of variation of 0.6 for pollutants and the confidence interval of the 99th percentile, based on an assumed lognormal distribution of daily effluent values (sections 3.3.2 and 5.5.2 of EPA’s TSD). EPA calculated the projected maximum effluent concentration for each pollutant using the following equation:

$$\text{Projected maximum concentration} = C_e \times \text{reasonable potential multiplier factor},$$

where “C_e” is the reported maximum effluent value, and the multiplier factor is obtained from Table 3-1 of the TSD.

Results are summarized in Table 3.

Table 3. Summary of Reasonable Potential Statistical Analysis:

Parameter	Maximum Observed Value ⁽¹⁾	n	RP Multiplier	Projected Maximum Effluent Concentration	Most Stringent Water Quality Criterion	Statistical Reasonable Potential?
Biochemical Oxygen Demand; 5-day (BOD ₅) ⁽²⁾	38 mg/L	1	13.2	502 mg/L	45 mg/L monthly average	Y
Total Suspended Solids (TSS)	19 mg/L	1	13.2	251 mg/L	45 mg/L monthly average	Y
<i>E. coli</i>	34.2 MPN/ML	1	13.2	451 MPN/mL	126 MPN/100 mL (geometric mean, minimum four samples in 30 days)	Y
Ammonia ⁽²⁾	13 mg/L	1	13.2	172	2.43 mg/L (chronic)	Y
AIR	1.55	1	13.2	21	1	Y

⁽¹⁾For purposes of RP analysis, parameters measured as Non-Detect are assumed to be zero. Only detected pollutants are included in this analysis.

⁽²⁾Based on Attachment D of the permit (Table 207.20 from the 2015 NNSWQS).

C. Rationale for Numeric Effluent Limits and Monitoring

EPA evaluated pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based effluent limits or water quality-based effluent limitations. Accordingly, EPA included the Goulding’s Lodge WWTP Fact Sheet

following provisions and effluent discharge limitations for flow, BOD₅, TSS, *E. coli*, total residual chlorine (“TRC”), and AIR (a ratio of measured ammonia value to ammonia criteria determined by ammonia concentration measured concurrently with temperature and pH measurements). Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge but prior to entry into the receiving water—i.e., at the end of the pipe of Outfall 001. Where effluent concentrations of pollutant parameters are unknown or are not reasonably expected to be discharged in concentrations that have the reasonable potential to cause or contribute to water quality standards exceedances, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be reevaluated, and the permit may be reopened to incorporate effluent limitations as necessary.

The facility is eligible for treatment equivalent to secondary treatment under 40 CFR §133.105. The permit contains discharge limitations for BOD₅, TSS, *E. coli*, TRC, and AIR. For both BOD₅ and TSS, the arithmetic means of values, by weight, for effluent samples collected in a period of 30 consecutive calendar days cannot exceed 35 percent of the arithmetic mean of values, by weight, for influent samples collected at approximately the same times during the same period. Monitoring is required for TDS, but no limits are set at this time.

Table 4 summarizes lists discharge limitations (i.e., effluent limits).

Flow: The permit carries over the previous permit limit, which was determined to reduce potential erosion from the discharge. If the discharge rate exceeds 0.1 MGD, the discharger will be required to perform a Priority Pollutant Scan.

BOD₅, TSS: Concentration and minimum removal limits for BOD₅ and TSS are the equivalent to secondary treatment standards as defined by 40 CFR §133.105(a) and (b). As noted in the compliance inspection report dated December 16, 2020, the facility has exceeded mass limitations during the previous discharge by such a great amount that the facility is likely to require process changes in order to meet these limitations. The previous permit had higher limits for TSS, but these limits are not allowable. Previous permit limits for TSS of 90 mg/L monthly and 135 mg/L applied under alternative state requirements (40 CFR §133.105(d) and 40 CFR §133.103(c)) are not currently allowable under 40 CFR §133.105(f) and 40 CFR §133.103(c) because the lower limits in 40 CFR §133.105(b) are achievable with proper operation and maintenance. The lower limits under 40 CFR §133.105(b) were achieved during the previous discharge.

Mass limits for BOD₅ and TSS are determined by calculating the mass of the concentration limits using the flow limit of 0.5 MGD:

$$0.5 \text{ MGD} \times 45 \text{ mg/L} \times 8.345 \text{ (lb/MG)/(mg/L)} = 188 \text{ lb/day (monthly average)}$$

$$0.5 \text{ MGD} \times 65 \text{ mg/L} \times 8.345 \text{ (lb/MG)/(mg/L)} = 271 \text{ lb/day (weekly average)}$$

Measured values would be reported using the measured flow volume during the discharge, which would likely be less than the flow limit.

Determinations of Effluent Limitation for *E. coli*: Presence of pathogens in untreated and treated domestic wastewater indicates reasonable potential for *E. coli* bacteria levels in the effluent to cause or contribute to an excursion above the WQS. In the permit, the monthly geometric mean of *E. coli* bacteria shall not exceed 126/100 ml as a monthly average and 575/100 ml as a single sample maximum. These limits are the NNSWQS for secondary human contact and are carried over from the previous permit. The monitoring frequency is once per discharge.

Table 4. Discharge Limitations

Parameter	Maximum Allowable Discharge Limits				Monitoring Requirements ⁽¹⁾	
	Average Monthly	Average Weekly	Maximum Daily	Units	Frequency	Sample Type
Flow Rate ⁽²⁾	—	—	0.5	MGD	Continuous	Metered ⁽²⁾
Biochemical oxygen demand (5-day) (BOD ₅) ⁽³⁾	45	65	—	mg/L	Once/Discharge	Composite
	188	271	—	lb/day		
	65% monthly removal ⁽⁴⁾			% removal		
Total Suspended Solids (TSS) ⁽³⁾	45	65	—	mg/L	Once/Discharge	Composite
	188	271	—	lb/day		
	65% monthly removal ⁽⁴⁾			% removal		
Total Dissolved Solids (TDS) ⁽⁵⁾	Report only ⁽⁵⁾	—	—	mg/L	Once/Discharge	Discrete
<i>E. coli</i> ⁽⁶⁾	126 ⁽⁷⁾	—	575 ⁽⁸⁾	#/100mL	Once/Discharge	Discrete
Total Residual Chlorine (TRC) ⁽⁸⁾	—	—	11	µg/L	Once/Discharge if Chlorine is used ⁽⁸⁾	Discrete
Total Ammonia (as N) ^(6,10)	Report only ⁽¹⁰⁾	—	—	mg/L	Once/Discharge	Discrete
AIR ^(6,10)	1.0	—	—	—	Once/Discharge	Discrete
pH ^(6,10)	Always between 6.5 to 9			S.U.	Once/Discharge	Discrete
Temperature ⁽¹⁰⁾	Report only ⁽¹⁰⁾	—	—	°C	Once/Discharge	Discrete
Priority Pollutant Scan ⁽¹¹⁾	—	—	(11)	µg/L	Once/Discharge if flow rate exceeds 0.1 MGD ⁽¹¹⁾	Grab

NOTES:

- Influent (INF-001 and INF-002) and effluent flows (Outfall-001) shall be monitored and reported when discharge occurs. If the discharge occurs for fewer than 24 hours, composite samples shall be taken at regular intervals during the discharge.
- The monitoring frequency is continuous during discharges. For intermittent discharges, composite samples shall be taken over the course of a single discharge.
- Under 40 CFR §133.105 (treatment equivalent to secondary treatment), the discharge limits for BOD₅ and TSS shall not exceed a monthly average of 45 mg/l and a weekly average of 65 mg/l. The mass effluent limits are calculated based upon the 0.5 MGD flow limitation. Measurement concentrations to be reported in DMRs can be converted to mass using the following formula:
 (*Flow rate*) MG/d x (*concentration*) mg/L x (*conversion factor*) 8.345 (lb/MG)/(mg/L)
- Both the influent (INF-001 and INF-002) and the effluent shall be monitored and reported. The average monthly effluent concentration of BOD₅ and TSS shall not exceed 35% of the average monthly influent concentration collected at the same time.
- Influent (INF-001 and INF-002) and effluent flows (Outfall-001) must be sampled and reported when discharge occurs. The incremental increase shall also be reported, defined as the difference between the averages of the two influent locations and the effluent sample.
- E. coli* AIR, and pH limits are derived from the numeric standards in the 2015 NNSWQS revisions.
- Geometric mean of samples collected during the calendar month.
- Single sample maximum.
- TRC limit applies only if chlorination is used. If chlorination is used, the permittee shall operate the facility to achieve the lowest possible TRC while still complying with permit limits for *E. coli*. Chlorination treatments shall be reported.
- Table 207.20 in the NNSWQS (Attachment D) defines water quality standards for total ammonia (in mg-N/l). The criteria for ammonia are pH- and temperature-dependent; field measurements for ammonia, pH, and temperature shall be taken concurrently and reported on the AIR worksheet (Attachment E).
- No effluent limits are set at this time but monitoring and reporting are required if flow rate exceeds 0.1 MGD. Priority Pollutant scan is only required once per discharge if the flow rate exceeds 0.1 MGD. See attachment F for a list of priority pollutants. For the most current listing of all priority toxic pollutants, see 40 CFR Part 423, Appendix A.

Total Dissolved Solids (TDS): Presence of solids in untreated and treated domestic wastewater indicates that reasonable potential for TDS level in the effluent to cause or contribute to an excursion above narrative water quality standards. While NNSWQS do not include criteria for TDS, the regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary. No limits are set at this time. The monitoring frequency is once per discharge.

Total Residual Chlorine (TRC): Chlorination is not currently used for treatment. If it is used, reasonable potential would exist for TRC levels in the effluent to cause or contribute to an excursion above the NNSWQS. If chlorination is used, no single sample shall exceed 11 µg/l, carried over from the previous permit and based on the NNSWQS for the tributaries to Oljeto Wash. The monitoring frequency is once per discharge.

Total Ammonia Nitrogen (NH₃-N): Presence of ammonia in untreated and treated domestic wastewater indicates reasonable potential for levels in the effluent to cause or contribute to an excursion above the WQS. In accordance with the NNSWQS for protection of aquatic and wildlife habitat, the permit contains effluent limitations for AIR, which incorporates NNSWQS ammonia criteria. The criteria are temperature- and pH-dependent, as shown in Table 207.20 of the 2015 NNSWQS (included as Attachment D in the permit). Table 207.20 is chosen because salmonids are present. Ammonia limits are set for the AIR, as carried over from the previous permit. The monitoring frequency is once per discharge. Measurements for ammonia are required to be taken concurrently with temperature and pH measurements.

Ammonia Impact Ratio (AIR): AIR is determined by the concurrent measurement of ammonia concentration, pH and temperature, and is calculated by dividing the ammonia concentration in the effluent by the applicable ammonia criteria found in Attachment D in the permit (Table 207.20 from the 2015 NNSWQS). Any AIR value in excess of 1 will indicate an exceedance of the permit limit.

pH: Untreated and treated domestic wastewater could be contaminated with substances that affect pH, which indicates reasonable potential for pH levels in the effluent to cause or contribute to an excursion above the WQS. In order to ensure adequate protection of beneficial uses of Oljeto Wash, the receiving water downstream of the unnamed wash, a minimum pH limit of 6.5 and a maximum limit of 9.0 S.U. are established in Section 206.C. of 2015 NNSWQS. The permit limit is carried over from the previous permit, and the monitoring frequency is once per discharge. Measurements for pH, ammonia and temperature are required to be taken concurrently.

Temperature: Measurements for temperature are required to be taken concurrently with ammonia and pH measurements, once per discharge. No temperature limits are set at this time.

D. Anti-Backsliding

CWA §402(o) and §303(d)(4) and 40 CFR §122.44(l)(1) prohibit the renewal or reissuance of an NPDES permit that contains effluent limits and permit conditions less stringent than those established in the previous permit, except as provided in the statute and regulation. The permit limits are equal to or more stringent than those in the previous permit.

E. Antidegradation Policy

EPA's antidegradation policy under CWA §303(d)(4) and 40 CFR §131.12 require that existing water uses and the level of water quality necessary to protect the existing uses be maintained. Permit limits are equal or more stringent than those in the previous permit; accordingly, the discharge is not expected to adversely affect receiving waterbodies or result in any degradation of water quality.

VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

The 2015 NNSWQS contain narrative water quality standards for pollutants applicable to the receiving water. Thus, the permit incorporates applicable narrative water quality standards. Pursuant to the narrative surface water quality standards (Section 203 of the 2015 NNSWQS), the discharge shall be free from pollutants in amounts or combinations that cause solids, oil, grease, foam, scum, or any other form of objectionable floating debris on the surface of the water body; may cause a film or iridescent appearance on the surface of the water body; or that may cause a deposit on a shoreline, on a bank, or on aquatic vegetation.

VIII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters in Table 5, at the minimum frequency specified. Additionally, where effluent concentrations of pollutant parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutant parameters where effluent limits have not been established.

A. Influent and Effluent Monitoring and Reporting

The permit requires influent and effluent monitoring to evaluate compliance with the permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR §136, unless otherwise specified in the permit. Influent monitoring shall be performed at both influent locations (INF-001 and INF-002). The permit includes a new requirement for electronically submitting compliance monitoring data, using the electronic reporting tools (NetDMR) provided by EPA Region 9. These reports are due January 28, April 28, July 28, and October 28 of each year. All monitoring data shall be reported on monthly DMRs and submitted quarterly as specified in the permit. All DMRs are to be submitted electronically to EPA using NetDMR.

B. Priority Toxic Pollutants Scan

If discharge exceeds 0.1 MGD, a Priority Toxic Pollutants scan shall be conducted during the flow to ensure that the discharge does not contain toxic pollutants in concentrations that may cause an exceedance of water quality standards. The permittee shall perform all effluent sampling and analyses for this scan in accordance with the methods described in the most recent edition of 40 CFR §136, unless otherwise specified in the permit or by EPA. 40 CFR §131.36 provides a complete list of Priority Toxic Pollutants.

IX. SPECIAL CONDITIONS

A. Biosolids

Standard requirements for the monitoring, reporting, recordkeeping, and handling of biosolids in accordance with 40 CFR §503 are incorporated into the permit. The permit requires development of a sludge

management plan and determination of lagoon capacity within 180 days of the permit effective date. The permit also includes, for dischargers who are required to submit biosolids annual reports, including major POTWs that prepare sewage sludge and other facilities designated as “Class 1 sludge management facilities,” electronic reporting requirements. Those permittees shall submit biosolids annual reports using EPA’s NPDES Electronic Reporting Tool (“NeT”) by February 19th of the following year. Annual reports when no biosolids are removed may consist of a statement that no biosolids are removed. The permit includes a requirement for submitting a report 120 days prior to disposal of biosolids. The compliance inspection report dated December 16, 2020 noted that most of the solids settle in Lagoon 1, from which solids have never been removed.

Electronic submittals should be copied to R9NPDES@epa.gov. Biosolids reports should be submitted through the NeT e-reporting system (<https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws> for more information).

The permittee is required to develop a sludge management plan to ascertain the sludge levels in the lagoons and to prevent any future spills or failures. It is possible that removing solids from the lagoon may also assist in reducing AIR exceedances. The sludge management plan should be submitted to EPA at R9NPDES@epa.gov and should include the permit number in the subject line.

B. Pretreatment

No nondomestic facilities discharge pollutants that pass through or interfere with the operations of this POTW or are otherwise subject to pretreatment standards. Accordingly, EPA has not incorporated any pretreatment requirements into this permit.

C. Capacity Attainment and Planning

The permit requires that a written report be filed within ninety (90) days if the average dry-weather wastewater treatment flow for any month that exceeds 90 percent of the annual dry weather design capacity of the waste treatment and/or disposal facilities. Planning for solids removal as described in Section IX.A., above, should also be undertaken to ensure that capacity is not exceeded. In addition, the sludge management plan required by Section IX.A. should determine an accurate facility flow capacity to update the current estimate.

D. Development and Implementation of Best Management Practices

The permittee shall develop and implement BMPs for pollution prevention. Pursuant to 40 CFR §122.44(k)(4), EPA may impose Best Management Practices (BMPs) “reasonably necessary...to carry out the purposes of the Act.” The pollution prevention requirements or BMPs in the permit operate as technology-based limitations on effluent discharges that reflect the application of Best Available Technology and Best Control Technology. Thus, the permit requires that the permittee develop (or update) and implement a Pollution Prevention Plan with appropriate pollution prevention measures or BMPs designed to prevent pollutants from entering the unnamed wash that discharges into Mitchell Butte Wash while performing normal processing operations at the facility.

The permittee shall develop and implement BMPs that are necessary to control the high BOD₅ and TSS concentrations and reduce the AIR.

E. Asset Management

40 CFR §122.41(e) requires permittees to properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Asset management planning provides a framework for setting and operating quality assurance

procedures and ensuring the permittee has sufficient financial and technical resources to continually maintain a targeted level of service. This includes identifying lagoon sludge capacity and developing a plan for sludge removal (Section IX.A). Asset management requirements have been established in the permit to ensure compliance with the provisions of 40 CFR §122.41(e).

X. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Consideration of Environmental Justice

EPA conducted a screening level evaluation of environmental justice (EJ) vulnerabilities in the community posed to residents in the vicinity of the permitted facility using EPA’s EJSCREEN tool (<https://www.epa.gov/ejscreen>). The purpose of the screening is to identify areas disproportionately burdened by pollutant loadings and to consider demographic characteristics of the population living near the discharge when drafting permit conditions.

In December 2020, EPA conducted an EJSCREEN analysis of the community in a 30-mile radius of the vicinity of the outfall, since the area is sparsely populated. Of the 11 environmental indicators screened through EJSCREEN, the evaluation determined elevated risks for all the EJ index factors. The results, summarized in Table 5, suggest that the area around the facility are at high risk for EJ factors. For example, the population within a wide range of the Goulding’s facility is at greater risk for hazardous wastewater discharge than 89 percent of the population in the state and 93 percent of people in the nation.

Table 5. EJSCREEN Results

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indices			
EJ Index for Particulate Matter (PM 2.5)	96	95	87
EJ Index for Ozone	98	98	94
EJ Index for NATA* Diesel PM	80	81	62
EJ Index for NATA* Air Toxics Cancer Risk	96	94	81
EJ Index for NATA* Respiratory Hazard Index	94	93	78
EJ Index for Traffic Proximity and Volume	78	77	70
EJ Index for Lead Paint Indicator	87	95	69
EJ Index for Superfund Proximity	86	85	70
EJ Index for RMP Proximity	81	81	69
EJ Index for Hazardous Waste Proximity	78	79	60
EJ Index for Wastewater Discharge Indicator	89	93	93

The results are similar if only a one-mile buffer around the facility is analyzed. This is largely because the EJSCREEN analysis considers demographic factors in combination with environmental indicators. Nearly 100 percent of the population of the area around the facility are nonwhite, a minority demographic that indicates greater risk for EJ impacts. Nearly three-quarters of the population are low-income earners. Even when a specific environmental indicator is lower, the composite EJ indicator will suggest a higher than average risk due to the very high demographic indicators. For example, it’s unlikely that the area around Goulding’s Lodge has high traffic rates, but the composite EJ indicator for traffic proximity and volume indicator is high, likely due to static demographic factors.

EPA also considers the characteristics of the wastewater treatment facility operation and discharges, and whether those discharges pose exposure risks that the NPDES permit needs to further address. EPA found no evidence to indicate the treatment facility discharge poses a significant risk to residents. EPA concludes

that the facility is unlikely to contribute to any EJ issues. Furthermore, EPA believes that by implementing and requiring compliance with the provisions of the Clean Water Act, which are designed to ensure full protection of human and aquatic health, the permit is sufficient to ensure the effluent discharges do not cause or contribute to human health risk in the vicinity of the facility.

B. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. §1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat. The issuance of an NPDES permit by EPA is a Federal action, so consideration of the potential effects of the permitted discharge on any federally listed species is appropriate. The NPDES permit authorizes the discharged of treated domestic wastewater to an unnamed wash, a tributary to Mitchell Butte Wash, tributary to Oljeto Wash, which drains to the San Juan River.

In September 2020, EPA downloaded from the U.S. Fish and Wildlife’s (FWS) Information for Planning and Consultation (IPaC) Web site (<https://ecos.fws.gov/ipac/>) lists of threatened and endangered species near the facility and the discharge point to the unnamed wash, Mitchell Butte and Oljeto Wash, and the San Juan River, in Utah and Arizona. The action area was defined to include the mountains surrounding Goulding’s Lodge lagoons, to account for bird species in the area, although the discharge does not usually reach Mitchell Butte Wash or any of the downstream areas below that. The discharge that is being permitted can usually be expected to occur once or twice in a five-year period, at a rate of 45 gpm, for a period of up to 10 days. The flow rate is not high enough to change conditions in the wash to affect habitat. It is likely that the flow would seep into the ground within a few hundred yards of the discharge point, and the depth of the flow would likely be less an inch. Pollutants that are monitored include ammonia, TDS, TSS, BOD₅, *E. coli*, pH, and temperature.

The IPaC reports (USFWS 2020a, USFWS 2020b) identified 10 federally listed threatened (T) or endangered (E) species that may occur in the action area, or species for which a non-essential experimental population has been proposed (EXPN). The action area was defined broadly throughout the Monument Valley and surrounding mountain ranges in San Juan County, Utah and Navajo County, Arizona. Table 6 summarizes the results.

For the species that were identified in the IPaC reports, EPA has made a finding of “no effect.” Non-essential experimental populations have been proposed for the Gray Wolf and the California Condor. The IPaC report did not identify any critical habitat in the action area for any of the listed species.

Table 6. Federally Listed Species under the U.S. Endangered Species Act

Status	Species/Listing Name	AZ or UT Species list	Notes/Summary
EXPN*	Gray Wolf, <i>Canis lupus</i>	AZ	No designated critical habitat within the action area. No occurrence near project site.
EXPN*	California Condor, <i>Gymnogyps californianus</i>	AZ, UT	Critical habitat proposed in Utah (location not available); The action area is not within critical habitat designated in Arizona. Suitable habitat is not found within the project area nor would it be affected by short-term releases from lagoon.
T	Mexican Spotted Owl, <i>Strix occidentalis lucida</i>	AZ, UT	No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.
T	Yellow-billed Cuckoo, <i>Coccyzus americanus</i>	AZ, UT	No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases

<u>Status</u>	<u>Species/Listing Name</u>	<u>AZ or UT Species list</u>	<u>Notes/Summary</u>
			from lagoon would not create suitable habitat.
E	Southwestern Willow Flycatcher, <i>Empidonax traillii extimus</i>	UT	No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.
T	Northern Mexican Gartersnake, <i>Thamnophis eques megalops</i>	AZ	Does not occur within project area. Designated threatened in Arizona, but not no designated protection status in Utah. No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.
E	Colorado Pikeminnow (squawfish), <i>Ptychocheilus lucis</i>	UT	Does not occur near project site. No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.
E	Razorback Sucker, <i>Xyrauchen texanus</i>	UT	Not within critical habitat. No occurrence near project site. No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.
T	Navajo Sedge, <i>Carex specuicola</i>	AZ, UT	Not within critical habitat. No occurrence near project site. No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.
E	Welsh's Milkweed, <i>Asclepias welshii</i>	AZ	Not within critical habitat. No protected status in Utah. No designated critical habitat within the action area. Suitable habitat not found within the action area; short-term releases from lagoon would not create suitable habitat.

*Exp: Proposed Experimental Population, Non-Essential. T: Threatened. E: Endangered

EPA evaluated the effects that could result from a periodic discharge (generally once every five years or so) of approximately 45 gpm (averaging about 0.07 MGD), lasting from three to five days into the unnamed wash. Although EPA defined a large action area to consider the potential for bird species that could occur in the greater area, the analysis is primarily focused on the immediate area that could be affected directly by the infrequent flows. Past discharges have not reached Mitchell Butte Wash, so discharges permitted under this permit are not expected to reach Mitchell Butte Wash, Oljeto Wash, or the San Juan River.

The range of the Gray Wolf (*Canis lupus*) is outside of the project area (USFWS 2020b, Center for Biological Diversity, Mexican Gray Wolf Natural History (https://www.biologicaldiversity.org/species/mammals/Mexican_gray_wolf/natural_history.html), accessed 2/1/2021). EPA has made a “no effect” determination.

The California Condor (*Gymnogyps californianus*) ranges throughout parts of California, Nevada, Colorado, Arizona, and Utah, although no known specific populations are known to occur in the project action area (USFWS ECOS <https://ecos.fws.gov/ecp/species/8193>, accessed 2/1/2021). An active release site occurs in northeastern Arizona, well outside of the action area (USFWS 2013). Proposed critical habitat for an “Experimental Population, Non-Essential” occurs in Utah (location not available); “Experimental Population, Non-Essential” critical habitat outside of the project area has been finalized in Arizona (USFWS 2020a, 2020b). California condors may use roosting sites on ridges, rocky outcrops, or steep canyons, and they forage for carrion, primarily in foothill grasslands and oak savanna habitats. (USFWS 2013). Major causes of mortality include lead shot, predators, powerlines, starvation, micro-trash, fire, hunting, falls, and other isolated incidents (USFWS 2013). None of these issues would be caused or contributed to by periodic, short-term releases of water from lagoons. EPA has made a “no effect” determination.

Mexican Spotted Owls (*Strix occidentalis lucida*) may occur in Arizona, Colorado, New Mexico, Texas, and Utah. Populations in or near the project area have not been documented. Spotted owls occur in old-growth or mature, complex forest structures. Canyons with riparian or conifer communities are also important habitat components for this species. Owls roost and forage in riparian zones of forests. They feed primarily on small mammals, although they will also prey on birds, bats, reptiles, and arthropods. Actions that fragment the forest or remove old-growth forests adversely affect the species. (USFWS ECOS <https://ecos.fws.gov/ecp/species/8196>, accessed 2/1/2021). These types of habitats are not found in the vicinity of Goulding's Lodge. EPA does not believe that impacts to the species would be caused by the occasional release of water from the lagoon. EPA has made a "no effect" determination.

The Yellow-billed Cuckoo (*Coccyzus americanus*) is known or believed to occur throughout most of Arizona and Utah, and in parts of New Mexico, Colorado, Idaho, Montana, Nevada, Texas, Wyoming, Oregon, and Washington. They are found in dense cover with water nearby, such as woodlands with low vegetation, overgrown orchards, and dense thickets along streams or marshes and riparian vegetation. Caterpillars are their primary food source, along with cicadas, katydids and crickets. They also forage on wild fruits in the summer, with seeds becoming a larger portion of their winter diet. Population declines have been a result of converting farmland to housing. They are also vulnerable to collisions with tall buildings, cell towers, radio antennas, wind turbines, and other structures. (USFWS ECOS <https://ecos.fws.gov/ecp/species/3911>, accessed 2/1/2021). These habitat conditions are not found in the vicinity of Goulding's Lodge. EPA has made a "no effect" determination.

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) requires dense riparian habitats, saturated soils, standing water, streams, pools, or cienegas for nesting (USFWS ECOS, accessed 2/1/2021, at <https://ecos.fws.gov/ecp/species/6749>). Such habitat is not found in the more arid vicinity of Goulding's Lodge, and would not be affected by occasional, short-term releases from the lagoon. Recurrent flooding is important to the flycatcher (USFWS ECOS, accessed 2/1/2021, at <https://ecos.fws.gov/ecp/species/6749>), which does not occur regularly in the Goulding's Lodge area. Its food is primarily flying insects (USFWS ECOS <https://ecos.fws.gov/ecp/species/6749>, accessed 2/1/2021). EPA has made a "no effect" determination.

The Northern Mexican Gartersnake (*Thamnophis eques megalops*) is not known to occur within the action area. Its range is known or believed to be in Arizona and New Mexico. USFWS has not designated federally protected status for the Northern Mexican Gartersnake in Utah, where Goulding's Lodge is located. (USFWS 2020a, 2020b, USFWS ECOS <https://ecos.fws.gov/ecp/species/7655>, accessed 2/1/2021). EPA has made a "no effect" determination.

Neither the Colorado Pikeminnow (*Ptychocheilus lucis*) nor the Razorback Sucker (*Xyrauchen texanus*) occurs within the vicinity of Monument Valley (USFWS ECOS <https://ecos.fws.gov/ecp/species/3531> (Colorado pikeminnow) and <https://ecos.fws.gov/ecp/species/530> (razorback sucker), accessed 2/1/2021),; no effect would be expected on those species. Both species are endemic to the Colorado River basin and were historically found in major tributaries such as the San Juan River, but their ranges were reduced following the construction of dams, but was considered nearly extirpated in the San Juan River basin (Platania et al. 1991, cited in USFWS 2020c; Bestgen et al. 2012, cited in USFWS 2018). Both species require stable water availability for habitat. Colorado pikeminnow spawn in groups over the summer where cobble and gravel streambeds are recently cleaned by spring peak flows, and they mature where snowmelt flows decrease to stable summer flows with periodic flash floods (USFWS 2020c). Razorback suckers also typically spawn in clean, rocky substrates. While spawning sites have been noted over other substrates, maturation requires backwaters, floodplains, and flows sufficient to maintain healthy conditions, with adults

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found in main channel runs, eddies and shore runs, with depths of about 1 m (USFWS 2018). Although annual restocking occurs in the San Juan River (USFWS 2020c, USFWS 2018), suitable habitat does not occur in the vicinity of Goulding's Lodge or in any of the washes leading to the San Juan River. EPA has made a "no effect" determination for both species.

Navajo Sedge (*Carex specuicola*) occurs in hanging gardens associated with moist seeps alongside sheer cliffs (USFWS 2019, USFWS ECOS <https://ecos.fws.gov/ecp/species/8579>, accessed 2/1/2021), none of which occur within the more arid vicinity of Goulding's Lodge. Welsh's Milkweed (*Asclepias welshii*) is associated with sand dune formations, and populations are only known to occur much farther west and south in portions of southern Utah and northern Arizona, outside of the action area (USFWS 1992, USFWS ECOS <https://ecos.fws.gov/ecp/species/8400>, accessed 2/1/2021). EPA has made a "no effect" determination.

Conclusion

Considering all the information available, EPA concludes that the discharge will have "no effect" on any of these listed species. There is no designated critical habitat for any of the listed species within the action area. EPA provided copies of the draft fact sheet and the draft permit to the USFWS during the public notice period.

C. Migratory Bird Treaty Act and Bald Eagle Protection Act

The Migratory Bird Treaty Act (MBT) (16 USC 703-712) protects migratory birds. Bald Eagle nests would be protected under the Bald Eagle Protection Act (Eagle Act) (16 USC 668 et seq.), which would not be found in the vicinity of the project.

D. Impact to Coastal Zones

The Coastal Zone Management Act (CZMA) requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Plan (CZMA §307(c)(1) through (3)). CZMA §307(c) and implementing regulations at 40 CFR §930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the State (or Territory) or its designated agency concurs with the certification.

This permit does not affect land or water use in the coastal zone.

E. Impact to Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA) set forth new mandates for the National Marine Fisheries Service, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies to determine whether Federal actions may adversely impact Essential Fish Habitat (EFH).

The permit contains technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. The permit does not directly discharge to areas of essential fish habitat. Accordingly, EPA determined that the permit will not adversely affect essential fish habitat.

F. Impact to National Historic Properties

The National Historic Preservation Act (NHPA) §106 requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR §800.3(a)(1), EPA has determined that issuing this NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

G. Water Quality Certification Requirements (40 CFR §124.53 and §124.54)

EPA can only issue the permit after the certifying Tribe has granted certification under 40 CFR 124.55 or waived its right to certify. For this permit, the Permittee obtained water quality certification from the Navajo Nation EPA that this Permit will meet applicable water quality standards (including paying applicable fees). Certification under section 401 of the CWA is in writing and includes conditions necessary to assure compliance with referenced applicable provisions of Sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Territory law.

XI. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR §122 and §124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

B. Standard Provisions

The permit requires the permittee to comply with EPA Region 9 Standard Federal NPDES Permit Conditions.

XII. ADMINISTRATIVE INFORMATION

A. Public Notice (40 CFR §124.10)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application.

B. Public Comment Period (40 CFR §124.10)

Notice of the draft permit was posted on the EPA website for a 30-day public comment period from February 23, 2021 to March 26, 2021. No comments were received.

C. Public Hearing (40 CFR §124.12(c))

A public hearing may be requested in writing by any interested party during the public comment period. No comments were received during the 30-day public comment period, so EPA did not schedule a hearing.

XIII. CONTACT INFORMATION

Comments and additional information relating to this proposal may be directed to:

Janet Parrish
U.S. EPA Region 9

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