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

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Major Municipal Permit No. **UT0020427**
Biosolids Permit No. **UTL020427**

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

CITY OF PAYSON

is hereby authorized to discharge from

PAYSON CITY WASTEWATER TREATMENT PLANT

to receiving waters named Beer Creek,

to dispose biosolids,

and to distribute effluent for reuse,

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

This permit shall become effective on April 1, 2024

This permit expires at midnight on March 31, 2029.

Signed this Twentieth day of March, 2024.

John K. Mackey, P.E.
Director

DWQ-2023-121184

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

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

Outfall Number	Location of Discharge Outfall
001	Located at latitude 40°03'41" and longitude 111°43'49". The discharge is through a concrete pipe to an unnamed irrigation return drainage ditch to Beer Creek then Benjamin Slough to Utah Lake.

Outfall Number(s)	Description of Effluent Reuse Discharge Outfall
001R	Located at latitude 40°03'41" and longitude 111°43'49". The discharge is to a tank that collects water then sends it to the Payson Power Plant (Nebo Power Station) for use as makeup water in the cooling system.

B. Narrative Standard. It shall be unlawful, and a violation of this permit, for the City of Payson (Permittee) to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective March 1, 2024, and lasting through the life of this permit, there shall be no acute or chronic toxicity in Outfall 001 as defined in *Part VIII*, and determined by test procedures described in *Part I. C.4. a & b* of this permit.

2.
   a. Effective immediately and lasting the duration of this permit, the Permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Effluent Limitations [1]				
	Maximum Monthly Ave	Maximum Weekly Ave	Daily Minimum	Daily Maximum	Annual Average
Interim Effluent Limits [2]					
Total Flow	3.0	-	-	-	-
BOD_5, mg/L	25	35	-	-	-
BOD_5 Min. % Removal	85	-	-	-	-

Parameter	Effluent Limitations [1]				
	Maximum Monthly Ave	Maximum Weekly Ave	Daily Minimum	Daily Maximum	Annual Average
TSS, mg/L	25	35	-	-	-
TSS Min. % Removal	85	-	-	-	-
Dissolved Oxygen, mg/L	-	-	4.0	-	-
Total Phosphorus, mg/L	-	-	-	-	4.6
Total Ammonia (as N), mg/L					
Summer (Jul-Sep)	-	-	-	14.1	-
Fall (Oct-Dec)	-	-	-	13.1	-
Winter (Jan-Mar)	-	-	-	12.5	-
Spring (Apr-Jun)	-	-	-	13.1	-
TRC, mg/L					
Summer (Jul-Sep)	-	-	-	1.1	-
Fall (Oct-Dec)	-	-	-	1.6	-
Winter (Jan-Mar)	-	-	-	2.4	-
Spring (Apr-Jun)	-	-	-	1.6	-
E. coli, No./100mL	126	157	-	-	-
WET, Chronic Biomonitoring				IC_{25}> X% Eff.	
Summer (Jul-Sep)	-	-	-	X=54%	-
Fall (Oct-Dec)	-	-	-	X=32%	-
Winter (Jan-Mar)	-	-	-	X=26%	-
Spring (Apr-Jun)	-	-	-	X=32%	-
Oil & Grease, mg/L	-	-	-	10.0	-
pH, Standard Units	-	-	6.5	9.0	-
Cyanide (Total)	0.0067	-	-	-	-
Selenium	0.0069	-	-	0.0241	-
Mercury	0.000015	-	-	-	-
Final Effluent Limits [3]					
Total Flow	5.0	-	-	-	-
BOD_5, mg/L	25	35	-	-	-
BOD_5 Min. % Removal	85	-	-	-	-
TSS, mg/L	25	35	-	-	-
TSS Min. % Removal	85	-	-	-	-
Dissolved Oxygen, mg/L	-	-	4.0	-	-
Total Phosphorus, mg/L [3]	-	-	-	-	1
Total Ammonia (as N), mg/L					
Summer (Jul-Sep)	3.0	-	-	4.5	-
Fall (Oct-Dec)	6.0	-	-	7.0	-
Winter (Jan-Mar)	6.0	-	-	8.5	-
Spring (Apr-Jun)	4.0	-	-	4.0	-
TRC, mg/L					
Summer (Jul-Sep)	0.5	-	-	0.7	-
Fall (Oct-Dec)	0.3	-	-	0.3	-
Winter (Jan-Mar)	0.2	-	-	0.3	-
Spring (Apr-Jun)	0.3	-	-	0.4	-

Parameter	Effluent Limitations [1]				
	Maximum Monthly Ave	Maximum Weekly Ave	Daily Minimum	Daily Maximum	Annual Average
E. coli, No./100mL	126	157	-	-	-
WET, Chronic Biomonitoring				IC_{25}> X% Eff.	
Summer (Jul-Sep)	-	-	-	X=43%	-
Fall (Oct-Dec)	-	-	-	X=54%	-
Winter (Jan-Mar)	-	-	-	X=39%	-
Spring (Apr-Jun)	-	-	-	X=56%	-
Oil & Grease, mg/L	-	-	-	10.0	-
pH, Standard Units	-	-	6.5	9.0	-
Cyanide (Total)	0.0057	-	-	-	-
Selenium	0.0055	-	-	0.0121	-
Mercury	0.000013	-	-	-	-
1. See Definitions, Part VIII, for definition of terms.					
2. Interim limits are in effect until December 31, 2026.					
3. Final limits go into effect on January 1,2027.					

Self-Monitoring and Reporting Requirements [5]			
Parameter	Frequency	Sample Type	Units
Interim Self-Monitoring Requirements [6]			
Total Flow [7], [8]	Continuous	Recorder	MGD
BOD_5, Influent [9]	2 x Weekly	Composite	mg/L
Effluent	2 x Weekly	Composite	mg/L
TSS, Influent [9]	2 x Weekly	Composite	mg/L
Effluent	2 x Weekly	Composite	mg/L
E. coli	2 x Weekly	Grab	No./100mL
pH	2 x Weekly	Grab	SU
Total Ammonia (as N)	2 x Weekly	Composite	mg/L
DO	2 x Weekly	Grab	mg/L
Cyanide (total)	2 x Monthly	Composite	mg/L
Cyanide (free) [10]	Monthly	Composite	mg/L
Selenium	Monthly	Composite	mg/L
Mercury	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
WET – Biomonitoring [11]			
Ceriodaphnia - Chronic	1st & 3rd Quarter	Composite	Pass/Fail
Fathead Minnows - Chronic	2nd & 4th Quarter	Composite	Pass/Fail
TRC, mg/L	Daily	Grab	mg/L
Oil & Grease [12]	When Sheen Observed	Grab	mg/L
Orthophosphate, (as P) [13]		Composite	mg/L
Effluent	Monthly		
Phosphorus, Total [13]	Monthly	Composite	mg/L
Influent	Monthly	Composite	mg/L
Effluent			

Self-Monitoring and Reporting Requirements [5]			
Parameter	Frequency	Sample Type	Units
Total Kjeldahl Nitrogen, TKN (as N), [13] Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Nitrate, NO3, [13]	Monthly	Composite	mg/L
Nitrite, NO2, [13]	Monthly	Composite	mg/L
Metals [14], Influent Effluent	Quarterly Quarterly	Composite/Grab Composite/Grab	mg/L mg/L
Organic Toxics [15]	Yearly	Grab	mg/L
Final Self-Monitoring Requirements [16]			
Total Flow [7], [8]	Continuous	Recorder	MGD
BOD_5, Influent [9] Effluent	2 x Weekly 2 x Weekly	Composite Composite	mg/L mg/L
TSS, Influent [9] Effluent	2 x Weekly 2 x Weekly	Composite Composite	mg/L mg/L
E. coli	2 x Weekly	Grab	No./100mL
pH	2 x Weekly	Grab	SU
Total Ammonia (as N)	2 x Weekly	Composite	mg/L
DO	2 x Weekly	Grab	mg/L
Cyanide (total)	2 x Monthly	Composite	mg/L
Cyanide (free) [10]	Monthly	Composite	mg/L
Selenium	Monthly	Composite	mg/L
Mercury	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
WET – Biomonitoring [17] Ceriodaphnia - Chronic Fathead Minnows - Chronic	 Quarterly Quarterly	 Composite Composite	 Pass/Fail Pass/Fail
Oil & Grease [12]	When Sheen Observed	Grab	mg/L
Orthophosphate, (as P) [13] Effluent	 Monthly	Composite	mg/L
Phosphorus, Total [13] Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Total Kjeldahl Nitrogen, [13] TKN (as N), Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Nitrate, NO3, [13]	Monthly	Composite	mg/L
Nitrite, NO2, [13]	Monthly	Composite	mg/L
Metals [14], Influent Effluent	Quarterly Quarterly	Composite/Grab Composite/Grab	mg/L mg/L
Organic Toxics [15]	Yearly	Grab	mg/L
5. See Definitions, Part VIII, for definition of terms.			
6. Interim Self-Monitoring Requirements are in effect until December 31, 2026.			

Self-Monitoring and Reporting Requirements [5]			
Parameter	Frequency	Sample Type	Units
7. Flow measurements of influent/effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained.			
8. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.			
9. In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge.			
10. Free Cyanide may be sampled for prior to chlorination of the effluent.			
11. The chronic Ceriodaphnia will be tested during the 2nd and 4th quarters, and the chronic fathead minnows will be tested during the 1st and 3rd quarters.			
12. Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report a no data indicator (NODI) code of 9 (Conditional Monitoring -Not Required This Period).			
13. These reflect changes required with the adoption of UCA R317-1-3.3, Technology-based Phosphorus Effluent Limits rule.			
14. Testing for metals listed in the table found in Part II, H, 1 of the permit.			
15. A list of the organics to be tested can be found in 40CFR122 appendix D table II.			
16. Final Self-Monitoring Requirements go into effect on January 1,2027.			
17. Both the Ceriodaphnia and fathead minnows will be tested Quarterly for chronic WET.			

b. Effective immediately and lasting the duration of this permit, the Permittee is authorized to discharge from Outfall 001R. Such discharges shall be limited and monitored by the Permittee as specified below:

	Outfall 001R Effluent Limitations [4]				
Parameter	Max Monthly Average	Max Weekly Median	Max Daily Average	Minimum	Maximum
BOD_5, mg/L	25	-	-	-	-
TSS, mg/L	25	35	-	-	-
E. coli, No/100mL	-	126	-	-	500
pH, Standard Units	-	-	-	6.0	9.0
4. See Definitions, Part VIII, for definition of terms.					

Reuse (Type II) Outfall 001R Self-Monitoring and Reporting Requirements [18], [19]			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD_5	Weekly	Composite	mg/L
TSS	Weekly	Composite	mg/L
E. coli	Daily	Grab	No./100mL
pH	Daily	Grab	SU
18. See Definitions, Part VIII, for definition of terms.			
19. Reuse monitoring results obtained during the previous month for reuse discharges shall be summarized for each month and reported on a Monthly Operational Report, post-marked no later than the 28th day of the month following the completed reporting period.			

3. Compliance Schedule

a. May 1, 2019 Submit to the Division of Water Quality (DWQ) a City Council resolution supporting the pursuit of the facility

		upgrade for the selected biological phosphorus and ammonia removal technology. The resolution shall include the approximate budget for the facility upgrade. If The Permittee is not pursuing a biological phosphorus removal technology the TBPEL variance will terminate, final limits for ammonia and total residual chlorine (TRC) will continue as per the effluent limits table below. (Completed)
b.	July 1, 2019	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
c.	December 1, 2019	Submit to DWQ a complete Capital Facilities Plan with the recommended biological phosphorus, ammonia removal technology and disinfection system. (Completed)
d.	July 1, 2020	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
e.	January 1, 2021	Submit to DWQ documentation of financial planning for the required facility upgrades. In addition, if rate increases are necessary The Permittee shall have passed the required rate increase resolution by no later than January 1, 2021. (Completed)
f.	July 1, 2021	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
g.	January 1, 2022	Submit to DWQ an approvable complete construction permit application for new facilities to meet permit effluent limit requirements. (Completed)
h.	July 1, 2022	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
i.	July 1, 2023	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
j.	July 1, 2024	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance.
k.	July 1, 2025	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance.
l.	July 1, 2026	Submit to DWQ an annual report relating to its

phosphorus discharges as detailed in the TBPEL Variance.

m. January 1, 2027 — Complete facility construction commissioning and start-up.

n. January 1, 2027 — Comply with all permit effluent limits and conditions.

o. February 1, 2027 — Submit to DWQ the final annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. This report will include a summary of the project.

Any violation of the Compliance Schedule stated above is violation of the permit.

4. Chronic Whole Effluent Toxicity (WET) Testing.

a. *Whole Effluent Testing – Acute Toxicity*.

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

The Permittee is a major municipal facility with a pretreatment program with a dilution ratio that is less than 20:1, and a flow less than 20 MGD therefore according to new WET Guidance the Permittee is not required to conduct Quarterly acute WET testing. The permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

b. *Whole Effluent Testing – Chronic Toxicity*.
Starting immediately, the Permittee shall quarterly, conduct chronic static renewal toxicity tests on a composite sample of the final effluent at Outfall 001. The sample shall be collected at the point of compliance before mixing with the receiving water.

Three samples are required and samples shall be collected on Monday, Wednesday and Friday of each sampling period or collected on a two-day progression for each sampling period. This may be changed with Director approval. The chronic toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition*, October 2002, *EPA—821-R-02-013* as per *40 CFR 136.3(a)* TABLE IA-LIST OF APPROVED BIOLOGICAL METHODS. Test species shall consist of *Ceriodaphnia dubia* (water flea) and *Pimephales promelas* (fathead minnow). The facility shall alternate between the two species until December 31, 2026. Starting January 1 2027, the facility shall start testing both species.

A multi dilution test consisting of at least five concentrations and a control is required at two dilutions below and two above the RWC, if possible. If test acceptability criteria are not met for control survival, growth, or reproduction, the test shall be considered invalid. A valid replacement test is required within the specified sampling period to remain in compliance with this permit. Chronic toxicity occurs when, during a chronic toxicity test, the 25% inhibition concentration (IC25) calculated on the basis of test organism survival and growth or survival and reproduction, is less than or equal to Interim RWC/Final RWC effluent concentration (equivalent to the RWC). If a sample is found to be chronically toxic during a routine test, the monitoring frequency shall become biweekly (see Part I C.4.c Accelerated Testing). The Director may enter acceptable variations in the test procedure here as documented in the Fact Sheet Statement of Basis and based on the test acceptability criteria as contained in Utah Pollutant Discharge Elimination System (UPDES) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control February, 2018. If possible, dilution water should be obtained from the receiving stream.

Seasonal Chronic WET RWC Limits, From WLA		
Season	Chronic WET IC_{25} RWC% Effluent	
	Interim RWC	Final RWC
Summer (Jul-Sep)	54% Eff.	43% Eff.
Fall (Oct-Dec)	32% Eff.	54% Eff.
Winter (Jan-Mar)	26% Eff.	39% Eff.
Spring (Apr-Jun)	32% Eff.	56% Eff.

If the permit contains a total residual chlorine limitation such that it may interfere with WET testing (>0.20 mg/L), the Permittee may dechlorinate the sample in accordance with the standard method. If dechlorination is negatively affecting the test, the Permittee may collect the sample just before chlorination with Director approval.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the required reporting period (e.g., biomonitoring results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining biomonitoring reports submitted with DMRs due each July 28, October 28, and January 28). Monthly test results shall be reported along with the DMR submitted for that month. The format for the report shall be consistent with Appendix C of "Utah Pollutant Discharge Elimination System (UPDES) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity, Utah Division of Water Quality, February, 2018.

If the results for ten consecutive tests indicate no chronic toxicity, the Permittee may submit a request to the Director to allow a reduction in chronic toxicity testing by alternating species, or using only the most sensitive species. The permit issuing authority may approve or deny the request based on the results and other available information without public notice. If the request is approved, the test procedures are to be the same as specified above for the test species. Under no circumstances shall monitoring for WET at major facilities be reduced less than quarterly. Minor facilities may be less than quarterly at the discretion of the Director.

c. *Accelerated Testing*. When whole effluent toxicity is indicated during routine WET testing as specified in this permit, the Permittee shall notify the Director in writing within 5 days after becoming aware of the test result. The Permittee shall perform an accelerated schedule of WET testing to establish whether a pattern of toxicity exists

unless the Permittee notifies the Director and commences a PTI, TIE, or a TRE. Accelerated testing or the PTI, TIE, or TRE will begin within fourteen days after the Permittee becomes aware of the test result. Accelerated testing shall be conducted as specified under Part I. Pattern of Toxicity. If the accelerated testing demonstrates no pattern of toxicity, routine monitoring shall be resumed.

d. *Pattern of Toxicity*. A pattern of toxicity is defined by the results of a series of up to five biomonitoring tests pursuant to the accelerated testing requirements using a full set of dilutions for acute (five plus the control) and five effluent dilutions for chronic (five plus the control), on the species found to be more sensitive, once every week for up to five consecutive weeks for acute and once every two weeks up to ten consecutive weeks for chronic.

If two (2) consecutive tests (not including the scheduled test which triggered the search for a pattern of toxicity) do not result in an exceedance of the acute or chronic toxicity criteria, no further accelerated testing will be required and no pattern of toxicity will be found to exist. The Permittee will provide written verification to the Director within 5 days of determining no pattern of toxicity exists, and resume routine monitoring.

A pattern of toxicity may or may not be established based on the following:

WET tests should be run at least weekly (acute) or every two weeks (chronic) (note that only one test should be run at a time), for up to 5 tests, until either:

1) 2 consecutive tests fail, or 3 out of 5 tests fail, at which point a pattern of toxicity will have been identified, or

2) 2 consecutive tests pass, or 3 out of 5 tests pass, in which case no pattern of toxicity is identified.

e. *Preliminary Toxicity Investigation*.

(1) When a pattern of toxicity is detected the Permittee will notify the Director in writing within 5 days and begin an evaluation of the possible causes of the toxicity. The Permittee will have 15 working days from demonstration of the pattern of toxicity to complete an optional Preliminary Toxicity Investigation (PTI) and submit a written report of the results to the Director. The PTI may include, but is not limited to: additional chemical and biological monitoring, examination of Pretreatment Program records, examination of discharge monitoring reports, a thorough review of the testing protocol, evaluation of treatment processes and chemical use, inspection of material storage and transfer areas to determine if any spill may have occurred.

(2) If the PTI identifies a probable toxicant and/or a probable source of toxicity, the Permittee shall submit, as part of its final results, written notification of that effect to the Director. Within thirty days of completing the PTI the Permittee shall submit to the Director for approval a control program to control effluent toxicity and shall proceed to implement such plan in accordance with the Director's approval. The control program, as submitted to or revised by the Director, will be incorporated into the permit. After final implementation, the Permittee must demonstrate successful removal of toxicity by passing a two species WET test as

outlined in this permit. With adequate justification, the Director may extend these deadlines.

(3) If no probable explanation for toxicity is identified in the PTI, the Permittee shall notify the Director as part of its final report, along with a schedule for conducting a Phase I Toxicity Reduction Evaluation (TRE) (see *Part I. C.4. f*, Toxicity Reduction Evaluation

(4) If toxicity spontaneously disappears during the PTI, the Permittee shall submit written notification to that effect to the Director, with supporting testing evidence.

f. *Toxicity Reduction Evaluation (TRE)*. If a pattern of toxicity is detected the Permittee shall initiate a TIE/TRE within 7 days unless the Director has accepted the decision to complete a PTI. With adequate justification, the Director may extend the 7-day deadline. The purpose of the TIE portion of a TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and the TRE will control or provide treatment for the toxicity.

A TRE may include but is not limited to one, all, or a combination of the following:

(1) Phase I – Toxicity Characterization

(2) Phase II – Toxicity Identification Procedures

(3) Phase III – Toxicity Control Procedures

(4) Any other appropriate procedures for toxicity source elimination and control.

If the TRE establishes that the toxicity cannot be immediately eliminated, the Permittee shall submit a proposed compliance plan to the Director. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to the Director, this permit may be reopened and modified.

If toxicity spontaneously disappears during the TIE/TRE, the Permittee shall submit written notification to that effect to the Director.

If the TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations, the Permittee shall submit the following:

(a) An alternative control program for compliance with the numerical requirements.

(b) If necessary, as determined by the Director, provide a modified biomonitoring protocol which compensates for the pollutant(s) being controlled numerically.

This permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by the Director, and/or modified WET testing requirements without public notice.

Failure to conduct an adequate TIE/TRE plan or program as described above, or the submittal of a plan or program judged inadequate by the Director, shall be considered a violation of this permit. After implementation of TIE/TRE plan, the Permittee must demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit.

D. Reporting of Monitoring Results.

1. Reporting of Wastewater Monitoring Results Monitoring results obtained during the previous month shall be summarized for each month and reported by NetDMR, entered into NetDMR no later than the 28th day of the month following the completed reporting period. The first report is due on April 28, 2024. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part VII.G*), and submitted by NetDMR, or to the Division of Water Quality.

2. Reporting of Reuse Monitoring Results. Monitoring results obtained during the previous month shall be summarized for each month and reported on a DMR, post-marked no later than the 28th day of the month following the completed reporting period. The first report is due on April 28, 2024. If no reuse occurs during the reporting period, "no reuse" shall be reported for those applicable effluent parameters. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the requirements of Signatory Requirements (see Part VII.G), and submitted to the Division of Water Quality at the following address:

Department of Environmental Quality
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

II. PRETREATMENT REQUIREMENTS

A. Pretreatment Program Delegation. The Permittee has been delegated primary responsibility for enforcing against discharges prohibited by *40 CFR 403.5* and applying and enforcing any national Pretreatment Standards established by the United States Environmental Protection Agency in accordance with Section 307 (b) and (c) of *The Clean Water Act (CWA)*, as amended by *The Water Quality Act (WQA), of 1987*.

The Permittee shall implement an Approved POTW Pretreatment Program in accordance with the legal authorities, policies, and procedures described in the Approved POTW Pretreatment Program submission. Such program commits the Permittee to do the following:

1. Carry out inspection, surveillance, and monitoring procedures, which will determine, independent of information supplied by the Industrial User, whether the Industrial User is in compliance with the pretreatment standards. At a minimum, all Significant Industrial Users shall be inspected and sampled by the Permittee at least once per year;

2. Control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable pretreatment standards and requirements;

3. Require development, as necessary, of compliance schedules by each Industrial User for the installation of control technologies to meet applicable pretreatment standards;

4. Maintain and update Industrial User information as necessary, to ensure that all IUs are properly permitted or controlled at all times;

5. An updated listing of the Industrial Users. This list must provide the following and must be provided to the Director, if requested:

   a. Identifying each Industrial User (IU) and determining if the IU is a Significant Industrial User (SIU),

   b. Determination of the qualitative and quantitative characteristics of each discharge, and

   c. Appropriate production data.

6. Enforce all applicable pretreatment standards and requirements and obtain appropriate remedies for noncompliance by any Industrial User;

7. Annually publish a list of Industrial Users that were determined to be in significant noncompliance during the previous year. The notice must be published before March 28 of the following year;

8. Maintain an adequate revenue structure and staffing level for continued implementation of the Pretreatment Program.

9. Evaluate all Significant Industrial Users at least once every two years to determine if they need to develop a slug prevention plan. If a slug prevention plan is required, the Permittee shall insure that the plan contains at least the minimum elements required in *40 CFR Part 403.8(f)(2)(v);*

10. Establish and enforce specific Local Limits as necessary to implement the provisions of the *40 CFR Parts 403.5(a)* and *(b)*, and as required by *40 CFR Part 403.5(c)*.

11. Notify all Significant Industrial Users of their obligation to comply with applicable requirements under *Subtitles C and D* of the *Resource* Conservation and Recovery Act (RCRA); and

12. Develop, implement, and maintain an enforcement response plan as required by *40 CFR Part 403.8(f)(5)* which shall, at a minimum,

    a. Describe how the POTW will investigate instances of noncompliance;

    b. Describe the types of escalating enforcement responses the POTW will take in response to all anticipated type of Industrial User violations; and

    c. Describe the time periods within which such responses will be taken and identify the POTW staff position(s) responsible for pursuing these actions.

B. Program Updates. The Permittee is required to modify its Pretreatment Program, as necessary, to reflect changes in the regulations of *40 CFR Part 403*. Such modifications shall be completed within the time frame set forth by the applicable regulations. Modification of the Approved POTW Pretreatment Program must be done in accordance with the requirements of *40 CFR Part 403.18*. Modifications of the approved program which result in less stringent Industrial User requirements shall not be effective until after approval has been granted by the Director.

C. General and Specific Prohibitions. Pretreatment standards (*40 CFR 403.5*) specifically prohibit the introduction of the following pollutants into the waste treatment system from any source of non-domestic discharge:

1. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140˚F (60˚C);

2. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;

3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

4. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at such volume or strength as to cause Interference in the POTW;

5. Heat in amounts, which will inhibit biological activity in the POTW, resulting in Interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104˚F (40˚C));

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;

7. Pollutants, which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems;

8. Any trucked or hauled pollutants, except at discharge points designated by the POTW; or

9. Any pollutant that causes Pass Through or Interference at the POTW.

10. Any specific pollutant which exceeds any Local Limitation established by the POTW in accordance with the requirement of *40 CFR Parts 403.5(c)* and *403.5(d)*.

D. Categorical Standards. In addition to the general and specific limitations expressed in *Part D* of this section, applicable National Categorical Pretreatment Standards must be met by all Industrial Users of the POTW. These standards are published in the federal regulations at *40 CFR 405* et. seq.

E. Self-Monitoring and Reporting Requirements.

1. Influent and Effluent Monitoring and Reporting Requirements. The Permittee shall sample and analyze both the influent and effluent, for the parameters listed in the Monitoring for Pretreatment Program Table.

Monitoring for Pretreatment Program Table				
Parameter	Reporting Limit	Sample Type	Frequency	Units
Total Arsenic	0.195	Composite	Quarterly	mg/L
Total Cadmium	0.0008			
Total Chromium	0.0104			
Total Copper	0.0331			
Total Lead	0.0236			
Total Molybdenum	NA			
Total Nickel	0.217			
Total Selenium	0.0055			
Total Silver	0.0264			
Total Zinc	0.253			
Total Cyanide	0.0057	Composite/Grab		
Total Mercury	0.000013			
TTOs	NA		Yearly	

2. A test method must be used that has a reporting limit as stated in the column. If a test method is not available the Permittee must submit documentation to the Director regarding the method that will be used.

3. The influent and effluent shall be analyzed by the Permittee for total toxic pollutants (TTOs) listed in *40 CFR Part 122* Appendix D Table II (Organic Toxic Pollutants). The pesticides fraction of Appendix D, Table II is suspended unless pesticides are expected to be present.

4. The results of the analyses of metals, cyanide and toxic organics shall be submitted along with the Discharge Monitoring Report (DMR) at the end of the earliest possible reporting period. Also, the Permittee must submit a copy of the toxic organics data to the Pretreatment Coordinator for DWQ via email.

5. In accordance with the requirements of *40 CFR Part 403.5(c),* the Permittee shall determine if there is a need to develop or revise its Local Limits in order to implement the

general and specific prohibitions of *40 CFR Part 403.5 (a)* and *Part 403.5 (b)*. A technical evaluation of the need to develop or revise Local Limits shall be submitted to the Division within 12 months of the effective date of this permit. This evaluation should be conducted in accordance with the latest revision of the EPA Local Limits Development Guidance. If a technical evaluation, reveals that development or revision of Local Limits is necessary, the Permittee shall submit the proposed Local Limits revision to the Division of Water Quality for approval, and after approval implement the new Local Limits, within 12 months of the determination that a revision is necessary.

6. For Local Limit parameters it is recommended that the most sensitive method be used for analysis. This will determine if the parameter is present and provide removal efficiencies based on actual data rather than literature values.

7. If a parameter load is greater than the allowable head works load, for any pollutant listed in Part II.E.1. or Part I, or a pollutant of concern listed in the Local Limit development document, the Permittee must report the information to the Pretreatment Coordinator for the DWQ. If the loading exceeds the allowable headworks load, increase sampling must occur based on the requirements given by the Pretreatment Coordinator for the DWQ. If needed sampling may need to occur to find the source(s) of the increase. This may include sampling of the collection system or additional sampling of Industrial Users. Notification regarding the exceedances of the allowable headworks loading can be provided via email.

F. Annual Report. The Permittee shall provide the Division of Water Quality and EPA with an annual report briefly describing the Pretreatment Program activities over the previous calendar year for the Permittee. Reports shall be submitted no later than March 28 of each year. The Permittee shall submit an annual report, that includes at a minimum, the following:

1. An updated listing of the Industrial Users.

2. A descriptive summary of the compliance activities including numbers of any major enforcement actions, i.e., administrative orders, penalties, civil actions, etc.

3. An assessment of the compliance status of the Industrial Users and the effectiveness of the Pretreatment Program in meeting its needs and objectives.

4. A description of all changes made to the Pretreatment Program.

5. Changes to pollutants of concern to include but not limited to the following

   a. Violations of effluent limits,
   b. Summary of pollutants of concern, and
   c. Exceedances of the maximum headwork loading or industrial loading.

6. Other information as may be determined necessary by the Director.

G. Enforcement Notice. *Section 19-5-104 of the Act* provides that the State may issue a notice to the POTW stating that a determination has been made that appropriate enforcement action must be taken against an Industrial User for noncompliance with any pretreatment requirements within 30 days. The issuance of such notice shall not be construed to limit the authority of the Director.

H. Formal Action. The Director retains the right to take legal action against any Industrial User and/or POTW for those cases where a permit violation has occurred because of the failure of an Industrial User to meet an applicable pretreatment standard.

III. BIOSOLIDS REQUIREMENTS

A. Biosolids Treatment and Disposal. The authorization to dispose of biosolids provided under this permit is limited to those biosolids produced from the treatment works owned and operated by the Permittee. The treatment methods and disposal practices are designated below.

1. Treatment

The Permittee biosolids are stabilized in an anaerobic digester with a hydraulic retention time of approximately 40 days at an average temperature of 95° F (35° C). Once a week the biosolids are drawn off the bottom of the primary digester and sent to the secondary digester that serves as a holding tank. The biosolids from the secondary digester are wasted to a screw press, and hauled to the drying beds for holding until they are then hauled to Payson City Landfill.

2. Description of Biosolids Disposal Method

a. Class A biosolids may be sold or given away to the public for lawn and garden use or land application.

b. Class B biosolids may be land applied for agriculture use or at reclamation sites at agronomic rates.

c. Biosolids may be disposed of in a landfill or transferred to another facility for treatment and/or disposal.

3. Changes in Treatment Systems and Disposal Practices.

a. Should the Permittee change their disposal methods or the biosolids generation and handling processes of the plant, the Permittee must notify the Director at least 30 days in advance if the process/method is specified in *40 CFR Part 503*. This includes, but is not limited to, the permanent addition or removal of any biosolids treatment units (i.e., digesters, drying beds, belt presses, etc.) and/or any other change.

b. Should the Permittee change their disposal methods or the biosolids generation and handling processes of the plant, the Permittee must notify the Director at least 180 days in advance if the process/method is not specified in *40 CFR Part 503*. This includes, but is not limited to, the permanent addition or removal of any biosolids treatment units (i.e., digesters, drying beds, belt presses, etc.) and/or any other change.

For any biosolids that are land filled, the requirements in *Section 2.12* of the latest version of the *EPA Region VIII Biosolids Management Handbook* must be followed

B. Specific Limitations and Monitoring Requirements. All biosolids generated by this facility to be sold or given away to the public shall meet the requirements of *Part III.B.1, 2, 3* and *4* listed below.

1. Metals Limitations. All biosolids sold or given away in a bag or similar container for application to lawns and home gardens must meet the metals limitations as described below. If these metals limitations are not met, the biosolids must be landfilled.

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits [1], (mg/kg)	CPLR [2], (mg/ha)	Pollutant Conc. Limits [3] (mg/kg)	APLR [4], (mg/ha-yr)
Total Arsenic	75	41	41	2.0
Total Cadmium	85	39	39	1.9
Total Copper	4300	1500	1500	75
Total Lead	840	300	300	15
Total Mercury	57	17	17	0.85
Total Molybdenum	75	N/A	N/A	N/A
Total Nickel	420	420	420	21
Total Selenium	100	100	100	5.0
Total Zinc	7500	2800	2800	140
1, If the concentration of any 1 (one) of these parameters exceeds the Table 1 limit, the biosolids cannot be land applied or beneficially used in any way.				
2, CPLR - Cumulative Pollutant Loading Rate - The maximum loading for any 1 (one) of the parameters listed that may be applied to land when biosolids are land applied or beneficially used on agricultural, forestry, or a reclamation site.				
3, If the concentration of any 1 (one) of these parameters exceeds the Table 3 limit, the biosolids cannot be land applied or beneficially used in on a lawn, home garden, or other high potential public contact site. If any 1 (one) of these parameters exceeds the Table 3 limit, the biosolids may be land applied or beneficially reused on an agricultural, forestry, reclamation site, or other high potential public contact site, as long as it meets the requirements of Table 1, Table 2, and Table 4.				
4, APLR - Annual Pollutant Loading Rate - The maximum annual loading for any 1 (one) of the parameters listed that may be applied to land when biosolids are land applied or beneficially reused on agricultural, forestry, or a reclamation site, when they do not meet Table 3, but do meet Table 1.				

2. Pathogen Limitations. All biosolids sold or given away in a bag or a similar container for application to lawns and home gardens must meet the pathogen limitations for Class A. Land applied biosolids must meet the pathogen limitations for Class B as described below. If the pathogen limitations are not met, the biosolids must be landfilled.

    a. Class A biosolids shall meet one of the pathogen measurement requirements in the following Pathogen Control Class table or shall meet the requirements for a Process to Further Reduce Pathogens as defined in *40 CFR Part 503.32(a) Sewage Sludge – Class A.*

        (1) At this time the Permittee does not intend to distribute biosolids to the public for use on the lawn and garden and thus is not required meet Class A Biosolids requirements currently*:*

    b. Class B biosolids shall meet the pathogen measurement requirements in the following Pathogen Control Class table or shall meet the requirements for a Process to Significantly Reduce Pathogens as defined in *40 CFR Part 503.32(b) Sewage Sludge – Class B*.

        (1) At this time the Permittee does not intend to distribute bulk biosolids for land application and thus is not required meet Class B Biosolids requirements currently.

c. In addition, the Permittee shall comply with all applicable site restrictions listed below *(40 CFR 503.32,(b),(5)):*

(1) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application.

(2) Food crops with harvested parts below the land surface shall not be harvested for 20 months after application if the biosolids remains on the land surface for four months or more prior to incorporation into the soil.

(3) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil.

(4) Food crops, feed crops, and fiber crops shall not be harvested from the land for 30 days after application.

(5) Animals shall not be allowed to graze on the land for 30 days after application.

(6) Turf grown on land where biosolids is applied shall not be harvested for one year after application if the harvested turf is placed on either land with a high potential for public exposure or a lawn.

(7) Public access to land with a high potential for public exposure shall be restricted for one year after application.

(8) Public access to land with a low potential for public exposure shall be restricted for 30 days after application.

(9) The sludge or the application of the sludge shall not cause or contribute to the harm of a threatened or endangered species or result in the destruction or adverse modification of critical habitat of a threatened or endangered species after application.

Pathogen Control Class	
503.32 (a)(1) - (5), (7), (8), Class A	503.32 (b)(1) - (5), Class B
B Salmonella species –less than three (3) MPN[1] per four (4) grams total solids (DWB)[2] or Fecal Coliforms – less than 1,000 MPN per gram total solids (DWB).	Fecal Coliforms – less than 2,000,000 MPN or CFU[3] per gram total solids (DWB).
503.32 (a)(6) Class A—Alternative 4	
B Salmonella species –less than three (3) MPN per four (4) grams total solids (DWB) or less than 1,000 MPN Fecal Coliforms per gram total solids (DWB), And - Enteric viruses –less than one (1) plaque forming unit per four (4) grams total solids (DWB) And - Viable helminth ova –less than one (1) per four (4) grams total solids (DWB)	

Pathogen Control Class	
503.32 (a)(1) - (5), (7), (8), Class A	503.32 (b)(1) - (5), Class B
1 - MPN – Most Probable Number	
2 - DWB – Dry Weight Basis	
3 - CFU – Colony Forming Units	

3. Vector Attraction Reduction Requirements.

   a. The Permittee will meet vector attraction reduction through use of one of the methods listed in *40 CFR Part 503.33*. Facility is meeting the requirements though the following methods.

      (1) At this time the Permittee does not intend to distribute biosolids to the public for beneficial use, and will be disposing of them in a landfill. Under 40 CFR 503.33(b)(11).

   If the Permittee intends to use another one of the alternatives, the Director and the EPA must be informed at least thirty (30) days prior to its use. This change may be made without additional public comment.

4. Self-Monitoring Requirements.

   a. At a minimum, upon the effective date of this permit, all chemical pollutants, pathogens and applicable vector attraction reduction requirements shall be monitored according to *40 CFR Part 503.16(1)(a)*.

Minimum Frequency of Monitoring (40 CFR Part 503.16, 503.26. and 503.46)		
Amount of Biosolids Disposed Per Year		Monitoring Frequency
Dry US Tons	Dry Metric Tons	Per Year or Batch
> 0 to < 320	> 0 to < 290	Once Per Year or Batch
> 320 to < 1650	> 290 to < 1,500	Once a Quarter or Four Times
> 1,650 to < 16,500	> 1,500 to < 15,000	Bi-Monthly or Six Times
> 16,500	> 15,000	Monthly or Twelve Times
Over the past 10 years the Permittee has produced on average 312 DMT of biosolids annually, therefore they need to sample at least four times a year		

   b. Sample collection, preservation and analysis shall be performed in a manner consistent with the requirements of *40 CRF 503* and/or other criteria specific to this permit. A metals analysis is to be performed using *Method SW 846* with *Method 3050* used for digestion. For the digestion procedure, an amount of biosolids equivalent to a dry weight of one gram shall be used. The methods are also described in the latest version of the *Region VIII Biosolids Management Handbook.*

   c. The Director may request additional monitoring for specific pollutants derived from biosolids if the data shows a potential for concern.

   d. After two (2) years of monitoring at the frequency specified, the Permittee may request that the Director reduce the sampling frequency for the heavy metals. The frequency cannot be reduced to less than once per year for biosolids that are sold or given away to the public for any parameter. The frequency also cannot be reduced for any of the pathogen or vector attraction reduction requirements listed in this permit.

C. Management Practices of Biosolids.

1. Biosolids Distribution Information

   a. For biosolids that are sold or given away, an information sheet shall be provided to the person who receives the biosolids. The label or information sheet shall contain:

      (1) The name and address of the person who prepared the biosolids for a sale or to be given away.

      (2) A statement that prohibits the application of the biosolids to the land except in accordance with the instructions on the label or information sheet.

2. Biosolids Application Site Storage

   a. For biosolids or material derived from biosolids that are stored in piles for one year or longer, measures shall be taken to ensure that erosion (whether by wind or water) does not occur. However, best management practices should also be used for piles used for biosolids treatment. If a treatment pile is considered to have caused a problem, best management practices could be added as a requirement in the next permit renewal

3. Land Application Practices

   a. The Permittee shall operate and maintain the land application site operations in accordance with the following requirements:

      (1) The Permittee shall provide to the Director and the EPA within 90 days of the effective date of this permit a land application plan.

      (2) Application of biosolids shall be conducted in a manner that will not contaminate the groundwater or impair the use classification for that water underlying the sites.

      (3) Application of biosolids shall be conducted in a manner that will not cause a violation of any receiving water quality standard from discharges of surface runoff from the land application sites. Biosolids shall not be applied to land 10 meters or less from waters of the United States (as defined in 40 CFR 122.2).

      (4) No person shall apply biosolids for beneficial use to frozen, ice-covered, or snow-covered land where the slope of such land is greater than three percent and is less than or equal to six percent unless one of the following requirements is met:

         (a) there is 80 percent vegetative ground cover; or,

         (b) approval has been obtained based upon a plan demonstrating adequate runoff containment measures.

      (5) Application of biosolids is prohibited to frozen, ice-covered, or snow-covered sites where the slope of the site exceeds six percent.

      (6) Agronomic Rate

(a) Application of biosolids shall be conducted in a manner that does not exceed the agronomic rate for available nitrogen of the crops grown on the site. At a minimum, the Permittee is required to follow the methods for calculating agronomic rate outlined in the latest version of the *Region VIII Biosolids Management Handbook* (other methods may be approved by the Director). The treatment plant shall provide written notification to the applier of the biosolids of the concentration of total nitrogen (as N on a dry weight basis) in the biosolids. Written permission from the Director is required to exceed the agronomic rate.

(b) The Permittee may request the limits of *Part III.C.6*. be modified if different limits would be justified based on local conditions. The limits are required to be developed in cooperation with the local agricultural extension office or university.

(c) Deep soil monitoring for nitrate-nitrogen is required for all land application sites (does not apply to sites where biosolids are applied less than once every five years). A minimum of six samples for each 320 (or less) acre area is to be collected. These samples are to be collected down to either a 5-foot depth, or the confining layer, whichever is shallower (sample at 1-foot, 2-foot, 3-foot, 4-foot and 5-foot intervals). Each of these one-foot interval samples shall be analyzed for nitrate-nitrogen. In addition to the one-foot interval samples, a composite sample of the 5-foot intervals shall be taken, and analyzed for nitrate-nitrogen as well. Samples are required to be taken once every five years for non-irrigated sites that receive more than 18 inches of precipitation annually or for irrigated sites

(7) Biosolids shall not be applied to any site area with standing surface water. If the annual high groundwater level is known or suspected to be within five feet of the surface, additional deep soil monitoring for nitrate-nitrogen as described in *Part III.C.(6)(c).* is to be performed. At a minimum, this additional monitoring will involve a collection of more samples in the affected area and possibly more frequent sampling. The exact number of samples to be collected will be outlined in a deep soil monitoring plan to be submitted to the Director and the EPA within 90 days of the effective date of this permit. The plan is subject to approval by the Director.

(8) The specified cover crop shall be planted during the next available planting season. If this does not occur, the Permittee shall notify the Director in writing. Additional restrictions may be placed on the application of the biosolids on that site on a case-by-case basis to control nitrate movement. Deep soil monitoring may be increased under the discretion of the Director.

(9) When weather and or soil conditions prevent adherence to the biosolids application procedure, biosolids shall not be applied on the site.

(10) For biosolids that are sold or given away, an information sheet shall be provided to the person who receives the biosolids. The label or information sheet shall contain:

(a) The name and address of the person who prepared the biosolids for sale or give away for application to the land.

(b) A statement that prohibits the application of the biosolids to the land except in accordance with the instructions on the label or information sheet.

(c) The annual whole biosolids application rate for the biosolids that do not cause the metals loading rates in Tables 1, 2, and 3 (*Part III.B.1.*) to be exceeded.

(11) Biosolids subject to the cumulative pollutant loading rates in Table 2 (*Part III.B.1.*) shall not be applied to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in Table 2 have been reached.

(12) If the treatment plant applies the biosolids, it shall provide the owner or leaseholder of the land on which the biosolids are applied notice and necessary information to comply with the requirements in this permit.

(13) The Permittee shall inspect the application of the biosolids to active sites to prevent malfunctions and deterioration, operator errors and discharges, which may cause or lead to the release of biosolids to the environment or a threat to human health. The Permittee must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment. The Permittee shall keep an inspection log or summary including at least the date and time of inspection, the printed name and the handwritten signature of the inspector, a notation of observations made and the date and nature of any repairs or corrective action.

D. Special Conditions on Biosolids Storage. Permanent storage of biosolids is prohibited. Biosolids shall not be temporarily stored for more than two (2) years. Written permission to store biosolids for more than two years must be obtained from the Director. Storage of biosolids for more than two years will be allowed only if it is determined that significant treatment is occurring.

E. Representative Sampling. Biosolids samples used to measure compliance with *Part III* of this Permit shall be collected at locations representative of the quality of biosolids generated at the treatment works and immediately prior to land application.

F. Reporting of Monitoring Results.

1. Biosolids. The Permittee shall provide the results of all monitoring performed in accordance with Part III.B, and information on management practices, biosolids treatment, site restrictions and certifications shall be provided no later than February 19 of each year. Each report is for the previous calendar year. If no biosolids were sold or given away during the reporting period, "no biosolids were sold or given away" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements (see Part VII.G), and submitted to the Utah Division of Water Quality and the EPA by the NeT-Biosolids system through the EPA Central Data Exchange (CDX) System.

G. Additional Record Keeping Requirements Specific to Biosolids.

1. Unless otherwise required by the Director, **the Permittee is not required to keep records** on compost products if the Permittee prepared them from biosolids that meet the limits in Table 3 (*Part III.B.1*), the Class A pathogen requirements in *Part III.B.2* and the vector

attraction reduction requirements in *Part III.B.3*. The Director may notify the Permittee that additional record keeping is required if it is determined to be significant to protecting public health and the environment.

2. **The Permittee is required** to keep the following information for at least 5 years:

   a. Concentration of each heavy metal in Table 3 (*Part III.B.1*).

   b. A description of how the pathogen reduction requirements in *Part III.B.2* were met.

   c. A description of how the vector attraction reduction requirements in *Part III.B.3* were met.

   d. A description of how the management practices in *Part III.C* were met (if necessary).

   e. The following certification statement:

      "I certify under the penalty of law, that the heavy metals requirements in *Part III.B.1*, the pathogen requirements in *Part III.B.2*, the vector attraction requirements in *Part III.B.3*, the management practices in *Part III.C*. This determination has been made under my direction and supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements, the vector attraction reduction requirements and the management practices have been met. I am aware that there are significant penalties for false certification including the possibility of imprisonment."

3. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit for the life of the permit. Data collected on site, copies of Biosolids Report forms, and a copy of this UPDES biosolids-only permit must be maintained on site during the duration of activity at the permitted location.

IV. STORM WATER REQUIREMENTS.

A. Industrial Storm Water Permit. Based on the type of industrial activities occurring at the facility, the Permittee is required to maintain separate coverage or an appropriate exclusion under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). If the facility is not already covered, the Permittee has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation.

V. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.

B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under Utah Administrative Code ("UAC") *R317-2-10*, *UAC R317-8-4.1(10)(d)*, and/or *40 CFR 503* utilizing sufficiently sensitive test methods unless other test procedures have been specified in this permit. Monitoring must be conducted according to the test procedures listed above unless another method is required under 40 CFR subchapters N or O. Sufficiently sensitive test method means: (1) The method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or (2) The method has the lowest ML of the analytical methods approved under *40 CFR part 136* or required under *40 CFR chapter I, subchapter N or O* for the measured pollutant or pollutant parameter as per *40 CFR 122.44(i)(1)(iv)(A).*

C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

E. Additional Monitoring by the Permittee. If the Permittee monitors any parameter more frequently than required by this permit, using test procedures approved under Permit Part V.B., the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form.

F. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

G. Retention of Records. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location

H. Twenty-four Hour Notice of Noncompliance Reporting.

1. The Permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the Permittee first became aware of circumstances. The report shall be made to the Division of Water Quality (DWQ) via the 24-hour answering service (801) 536-4123.

2. The following occurrences of noncompliance shall initially be reported by telephone to the DWQ via the 24-hour answering service as soon as possible but no later than 24 hours from the time the Permittee becomes aware of the circumstances:

   a. Any noncompliance which may endanger health or the environment;

   b. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part VI.G, Bypass of Treatment Facilities.)*;

   c. Any upset which exceeds any effluent limitation in the permit (See *Part VI.H*, *Upset Conditions*.);

   d. Violation of a daily discharge limitation for any of the pollutants listed in the permit. For other permit violations which will not endanger health or the environment, DWQ may otherwise be notified during business hours (801) 536-4300; or,

   e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.

3. A written submission shall also be provided within five days of the time that the Permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected;

   d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,

   e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.

4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.

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

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

J. Inspection and Entry The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,

5. The Permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

VI. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of *the Act* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed $10,000 per day of such violation. Except as provided at *Part VI.G*, *Bypass of Treatment Facilities* and *Part VI.H*, *Upset Conditions*, nothing in this permit shall be construed to relieve the Permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The Permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.

E. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

G. Bypass of Treatment Facilities.

1. Bypass Not Exceeding Limitations. The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.

2. Prohibition of Bypass.

   a. Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;

(2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and

(3) The Permittee submitted notices as required under *Part VI.G.3*.

b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *Parts VI.G.2.a (1), (2) and (3)*.

3. Notice.

a. *Anticipated bypass*. Except as provided above in *Part VI.G.2* and below in *Part VI.G.3.b*, if the Permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:

(1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages:

(2) A specific bypass plan describing the work to be performed including scheduled dates and times. The Permittee must notify the Director in advance of any changes to the bypass schedule;

(3) Description of specific measures to be taken to minimize environmental and public health impacts;

(4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;

(5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,

(6) Any additional information requested by the Director.

b. *Emergency Bypass*. Where ninety days advance notice is not possible, the Permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *Part VI.G.3.a.(1) through (6)* to the extent practicable.

c. *Unanticipated bypass*. The Permittee shall submit notice of an unanticipated bypass to the Director as required under *Part IV.H*, Twenty-Four Hour Reporting. The Permittee shall also immediately notify the Director of the Department of Natural

Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the Permittee until such time as an action is initiated for noncompliance.

2. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the Permittee can identify the cause(s) of the upset;

   b. The permitted facility was at the time being properly operated;

   c. The Permittee submitted notice of the upset as required under *Part V.H*, *Twenty-four Hour Notice of Noncompliance Reporting*; and,

   d. The Permittee complied with any remedial measures required under *Part VI.D*, *Duty to Mitigate*.

3. Burden of proof. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

VII. GENERAL REQUIREMENTS

A. Planned Changes. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 122.29(b); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit nor to notification requirements under Subsection R317-8-4.1(15).

3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. The Permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.

B. Anticipated Noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.

E. Duty to Provide Information. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

F. Other Information. When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.

G. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Director, and,

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who perfoms similar policy- or decision-making functions for the corporation, or

(b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency, or

(b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person.

3. Changes to authorization. If an authorization under *paragraph VII.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph VII.G.2.* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the Permittee of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under the *Act*.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new Permittee if:

1. The current Permittee notifies the Director at least 20 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new Permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Director does not notify the existing Permittee and the proposed new Permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph *2* above.

N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *Sections 19-5-117* and *510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.

O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. Water Quality Standards for the receiving water(s) to which the Permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.

3. Revisions to the current CWA § 208 areawide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.

P. Biosolids – Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate biosolids limitations (and compliance schedule, if necessary), management practices, other appropriate requirements to protect public health and the environment, or if there have been substantial changes (or such changes are planned) in biosolids use or disposal practices; applicable management practices or numerical limitations for pollutants in biosolids have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined that the Permittees biosolids use or land application practices do not comply with existing applicable state of federal regulations.

Q. Toxicity Limitation - Reopener Provision.

This permit may be reopened and modified (following proper administrative procedures) to include, whole effluent toxicity (WET) limitations, a compliance date, a compliance schedule, a change in the whole effluent toxicity (biomonitoring) protocol, additional or modified numerical limitations, or any other conditions related to the control of toxicants if one or more of the following events occur;

1. Toxicity is detected, as per *Part I.C.4.a* and/or *b* of this permit, during the duration of this permit.

2. The TRE results indicate that the toxicant(s) represent pollutant(s) or pollutant parameter(s) that may be controlled with specific numerical limits, and the Director concludes that numerical controls are appropriate.

3. Following the implementation of numerical control(s) of toxicant(s), the Director agrees that a modified biomonitoring protocol is necessary to compensate for those toxicants that are controlled numerically.

4. The TRE reveals other unique conditions or characteristics, which in the opinion of the permit issuing authority justify the incorporation of unanticipated special conditions in the permit.

VIII. DEFINITIONS

A. Wastewater.

1. The "7-day (and weekly) average", other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.

2. The "30-day (and monthly) average," other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

3. "Act," means the *Utah Water Quality Act*.

4. "Acute toxicity" occurs when 50 percent or more mortality is observed for either test species at any effluent concentration (lethal concentration or "LC_{50}").

5. "Annual Loading Cap" is the highest allowable phosphorus loading discharged over a calendar year, calculated as the sum of all the monthly loading discharges measured during a calendar year divided by the number of monthly discharges measured during that year.

6. "Bypass," means the diversion of waste streams from any portion of a treatment facility.

7. "Chronic toxicity" occurs when the IC_{25}< XX% effluent. The XX% effluent is the concentration of the effluent in the receiving water, at the end of the mixing zone expressed as per cent effluent.

8. "IC_{25}" is the concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female, or a 25% reduction in overall growth for the test population.

9. "Composite Samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

d. Continuous sample volume, with sample collection rate proportional to flow rate.

10. "CWA" means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.

11. "Daily Maximum" (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.

12. "EPA," means the United States Environmental Protection Agency.

13. "Director," means Director of the Division of Water Quality.

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

15. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

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

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

B. Biosolids.

1. "Biosolids," means any material or material derived from sewage solids that have been biologically treated.

2. "Dry Weight-Basis," means 100 percent solids (i.e. zero percent moisture).

3. "Land Application" is the spraying or spreading of biosolids onto the land surface; the injection of biosolids below the land surface; or the incorporation of biosolids into the land

so that the biosolids can either condition the soil or fertilize crops or vegetation grown in the soil. Land application includes distribution and marketing (i.e. the selling or giving away of the biosolids).

4. "Pathogen," means an organism that is capable of producing an infection or disease in a susceptible host.

5. "Pollutant" for the purposes of this permit is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organisms that after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food-chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

6. "Runoff" is rainwater, leachate, or other liquid that drains over any part of a land surface and runs off the land surface.

7. "Similar Container" is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

8. "Total Solids" are the materials in the biosolids that remain as a residue if the biosolids are dried at 103^{o} or 105^{o} Celsius.

9. "Treatment Works" are either Federally owned, publicly owned, or privately-owned devices or systems used to treat (including recycling and reclamation) either domestic sewage or a combination of domestic sewage and industrial waste or liquid manure.

10. "Vector Attraction" is the characteristic of biosolids that attracts rodents, flies, mosquito's or other organisms capable of transporting infectious agents.

11. "Animals" for the purpose of this permit are domestic livestock.

12. "Annual Whole Sludge Application Rate" is the amount of sewage sludge (dry-weight basis) that can be applied to a unit area of land during a cropping cycle.

13. "Agronomic Rate is the whole sludge application rate (dry-weight basis) designed to: (1) provide the amount of nitrogen needed by the crop or vegetation grown on the land; and (2) minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

14. "Annual Pollutant Loading Rate" is the maximum amount of a pollutant (dry-weight basis) that can be applied to a unit area of land during a 365-day period.

15. "Application Site or Land Application Site" means all contiguous areas of a users' property intended for sludge application.

16. "Cumulative Pollutant Loading Rate" is the maximum amount of an inorganic pollutant (dry-weight basis) that can be applied to a unit area of land.

17. "Grit and Screenings" are sand, gravel, cinders, other materials with a high specific gravity and relatively large materials such as rags generated during preliminary treatment of domestic sewage at a treatment works and shall be disposed of according to *40 CFR 258*.

18. "High Potential for Public Contact Site" is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

19. "Low Potential for Public Contact Site" is the land with a low potential for contact by the public. This includes, but is not limited to, farms, ranches, reclamation areas, and other lands which are private lands, restricted public lands, or lands which are not generally accessible to or used by the public.

20. "Monthly Average" is the arithmetic mean of all measurements taken during the month.

21. "Volatile Solids" is the amount of the total solids in sewage sludge lost when the sludge is combusted at 550 degrees Celsius for 15-20 minutes in the presence of excess air.

FACT SHEET AND STATEMENT OF BASIS
PAYSON CITY WASTEWATER TREATMENT PLANT
RENEWAL PERMIT: DISCHARGE, BIOSOLIDS, & REUSE
UPDES PERMIT NUMBER: UT0020427
UPDES BIOSOLIDS PERMIT NUMBER: UTL-020427
MAJOR MUNICIPAL

FACILITY CONTACTS

Person Name:	Jeff Hiatt
Position:	Plant Superintendent
Person Name:	Tyler Lowe
Position:	Operator
Phone Number:	(801) 465-5277
Permittee:	City of Payson
Facility Name:	Payson City Wastewater Treatment Plant
Mailing Address:	439 West Utah Ave Payson City, Utah 84651
Telephone:	(801) 465-5277
Actual Address:	1062 North Main St.

DESCRIPTION OF FACILITY

The City of Payson (Permittee) owns and operates a publicly owned treatment works the Payson City Wastewater Treatment Plant (Payson WTP), which treats and discharges the sanitary sewer water for the City of Payson. Payson WTP is located at 1062 North Main, Payson City, Utah. The State of Utah Storet number is 499541. The population of the City is approximately 20,000. The design flow of the facility is 3.0 MGD average daily flow with a peak flow of 4.5 MGD.

The influent enters the plant through a 30" Parmer Bowlus flume. The headworks contain two (2) 30" step screens followed by rag washers for each screen. The headworks also contain an 8 ft diameter vortex grit removal system with an air lift pump to a grit washer. The wastewater is then pumped to the 70 ft diameter Primary Clarifier followed by the 102 ft diameter primary trickling filter (Rock Media Volume = 57,200 ft^3). The primary pump station has a capacity of 0.5-7.0 MGD with one standby pump.

The flow then enters the secondary pump station where the wastewater is pumped to one of two 45 ft diameter intermediate clarifiers. The secondary pump station has a capacity of 0.5-6.5 MGD with one standby pump. After leaving the intermediate clarifiers, the flow enters the STM Aerotors. In July 2002, a rectangular tank (92.5 ft x 49.5 ft x 16 ft) fitted with eight (8) STM Aerotors was brought on-line, replacing the secondary trickling filters which were taken off-line to be converted to aeration basins. The aeration basins were only to be used during the cherry processing season, July through September. The flow would leave the intermediate clarifiers, enter the aeration basins, and then flow back to the aerotor tank. Throughout the remainder of the year, the aeration basins would be off-line, and the flow leaving the

intermediate clarifiers will directly enter the aerotor tank. Currently one of the aeration basins is back online and will be in use until construction is complete.

After leaving the aerotor tank, the process water will enter one of two final clarifiers with diameters of 45 ft and 60 ft. Following the final clarifiers, the flow is directed through 2-shallow bed, traveling bridge rapid sand filters followed by a chlorine contact basin having a sixty (60) minute detention time in the chlorine contact basin and then discharged through Outfall 001.

Payson WTP has three (3) anaerobic digesters. Each digester is 40 ft in diameter with a total digester volume of 91,471 ft^3. Payson WTP has nine (9) drying beds. The first five drying beds have an area of 5000 ft^2 each. The remaining four drying beds have a combined area of 16,150 ft^2. The biosolids are removed from the drying beds and sent to the landfill. Approximately 250 metric tons of dry biosolids are produced each year by the facility.

The 2017 renewal permit included provisions covering the reuse of the effluent. For the 2017 renewal permit, a new WLA model was calibrated and used and a reasonable potential analysis (RP) was conducted. As a result, limits for ammonia and residual chlorine were modified, limits for selenium, mercury, and cyanide were added, and the monitoring requirements were increased. Consistent with the Utah Division of Water Quality's (DWQ) and EPA policy, a limit on flow was included in the permit. DWQ completed an update WET Policy, which resulted in some changes to the WET requirements in the Permit.

To allow time for the Permittee to come into compliance with the new effluent limits and the Technology-Based Phosphorus Effluent Limit (TBPEL) Rule (Utah Administrative Code (UAC)317-1-3.3) DWQ adopted in 2014, DWQ issued a Variance and added a compliance schedule (CS) in the permit.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Minor issues with the Reuse requirements were identified after the issuance of the renewal permit. The permit was modified to correct them, then public noticed and signed.

Over the past permit term, the Permittee has had problems staying in compliance with the WQBEL for cyanide in the effluent. After completing the RP for cyanide, it was determined that the Permittee will be required to monitor for both free and total cyanide. This permit also includes a limit for total cyanide.

In this permit, Permittee has interim limits for selenium, mercury, and cyanide until plant upgrades are complete, with the final limits going into effect on January 1, 2027. These interim limits were taken from the previous permit.

In support of future TMDL work on impaired downstream waters, monitoring for total dissolved solids (TDS) is being added to the permit.

The Permittee will be upgrading and replacing almost all the processes at the plant during the permit cycle in order to meet the capacity requirements of ongoing development and growth, as well as the more stringent limits related to reduced instream flows. To prepare for this, the Permittee applied for a renewal permit at an increased flow rate, and submitted a Level II Antidegradation Review (L2ADR) to demonstrate they will be using the least degrading technology.

This increased flow, along with refinements in the WLA Model, and decreasing flows in the receiving stream resulted in more stringent limits for the Permittee. The Renewal Application and L2ADR are

included in the FSSOB in Attachment 5. Since the Permittee will not be able to comply with all the effluent limits until Payson WTP has completed the upgrades, the previous permit limit will remain as interim limits until the construction is complete.

Page 3 of the WLA lists the spring acute limit of 4.0 mg/L and chronic limit of 4.5 mg/L. This translates to a Daily Max of 4.0 mg/L and a monthly average of 4.5 mg/L. This is a result of a limitation in the WLA model. Most of the time, when a daily max (Acute) limit is calculated, the result is higher than the average (Chronic) limit, but on occasions, the values for these end up swapped, and when this happens, the Acute limit "controls". As a result of this, for this permit, the spring daily max (Acute) and average (Chronic) limits will be the same.

Global events during the previous permit cycle resulted in delays in the completion of the facility upgrades required to come into compliance with the new permit effluent limits and TBPEL rule. To allow more time for Payson WTP to come into compliance with the new permit requirements the CS and variance were extended. The deadline will now be extended to December 31, 2026.

The requirements on the Variance and CS are extended until the December 31, 2026 deadline. Full compliance is expected on January 1, 2027. The requirements for the TBPEL, Ammonia, Disinfection System CS are below, completed items are noted as complete:

May 1, 2019	Submit to DWQ a City Council resolution supporting the pursuit of the facility upgrade for the selected biological phosphorus and ammonia removal technology. The resolution shall include the approximate budget for the facility upgrade. If the Permittee is not pursuing a biological phosphorus removal technology the TBPEL variance will terminate, final limits for ammonia and TRC will continue as per the effluent limits table below. (Completed)
July 1, 2019	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
December 1, 2019	Submit to DWQ a complete Capital Facilities Plan with the recommended biological phosphorus, ammonia removal technology and disinfection system. (Completed)
July 1, 2020	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
January 1, 2021	Submit to DWQ documentation of financial planning for the required facility upgrades. In addition, if rate increases are necessary the Permitee shall have passed the required rate increase resolution by no later than January 1, 2021. (Completed)
July 1, 2021	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
January 1, 2022	Submit to DWQ an approvable complete construction permit application for new facilities to meet permit effluent limit requirements. (Completed)

July 1, 2022	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
July 1, 2023	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. (Completed)
July 1, 2024	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance.
July 1, 2025	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance.
July 1, 2026	Submit to DWQ an annual report relating to its phosphorus discharges as detailed in the TBPEL Variance.
January 1, 2027	Complete facility construction commissioning and start-up.
January 1, 2027	Comply with all permit effluent limits and conditions.
February 1, 2027	Submit to DWQ the final annual report relating to its phosphorus discharges as detailed in the TBPEL Variance. This report will include a summary of the project.

When facility upgrades are complete, and the increased flow limit goes into effect, Permitee will be subject to new WET compliance. Following the DWQ WET Guidance Policy that was updated and approved in 2018, the facility will be considered a new discharger. The policy requires that a Major POTW with a design flow of less than 20 MGD sample quarterly and analyze both species for chronic WET. This requirement will not go into effect until the end of the facility upgrades and the CS.

DISCHARGE

DESCRIPTION OF DISCHARGE

Payson WTP discharges into an irrigation ditch which runs approximately one to two miles before entering Beer Creek. Beer Creek runs through Benjamin Slough and hence to Utah Lake. The Permittee has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the last 3 years of data is included in Attachment 2.

Outfall	Description of Discharge Point
001	Located at latitude 40°03'41" and longitude 111°43'49". The discharge is through a concrete pipe to an unnamed irrigation return drainage ditch to Beer Creek then Benjamin Slough to Utah Lake.

Outfall	Description of Reuse Water Discharge Point
001R	Located at latitude 40°03'41" and longitude 111°43'49". The Type II Reuse discharge is to a tank that collects water then sends it to the Payson Power Plant (Nebo Power Station) for use as makeup water in the cooling system.

RECEIVING WATERS AND STREAM CLASSIFICATION
The final discharge flows into an unnamed ditch hence to Beer Creek. The route that the effluent takes has been classified as 2B & 3C (Beer Creek) and 4 (unnamed ditch and Beer Creek) according to *UAC R317-2-13*.

Class 2B -- Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS

Beer Creek and tributaries from confluence with Spring Creek to headwaters (UT16020202-027_00) is listed as impaired for E. coli and observed/ expected (O/E) bioassessment according to the 303(d) list in the Utah's Final 2021 Integrated Report (UDWQ 2021). Benjamin Slough from confluence with Utah Lake to Beer Creek confluence is listed as impaired for total ammonia. Utah Lake other than Provo Bay (UT-L-16020201-004_01) is listed as impaired for E. coli, Harmful Algal Blooms (HABs), Eutrophication, PCBs in Fish Tissue, Phosphorus, and Total Dissolved Solids (TDS).

Reasonable Potential Analysis
Since January 1, 2016, DWQ has conducted RP on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 RP Guidance. There are four outcomes defined in the RP Guidance: Outcome A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required

A screening of heavy metals monitoring results reported in the Discharge Monitoring Reports (DMRs) was conducted. The screening process is a check to see if the highest value received on any monitored parameter is greater than half the Acute or Chronic WQBEL from the WLA. The screening resulted in a need for a full RP Analysis to be run on the monitoring data for mercury, selenium, free cyanide, and total cyanide.

A quantitative RP analysis was performed on cyanide, selenium and mercury to determine if there was reasonable potential for the discharge to exceed the applicable water quality standards. Based on the RP analysis, the limits for the renewal permit will remain in the permit until the facility upgrades are completed and the next permit renewal. A copy of the RP analysis is included at the end of this Fact Sheet.

BASIS FOR EFFLUENT LIMITATIONS
Attached is a Wasteload Analysis for this discharge into the unnamed irrigation return ditch to Beer Creek then Benjamin Slough to Utah Lake. It has been determined that this discharge will not cause a violation of water quality standards. An L2ADR review is required since the renewal is an expansion and modification of an existing treatment works. The L2ADR was provided as part of the renal application. The total suspended solids (TSS), biochemical oxygen demand (BOD5), *E. coli*, pH and percent removal for BOD5 and TSS are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. The oil and grease is based on best professional judgment (BPJ). The inclusion of effluent limits for cyanide, mercury and selenium are based on RP and the remaining effluent limits are based on the WLA. The inclusion of effluent limits for ammonia and TRC are based on the effluent makeup and treatment process in place, and the

effluent limits are based on the WLA. The inclusion of WET is based on the WET Policy.

The permit limitations are:

Parameter	Effluent Limitations [1]				
	Maximum Monthly Ave	Maximum Weekly Ave	Daily Minimum	Daily Maximum	Annual Average
Interim Effluent Limits [2]					
Total Flow	3.0	-	-	-	-
BOD_5, mg/L	25	35	-	-	-
BOD_5 Min. % Removal	85	-	-	-	-
TSS, mg/L	25	35	-	-	-
TSS Min. % Removal	85	-	-	-	-
Dissolved Oxygen, mg/L	-	-	4.0	-	-
Total Phosphorus, mg/L	-	-	-	-	4.6
Total Ammonia (as N), mg/L					
Summer (Jul-Sep)	-	-	-	14.1	-
Fall (Oct-Dec)	-	-	-	13.1	-
Winter (Jan-Mar)	-	-	-	12.5	-
Spring (Apr-Jun)	-	-	-	13.1	-
TRC, mg/L					
Summer (Jul-Sep)	-	-	-	1.1	-
Fall (Oct-Dec)	-	-	-	1.6	-
Winter (Jan-Mar)	-	-	-	2.4	-
Spring (Apr-Jun)	-	-	-	1.6	-
E. coli, No./100mL	126	157	-	-	-
WET, Chronic Biomonitoring				IC_{25}> X% Eff.	-
Summer (Jul-Sep)	-	-	-	X=54%	-
Fall (Oct-Dec)	-	-	-	X=32%	-
Winter (Jan-Mar)	-	-	-	X=26%	-
Spring (Apr-Jun)	-	-	-	X=32%	-
Oil & Grease, mg/L	-	-	-	10.0	-
pH, Standard Units	-	-	6.5	9.0	-
Cyanide (Total)	0.0067	-	-	-	-
Selenium	0.0069	-	-	0.0241	-
Mercury	0.000015	-	-	-	-
Final Effluent Limits [3]					
Total Flow	5.0	-	-	-	-
BOD_5, mg/L	25	35	-	-	-
BOD_5 Min. % Removal	85	-	-	-	-
TSS, mg/L	25	35	-	-	-
TSS Min. % Removal	85	-	-	-	-
Dissolved Oxygen, mg/L	-	-	4.0	-	-
Total Phosphorus, mg/L	-	-	-	-	1

Parameter	Effluent Limitations [1]				
	Maximum Monthly Ave	Maximum Weekly Ave	Daily Minimum	Daily Maximum	Annual Average
Total Ammonia (as N), mg/L					
Summer (Jul-Sep)	3.0	-	-	4.5	-
Fall (Oct-Dec)	6.0	-	-	7.0	-
Winter (Jan-Mar)	6.0	-	-	8.5	-
Spring (Apr-Jun)	4.0	-	-	4.0	-
TRC, mg/L					
Summer (Jul-Sep)	0.5	-	-	0.7	-
Fall (Oct-Dec)	0.3	-	-	0.3	-
Winter (Jan-Mar)	0.2	-	-	0.3	-
Spring (Apr-Jun)	0.3	-	-	0.4	-
E. coli, No./100mL	126	157	-	-	-
WET, Chronic Biomonitoring				IC_{25}> X% Eff.	
Summer (Jul-Sep)	-	-	-	X=43%	-
Fall (Oct-Dec)	-	-	-	X=54%	-
Winter (Jan-Mar)	-	-	-	X=39%	-
Spring (Apr-Jun)	-	-	-	X=56%	-
Oil & Grease, mg/L	-	-	-	10.0	-
pH, Standard Units	-	-	6.5	9.0	-
Cyanide (Total)	0.0057	-	-	-	-
Selenium	0.0055	-	-	0.0121	-
Mercury	0.000013	-	-	-	-
1. See Definitions, Part VIII, for definition of terms.					
2. Interim limits are in effect until December 31, 2026					
3. Final limits go into effect on January 1, 2027.					

The permit limitations for Outfall 001R (Type II Reuse) are:

Parameter	Outfall 001R Effluent Limitations [4]				
	Max Monthly Average	Max Weekly Median	Max Daily Average	Minimum	Maximum
BOD_5, mg/L	25	-	-	-	-
TSS, mg/L	25	35	-	-	-
E. coli, No/100mL	-	126	-	-	500
pH, Standard Units	-	-	-	6.0	9.0
4. See Definitions, Part VIII, for definition of terms.					

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are similar to the previous permit. The changes were noted earlier in the FSSOB under the Changes from The Previous Permit section. The permit will require DMRs to be submitted monthly, quarterly, and annually, as applicable, due 28 days after the end of the monitoring period. Monitoring results must be submitted using NetDMR unless the Permittee has successfully petitioned for an exception. Lab sheets for biomonitoring must be attached to the biomonitoring DMR. Lab sheets for metals and toxic organics must be attached to the DMRs.

Self-Monitoring and Reporting Requirements [5]			
Parameter	Frequency	Sample Type	Units
Interim Self-Monitoring Requirements [6]			
Total Flow [7], [8]	Continuous	Recorder	MGD
BOD_5, Influent [9] Effluent	2 x Weekly 2 x Weekly	Composite Composite	mg/L mg/L
TSS, Influent [9] Effluent	2 x Weekly 2 x Weekly	Composite Composite	mg/L mg/L
E. coli	2 x Weekly	Grab	No./100mL
pH	2 x Weekly	Grab	SU
Total Ammonia (as N)	2 x Weekly	Composite	mg/L
DO	2 x Weekly	Grab	mg/L
Cyanide (total)	2 x Monthly	Composite	mg/L
Cyanide (free) [10]	Monthly	Composite	mg/L
Selenium	Monthly	Composite	mg/L
Mercury	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
WET – Biomonitoring [11] Ceriodaphnia - Chronic Fathead Minnows - Chronic	 1st & 3rd Quarter 2nd & 4th Quarter	 Composite Composite	 Pass/Fail Pass/Fail
TRC, mg/L	Daily	Grab	mg/L
Oil & Grease [12]	When Sheen Observed	Grab	mg/L
Orthophosphate, (as P) [13] Effluent	 Monthly	Composite	mg/L
Phosphorus, Total [13] Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Total Kjeldahl Nitrogen, TKN (as N), [13] Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Nitrate, NO3, [13]	Monthly	Composite	mg/L
Nitrite, NO2, [13]	Monthly	Composite	mg/L
Metals [14], Influent Effluent	Quarterly Quarterly	Composite/Grab Composite/Grab	mg/L mg/L
Organic Toxics [15]	Yearly	Grab	mg/L
Final Self-Monitoring Requirements [16]			
Total Flow [7], [8]	Continuous	Recorder	MGD
BOD_5, Influent [9] Effluent	2 x Weekly 2 x Weekly	Composite Composite	mg/L mg/L
TSS, Influent [9] Effluent	2 x Weekly 2 x Weekly	Composite Composite	mg/L mg/L
E. coli	2 x Weekly	Grab	No./100mL

Self-Monitoring and Reporting Requirements [5]			
Parameter	Frequency	Sample Type	Units
pH	2 x Weekly	Grab	SU
Total Ammonia (as N)	2 x Weekly	Composite	mg/L
DO	2 x Weekly	Grab	mg/L
Cyanide (total)	2 x Monthly	Composite	mg/L
Cyanide (free) [10]	Monthly	Composite	mg/L
Selenium	Monthly	Composite	mg/L
Mercury	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
WET – Biomonitoring [17] Ceriodaphnia - Chronic Fathead Minnows - Chronic	 Quarterly Quarterly	 Composite Composite	 Pass/Fail Pass/Fail
Oil & Grease [12]	When Sheen Observed	Grab	mg/L
Orthophosphate, (as P) [13] Effluent	 Monthly	Composite	mg/L
Phosphorus, Total [13] Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Total Kjeldahl Nitrogen, [13] TKN (as N), Influent Effluent	 Monthly Monthly	 Composite Composite	 mg/L mg/L
Nitrate, NO3, [13]	Monthly	Composite	mg/L
Nitrite, NO2, [13]	Monthly	Composite	mg/L
Metals [14], Influent Effluent	Quarterly Quarterly	Composite/Grab Composite/Grab	mg/L mg/L
Organic Toxics [15]	Yearly	Grab	mg/L

5. See Definitions, Part VIII, for definition of terms
6. Interim Self-Monitoring Requirements are in effect until December 31, 2026
7. Flow measurements of influent/effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained.
8. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
9. In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge.
10. Free Cyanide may be sampled for prior to chlorination of the effluent.
11. The chronic Ceriodaphnia will be tested during the 2nd and 4th quarters, and the chronic fathead minnows will be tested during the 1st and 3rd quarters.
12. Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report a no data indicator (NODI) code of 9 (Conditional Monitoring -Not Required This Period)
13. These reflect changes required with the adoption of UCA R317-1-3.3, Technology-based Phosphorus Effluent Limits rule.
14. Testing for metals listed in the table found in Part II, H, 1 of the Permit.
15. A list of the organics to be tested can be found in 40CFR122 appendix D table II.
16. Final Self-Monitoring Requirements go into effect on January 1, 2027

Self-Monitoring and Reporting Requirements [5]			
Parameter	Frequency	Sample Type	Units
17. Both the Ceriodaphnia and fathead minnows will be tested Quarterly for chronic WET.			

The following is a summary of the Type II reuse self-monitoring and reporting requirements.

Reuse Outfall 001R Self-Monitoring and Reporting Requirements [18], [19]			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
BOD_5	Weekly	Composite	mg/L
TSS	Weekly	Composite	mg/L
E. coli	Daily	Grab	No./100mL
pH	Daily	Grab	SU
18. See Definitions, Part VIII, for definition of terms.			
19. Reuse monitoring results obtained during the previous month for reuse discharges shall be summarized for each month and reported on a Monthly Operational Report, post-marked no later than the 28th day of the month following the completed reporting period.			

BIOSOLIDS

For clarification purposes, sewage sludge is considered solids, until treatment or testing shows that the solids are safe, and meet beneficial use standards. After the solids are tested or treated, the solids are then known as biosolids. Class A biosolids, may be used for high public contact sites, such as home lawns and gardens, parks, or playing fields, etc. Class B biosolids may be used for low public contact sites, such as farms, rangeland, or reclamation sites, etc.

DESCRIPTION OF TREATMENT AND DISPOSAL

The Permittee submitted their 2022 annual biosolids report on February 7, 2023. The report states the Permittee produced 257 dry metric tons (DMT) of solids. Payson WTP's average annual biosolids production rate over the past 10 years has been 312 DMT of solids.

The biosolids (sewage sludge) are stabilized in anaerobic digesters with a hydraulic retention time of 40 days at an average temperature of 95º F (35º C). Once a week the biosolids are drawn off the bottom of the primary digester and sent to the secondary digester that serves as a holding tank. The biosolids from the secondary digester are wasted to a screw press, and then hauled to the drying beds for holding until they are then hauled to Payson City Landfill.

Payson WTP has nine (9) drying beds. The first five drying beds have an area of 5000 ft^2 each. The remaining four drying beds have a combined area of 16,150 ft^2. The biosolids are removed from the drying beds and sent to land fill.

The last inspection conducted at the land application site was September 1, 2022. The inspection showed that Payson WTP was in compliance with all aspects of the biosolids management program.

SELF-MONITORING REQUIREMENTS

Under *40 CFR 503.16(a)(1),* the self-monitoring requirements are based upon the amount of biosolids

disposed per year and shall be monitored according to the chart below.

Minimum Frequency of Monitoring (40 CFR Part 503.16, 503.26. and 503.46)		
Amount of Biosolids Disposed Per Year		Monitoring Frequency
Dry US Tons	Dry Metric Tons	Per Year or Batch
> 0 to < 320	> 0 to < 290	Once Per Year or Batch
> 320 to < 1650	> 290 to < 1,500	Once a Quarter or Four Times
> 1,650 to < 16,500	> 1,500 to < 15,000	Bi-Monthly or Six Times
> 16,500	> 15,000	Monthly or Twelve Times

Over the past 10 years Payson WTP has produced on average 312 DMT of biosolids annually, therefore the Permittee needs to sample at least four times a year.

Landfill Monitoring
Under *40 CFR 258,* the landfill monitoring requirements include a paint filter test. If the biosolids do not pass a paint filter test, the biosolids cannot be disposed in the sanitary landfill *(40 CFR 258.28(c)(1).*

BIOSOLIDS LIMITATIONS

Heavy Metals

Class A Biosolids for Home Lawn and Garden Use
The intent of the heavy metals regulations of Table 3, *40 CFR 503.13* is to ensure the heavy metals do not build up in the soil in home lawn and gardens to the point where the heavy metals become phytotoxic to plants. The Permittee will be required to produce an information sheet (see *Part III. C*. of the permit) to made available to all people who are receiving and land applying Class A biosolids to their lawns and gardens. If the instructions of the information sheet are followed to any reasonable degree, the Class A biosolids will be able to be land applied year after year, to the same lawns and garden plots without any deleterious effects to the environment. The information sheet must be provided to the public, because the Permittee is not required, nor able to track the quantity of Class A biosolids that are land applied to home lawns and gardens.

Class A Requirements With Regards to Heavy Metals
If the biosolids are to be applied to a lawn or home garden, the biosolids shall not exceed the maximum heavy metals in Table 3 below. If the biosolids do not meet these requirements, the biosolids cannot be sold or given away for applications to home lawns and gardens.

Class B Requirements for Agriculture and Reclamation Sites
The intent of the heavy metals regulations of Tables 1, 2 and 3, of *40 CFR 503.13* is to ensure that heavy metals do not build up in the soil at farms, forest land, and land reclamation sites to the point where the heavy metals become phytotoxic to plants. The Permittee will be required to produce an information sheet (see *Part III. C*. of the permit) to be handed out to all people who are receiving and land applying Class B biosolids to farms, ranches, and land reclamation sites (if biosolids are only applied to land owned by the Permittee, the information sheet requirements are waived). If the biosolids are land applied according to the regulations of *40 CFR 503.13*, to any reasonable degree, the Class B biosolids will be able to be land applied year after year, to the same farms, ranches, and land reclamation sites without any deleterious effects to the environment.

Class B Requirements With Regards to Heavy Metals
If the biosolids are to be land applied to agricultural land, forest land, a public contact site or a reclamation

site it must meet at all times:

The maximum heavy metals listed in *40 CFR Part 503.13(b) Table 1* and the heavy metals loading rates in *40 CFR Part 503.13(b) Table 2*, or

The maximum heavy metals in *40 CFR Part 503.13(b) Table 1* and the monthly heavy metals concentrations in *40 CFR Part 503.13(b) Table 3*.

Tables 1, 2, and 3 of Heavy Metal Limitations

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits [28], (mg/kg)	CPLR [29], (mg/ha)	Pollutant Conc. Limits [30] (mg/kg)	APLR [31], (mg/ha-yr)
Total Arsenic	75	41	41	2.0
Total Cadmium	85	39	39	1.9
Total Copper	4300	1500	1500	75
Total Lead	840	300	300	15
Total Mercury	57	17	17	0.85
Total Molybdenum	75	N/A	N/A	N/A
Total Nickel	420	420	420	21
Total Selenium	100	100	100	5.0
Total Zinc	7500	2800	2800	140
1. If the concentration of any 1 (one) of these parameters exceeds the Table 1 limit, the biosolids cannot be land applied or beneficially used in any way.				
2. CPLR - Cumulative Pollutant Loading Rate - The maximum loading for any 1 (one) of the parameters listed that may be applied to land when biosolids are land applied or beneficially used on agricultural, forestry, or a reclamation site.				
3. If the concentration of any 1 (one) of these parameters exceeds the Table 3 limit, the biosolids cannot be land applied or beneficially used in on a lawn, home garden, or other high potential public contact site. If any 1 (one) of these parameters exceeds the Table 3 limit, the biosolids may be land applied or beneficially reused on an agricultural, forestry, reclamation site, or other high potential public contact site, as long as it meets the requirements of Table 1, Table 2, and Table 4.				
4. APLR - Annual Pollutant Loading Rate - The maximum annual loading for any 1 (one) of the parameters listed that may be applied to land when biosolids are land applied or beneficially reused on agricultural, forestry, or a reclamation site, when they do not meet Table 3, but do meet Table 1.				

Any violation of these limitations shall be reported in accordance with the requirements of Part III.F.1. of the permit. If the biosolids do not meet these requirements they cannot be land applied.

Pathogens

The Pathogen Control class listed in the table below must be met,

Pathogen Control Class	
503.32 (a)(1) - (5), (7), (8), Class A	503.32 (b)(1) - (5), Class B
B Salmonella species –less than three (3) MPN[32] per four (4) grams total solids (DWB)[33] or Fecal Coliforms – less than 1,000 MPN per gram total solids (DWB).	Fecal Coliforms – less than 2,000,000 MPN or CFU[34] per gram total solids (DWB).
503.32 (a)(6) Class A—Alternative 4	
B Salmonella species –less than three (3) MPN per four (4) grams total solids (DWB) or less than 1,000 MPN Fecal Coliforms per gram total solids (DWB), And - Enteric viruses –less than one (1) plaque forming unit per four (4) grams total solids (DWB) And - Viable helminth ova –less than one (1) per four (4) grams total solids (DWB)	
5. MPN – Most Probable Number.	
6. DWB – Dry Weight Basis.	
7. CFU – Colony Forming Units.	

Class A Requirements for Home Lawn and Garden Use

If biosolids are land applied to home lawns and gardens, the biosolids need to be treated by a specific process to further reduce pathogens (PFRP), and meet a microbiological limit of less than less than 3 most probable number (MPN) of *Salmonella* per 4 grams of total solids (or less than 1,000 most probable number (MPN/g) of fecal coliform per gram of total solids) to be considered Class A biosolids.

At this time the Permittee does not intend to distribute biosolids to the public for use on the lawn and garden and thus is not currently required to meet Class A Biosolids requirements.

The practice of sale or giveaway to the public is an acceptable use of biosolids of this quality as long as the biosolids continue to meet Class A standards with respect to pathogens. If the biosolids do not meet Class A pathogen standards the biosolids cannot be sold or given away to the public, and the Permittee will need find another method of beneficial use or disposal.

Pathogens Class B

If biosolids are to be land applied for agriculture or land reclamation the solids need to be treated by a specific process to significantly reduce pathogens (PSRP

At this time the Permittee does not intend to distribute bulk biosolids for land application and thus is currently not required meet Class B Biosolids requirements.

Vector Attraction Reduction (VAR)

If the biosolids are land applied Payson WTP will be required to meet VAR through the use of a method of listed under *40 CFR 503.33.* At this time Payson WTP does not intend to distribute biosolids to the public for beneficial use, and will be disposing of them in a landfill. Under *40 CFR 503.33(b)(11)*

If the biosolids do not meet a method of VAR, the biosolids cannot be land applied.

If the Permittee intends to use another one of the listed alternatives in *40 CFR 503.33*, the Director and the

EPA must be informed at least thirty (30) days prior to its use. This change may be made without additional public notice

Landfill Monitoring
Under *40 CFR 258,* the landfill monitoring requirements include a paint filter test to determine if the biosolids exhibit free liquid. If the biosolids do not pass a paint filter test, the biosolids cannot be disposed in the sanitary landfill (*40 CFR 258.28(c)(1)*).

Record Keeping
The record keeping requirements from *40 CFR 503.17* are included under *Part III.G*. of the permit. The amount of time the records must be maintained are dependent on the quality of the biosolids in regards to the metals concentrations. If the biosolids continue to meet the metals limits of *Table 3* of *40 CFR 503.13*, and are sold or given away the records must be retained for a minimum of five years. If the biosolids are disposed in a landfill the records must retained for a minimum of five years.

Reporting
The Permittee must report annually as required in *40 CFR 503.18*. This report is to include the results of all monitoring performed in accordance with *Part III.B* of the permit, information on management practices, biosolids treatment, and certifications. This report is due no later than February 19 of each year. Each report is for the previous calendar year.

MONITORING DATA

Monitoring Data
Payson WTP disposed of all biosolids at the Payson City Landfill. Therefore, Payson WTP was not required to sample metals or pathogens.

STORM WATER

Separate storm water permits may be required based on the types of activities occurring on site.

Permit coverage under the Multi Sector General Permit (MSGP) for Storm Water Discharges from Industrial Activities is required based on the Standard Industrial Classification (SIC) code for the facility and the types of industrial activities occurring. If the facility is not already covered, it has 30 days from when this permit is issued to submit the appropriate Notice of Intent for the MSGP or exclusion documentation. Previously storm water discharge requirements and coverage were combined in this individual permit. These have been separated to provide consistency among Permittees, electronic reporting for storm water discharge monitoring reports, and increase flexibility to changing site conditions.

Information on storm water permit requirements can be found at http://stormwater.utah.gov

PRETREATMENT REQUIREMENTS

Payson WTP will continue to administer an Approved POTW Pretreatment Program (Program). Any changes to the Program must be submitted for approval to the Division of Water Quality (DWQ) before implementing the change, 40 CFR 403.18. Authority to require a Program is provided for in 19-5-108 UCA, 1953 ann. and UAC R317-8-8.

The Pretreatment Requirements in Part II of the UPDES Permit were modified to add additional language

to clarify requirements. The changes are consistent with *40 CFR 122*, *UAC R317 and 40 CFR 403*.

Metals must be sampled quarterly, and organic toxics yearly, see Part II of the UPDES Permit. The permit requires influent and effluent monitoring for metals and organic toxics. As stated in the permit, the most sensitive method should be used for analyzing pollutants of concern as determined by the local limit development. The monitoring frequency is consistent with the UPDES Pretreatment Guidance for Sampling of POTWs, which is based on the design flow of the wastewater treatment plant. Payson WTP must submit the analysis for the TTO, via email, to the Pretreatment Coordinator for DWQ.

Additional requirements have been added to the permit regarding local limits. This includes notifying the Pretreatment Coordinator for DWQ of issues related to pollutants of concern. This is to ensure that local limits are protecting the POTW or that further investigation is occurring by the Permittee.

The Permittee has developed technically based local limit. The permit requires an annual evaluation of the local limit to determine the need to revise or develop technically based local limits to implement the general and specific prohibitions of 40 CFR, Part 403.5(a) and Part 403.5(b). This evaluation may indicate that present local limits are sufficiently protective or must be revised. The initial evaluation is due twelve months after the effective date of the permit. The Permittee should utilize the EPA Local Limits Development Guidance to justify re-evaluating the local limits. Information is provided in Chapter 7 of the EPA Local Limits Development Guidance 2004 to assist with revising the local limits. Also, DWQ has a template for submitting the evaluation of the local limits.

BIOMONITORING REQUIREMENTS

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

The Permittee is a major municipal facility with a pretreatment program with a dilution ratio that is less than 20:1, and a flow less than 20 MGD therefore according to new WET Guidance Payson WTP is required to conduct Quarterly chronic WET testing. The permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

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

Drafted and Reviewed by
Daniel Griffin, Discharge Permit Writer
Daniel Griffin, Biosolids, Reasonable Potential Analysis
Jennifer Robinson, Pretreatment
Lonnie Shull, Biomonitoring
Scott Daly, TMDL/Watershed
Suzan Tahir, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

FIRST PUBLIC NOTICE

Began: November 9, 2023
Ended: December 11, 2023

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

The Public Notice of the draft permit was published on the Division of Water Quality Public Notice Webpage.

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

ADDENDUM TO FSSOB

Responsiveness Summary

The Permittee submitted the only comments that were received on the draft documents. The comment letter and communication regarding the comments are in the file for the Permittee Payson WTP (DWQ-2023-200207 and DWQ-2023-200039).

Comment one is,

"FSSOB page 6 and Permit page 6: The tables on these pages list 4.0 mg/L for the effluent limitation for total ammonia, spring. The value should be 4.5 mg/L per page 43 of the Wasteload Study."

DWQ Response:

The final ammonia limits in the Permit are correct. Page 3 of the WLA lists the spring acute limit of 4.0 mg/L and chronic limit of 4.5 mg/L. This translates to a Daily Max of 4.0 mg/L and a monthly average of 4.5 mg/L. This is a result of a limitation in the WLA model. Most of the time, the daily max (Acute) limit is higher than the average (Chronic) limit, but on occasion, these values swap, and when this happens, the Acute limit controls. An explanation of this is included in the "Summary Of Changes From

Previous Permit" section of the FSSOB. No changes will be made to the permit limits as a result of this comment.

Comment two is,

"FSSOB page 6 and Permit page 6: A free cyanide limit of 0.006 mg/L is proposed. Our previous testing for free cyanide was done through Chemtech-Ford. In reviewing our testing reports from them during early 2023, we noticed that the minimum reporting limit was 0.016 mg/L. Since this is higher than the proposed limit, we contacted Chemtech-Ford about the possibility of achieving a lower MRL. They performed a study and determined that they should be able to achieve an MRL of 0.005 mg/L (see attached emails). We make the following observations: (1) the new MRL is not fully certain and may need to be adjusted after actual sample analysis begins, and (2) the lower possible MRL is barely below the proposed limit. The accuracy of the test is 0.001 mg/L, so any slight level of free cyanide may push us above nondetect and cause a violation. We propose a compliance schedule of 2 years in order for us to be able to fine tune the sampling and testing protocol and procedure, and to be able to adjust the procedures as necessary without violation of the permit"

DWQ Response:

In Utah, the Water Quality Standard for cyanide is based on free cyanide concentration. UPDES Permit No. UT0020427, as it was public noticed, required the Permittee to monitor both free and total cyanide, and included effluent limits for free cyanide.

Free cyanide is a subset of total cyanide, and the current methods for measuring free cyanide has a method reporting limit (MRL) and method detection limit (MDL) that is higher than the MRL and MDL for total cyanide. When a non-detect (ND) result is reported for a constituent in a sample, it doesn't mean that there is none of that constituent in the sample, it is an indication that the concentration of that constituent is below the MRL/MDL for that method. That constituent could be present below those concentration levels. For cyanide, a facility could get a ND reported for free cyanide with an MRL/MDL that is higher than the reported concentration for total cyanide.

The Payson WTP permit will be modified to address this by changing the cyanide limit from free cyanide to total cyanide, but not changing the limit. The total cyanide limit is more restrictive than a limit based on free cyanide. This modification does not violate the Anti-backsliding ([CWA 303(d)(4), CWA 402(c), CFR 122.44(l)]) regulations because the total cyanide limit is more restrictive.

The frequency of the total cyanide monitoring will remain at twice per month, but the frequency of free cyanide monitoring will be reduced to monthly. This will allow for a better understanding of the level and makeup of the cyanide concentrations in the effluent for the next renewal before and after the facility upgrades are implemented.

These changes are considered a major modification, and thus require the permit to be public noticed again.

SECOND PUBLIC NOTICE

Began: February 12, 2024
Ended: March 13, 2024

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

The Public Notice of the draft permit was published on the Division of Water Quality Public Notice Webpage.

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

No comments were received during the second public notice period.

DWQ-2023-121164

ATTACHMENT 1

Effluent Monitoring Data

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Effluent Monitoring Data.

	Flow	BOD		TSS		TRC	DO	Ammonia	O & G	pH		E. coli	
	Chronic	Max 7 Day Average	30 Day Average	Max 7 Day Average	30 Day Average	Max	Min	Max	Max	Min	Max	Acute	Chronic
	MGD	mg/L		mg/L		mg/L		mg/L	mg/L	SU		#/100mL	
		35	25	35	25	1.1	4	12.5	10	6.5	9	158	126
Jul-20	1.63	6	5.3	6	4.32	0.57	5.7	1.8	0	6.89	8.66	0	1.08
Aug-20	1.68	5.5	5.1	4	4.13	0.23	5.3	0.9	0	6.91	7.37	0	1
Sep-20	1.7	10	6.1	10.7	4.67	0.26	5.3	2.2	0	6.86	7.57	0	1.47
Oct-20	1.71	5	5	4	4	0.35	5.3	1.48	0	6.58	7.59	0	1
Nov-20	1.71	7.5	6.1	4.07	4.3	0.39	5.8	27.8	0	7.16	7.67	0	1.02
Dec-20	1.85	7	6.2	6	4.13	0.42	5.2	9.1	0	7	7.41	0	1.02
Jan-21	1.79	31.5	14.1	4	4	1.2	4.7	12.4	0	7.18	7.45	0	1.06
Feb-21	1.77	10	6.9	4	4	0.44	5	13.2	0	6.94	7.31	1.99	0
Mar-21	1.76	11	8.8	4	4	0.22	5.1	16.4	0	6.95	7.39	0	2.54
Apr-21	1.69	12.5	9.78	4	4.03	0.33	5.4	4.67	0	6.69	7.44	0	1.08
May-21	1.68	11.5	8.6	4	4	0.29	5.4	14.4	0	6.77	7.48	0	1.07
Jun-21	1.66	7	5.2	4	4	0.27	5.2	6.5	0	6.77	7.41	0	1.5
Jul-21	1.67	6	5.4	4.7	4.45	0.56	5.6	3.6	0	7.06	7.35	0	1.58
Aug-21	2.3	6	5.3	4.3	4.13	0.3	5.3	12.6	0	6.86	7.59	0	1.02
Sep-21	1.69	5.5	5.3	4	4	0.3	5.4	12.1	0	7.04	7.65	0	1
Oct-21	1.61	22	16.9	5	4.24	0.33	4.5	15.2	0	7.04	7.65	0	1.22
Nov-21	1.73	9.5	6.2	4.3	4.03	0.51	4.6	20.9	0	7.34	7.83	0	1
Dec-21	1.81	9.5	6.4	6	4.45	0.5	5.4	18.3	0	7.28	8.05	0	1
Jan-22	1.89	18	10.3	11.3	6.5	0.7	5.7	19.7	0	7.1	8.12	0	1.45
Feb-22	1.71	11	6.4	10.7	5.8	0.87	5.5	25.2	0	7.04	7.99	0	1.39
Mar-22	1.74	13	6.4	4.2	6	0.36	5.8	10.1	0	7.02	7.81	0	1
Apr-22	1.68	43	13.63	6	5.63	0.25	5.4	32.7	0	7.07	7.8	0	2.08
May-22	1.79	14	9.4	5	4.35	0.34	4.4	17.2	0	7.24	7.84	0	1.77
Jun-22	1.66	11.7	17	4.16	4	0.36	5.2	11.6	0	6.98	7.61	0	1
Jul-22	1.56	7	6.9	4.7	4.15	0.99	6	20.9	0	7.18	7.82	0	1.04
Aug-22	1.59	25	12.7	4	4.26	0.36	4.5	20	0	6.81	7.39	0	1

	Flow	BOD		TSS		TRC	DO	Ammonia	O & G	pH		E. coli	
	Chronic	Max 7 Day Average	30 Day Average	Max 7 Day Average	30 Day Average	Max	Min	Max	Max	Min	Max	Acute	Chronic
	MGD	mg/L		mg/L		mg/L		mg/L	mg/L	SU		#/100mL	
		35	25	35	25	1.1	4	12.5	10	6.5	9	158	126
Sep-22	1.74	17	9.9	4.13	4	0.32	5.2	11.1	0	7.06	7.59	0	1.52
Oct-22	1.64	27	13.9	5.3	5.35	0.48	5.2	16.1	0	6.98	7.55	0	1.45
Nov-22	1.71	19	15.1	12	7.07	0.37	4.5	24.1	0	7.12	7.56	0	2.88
Dec-22	1.71	21	13.4	7.03	11	1.1	5.2	23.7	0	7.22	7.75	0	1.58
Jan-23	1.87	19	13.4	13	7.1	1.45	4.4	18.9	0	6.97	7.93	0	1.1
Feb-23	1.96	18	11.9	6.7	5.3	0.95	5.1	17.5	0	7.11	7.95	0	1.08
Mar-23	2.05	17	10.2	9	7.2	1.16	5.1	16.1	0	7.25	8.1	0	2.51
Apr-23	1.99	17	14.75	22	10.5	0.79	5.7	8.1	0	7.06	8.02	0	4.55
May-23	1.85	30	14.1	14.7	9.71	1.06	5.2	6.2	0	7.17	7.75	0	4.13
Jun-23	1.8	21	8.8	10	6.87	0.66	6	1.1	0	7.05	7.72	0	5

Effluent Metals Quarterly Reporting, mg/L												
Param	Hg	Hg	Se	Ag	As	Cd	Cr	Cu	Mo	Ni	Pb	Zn
Quarter	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
3rd Quarter, 2018	0.007	0.0000006	0.002	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.02
4th Quarter. 2018	0.003	0.0000017	0.0018	0.0005	0.05	0.0002	0.005	0.007	0.01	0.005	0.0005	0.01
1st Quarter, 2019												
2nd Quarter, 2019	0.003	0.0000037	0.003	0.0005	0.05	0.0002	0.005	0.008	0.01	0.005	0.0005	0.03
3rd Quarter, 2019	0.003	0.0002	0.0016	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.03
4th Quarter. 2019	0.002	0.0002	0.0021	0.0005	0.05	0.0002	0.005	0.009	0.01	0.0021	0.0005	0.03
1st Quarter, 2020	0.002	0.0002	0.0026	0.0005	0.05	0.0002	0.005	0.009	0.01	0.005	0.0005	0.04
2nd Quarter, 2020	0.002	0.0002	0.0021	0.0005	0.05	0.0002	0.005	0.008	0.01	0.005	0.0005	0.05
3rd Quarter, 2020	0.005	0.0002	0.0012	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.03
4th Quarter. 2020	0.015	0.0002	0.0006	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.04
1st Quarter, 2021												
2nd Quarter, 2021	0.004	0.0002	0.0013	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.04
3rd Quarter, 2021	0.004	0.0002	0.0014	0.0005	0.05	0.0002	0.005	0.007	0.01	0.005	0.0005	0.04
4th Quarter. 2021	0.005	0.0002	0.0012	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.03
1st Quarter, 2022	0.006	0.0002	0.0012	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.02
2nd Quarter, 2022	0.015	0.0002	0.001	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.03
3rd Quarter, 2022	0.017	0.00015	0.0008	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.04
4th Quarter. 2022	0.005	0.00015	0.0014	0.0005	0.005	0.0002	0.005	0.008	0.01	0.005	0.0005	0.03
1st Quarter, 2023	0.008	0.00015	0.0015	0.0005	0.05	0.0002	0.005	0.005	0.01	0.005	0.0005	0.03
2nd Quarter, 2023	0.002	0.00015	0.0018	0.0005	0.05	0.0002	0.005	0.005	0.01	0.008	0.0005	0.04

Effluent Metals Monthly Reporting, mg/L				
Param	Total Cn	Hg	Se	Se
	Average	Average	Average	Max
Limit	0.0067	0.000015	0.0069	0.0241
Month				
Feb-19	0.0045	0.0000006	0.0021	0.0021
Mar-19	0.003	0.0000035	0.0023	0.0023
Apr-19	0.008	0.00000008	0.0003	0.003
May-19	0.002	0.0000019	0.0023	0.0023
Jun-19	0.003	0	0.0017	0.0017
Jul-19	0.002	0.0000012	0.0015	0.0015
Aug-19	0.005	0.0000027	0.0021	0.0021
Sep-19	0.002	0.000002	0.0022	0.0022
Oct-19	0.002	0.0000033	0.0022	0.0022
Nov-19	0.007	0.0000047	0.0012	0.0012
Dec-19	0.006	0.0000116	0.0012	0.0012
Jan-20	0.002	0.0000081	0.0019	0.0019
Feb-20	0.002	0.000003	0.0008	0.0008
Mar-20	0.004	0	0.001	0.001
Apr-20	0.004	0.0000134	0.001	0.001
May-20	0.006	0.0000035	0.005	0.005
Jun-20	0.002	0.0000005	0.0009	0.0009
Jul-20	0.002	0.0000005	0.0023	0.0023
Aug-20	0.009	0.000007	0.0018	0.0018
Sep-20	0.004	0.000025	0.0015	0.0015
Oct-20	0.007	0.0000008	0.0011	0.0011
Nov-20	0.0004	0.0000021	0.001	0.001
Dec-20	0.006	0.0000022	0.0008	0.0008
Jan-21	0.0135	0.000031	0.0006	0.0006
Feb-21	0.003	0	0	0
Mar-21	0.013	0.0000015	0.0013	0.0013
Apr-21	0.0105	0.0000029	0.0016	0.0016
May-21	0.012	0.0000019	0.0012	0.0012
Jun-21	0.003	0.0000012	0.0013	0.0013
Jul-21	0.003	0.0000027	0.0014	0.0014
Aug-21	0.006	0.0000029	0.0016	0.0016
Sep-21	0.006	0.000002	0.0012	0.0012
Oct-21	0.002	0.0000019	0.0012	0.0012
Nov-21	0.0078	0.0000015	0.0015	0.0015
Dec-21	0.011	0.0000039	0.0012	0.0012
Jan-22	0.007	0.000031	0.0009	0.0009

Effluent Metals Monthly Reporting, mg/L				
Param	Total Cn	Hg	Se	Se
	Average	Average	Average	Max
Limit	0.0067	0.000015	0.0069	0.0241
Feb-22	0.008	0.000002	0.0013	0.0013
Mar-22	0.011	0.0000034	0.0006	0.0006
Apr-22	0.002	0.0000013	0.0013	0.0013
May-22	0.012	0.0000028	0.0006	0.0006
Jun-22	0.007	0.0000017	0.0014	0.014
Jul-22	0.0133	0.0000036	0.0008	0.0008
Aug-22	0.0096	0.0000016	0.0009	0.0009
Sep-22	0.005	0.0000021	0.0011	0.0011
Oct-22	0.0071	0.0000025	0.0011	0.011
Nov-22	0.0078	0.0000081	0.0014	0.0014
Dec-22	0.0058	0.0000027	0.0013	0.0013
Jan-23	0.0092	0.000031	0.0013	0.0013
Feb-23	0.0084	0.000003	0.0017	0.0017
Mar-23	0.0061	0.0000049	0.0017	0.0017
Apr-23	0.0053	0.0000054	0.001	0.001
May-23	0.0079	0.000003	0.0021	0.0021
Jun-23	0.0062	0.0000038	0.0016	0.0016

WET Results

Quarter	WET Test	Pass / Fail
3rd Quarter, 2018	48Hr Acute Ceriodaphnia	Pass
	96Hr Acute Pimephales Promelas	NA
4th Quarter. 2018	48Hr Acute Ceriodaphnia	NA
	96Hr Acute Pimephales Promelas	Pass
1st Quarter, 2019		
2nd Quarter, 2019	7 Day Chronic Pimephales Promelas	
3rd Quarter, 2019	7 Day Chronic Ceriodaphnia	Pass
4th Quarter. 2019	7 Day Chronic Pimephales Promelas	Pass
1st Quarter, 2020	7 Day Chronic Ceriodaphnia	Pass
2nd Quarter, 2020	7 Day Chronic Pimephales Promelas	Pass
3rd Quarter, 2020	7 Day Chronic Ceriodaphnia	Pass
4th Quarter. 2020	7 Day Chronic Pimephales Promelas	Pass
1st Quarter, 2021	7 Day Chronic Ceriodaphnia	Pass
2nd Quarter, 2021	7 Day Chronic Pimephales Promelas	Pass
3rd Quarter, 2021	7 Day Chronic Ceriodaphnia	Pass
4th Quarter. 2021	7 Day Chronic Pimephales Promelas	Pass
1st Quarter, 2022	7 Day Chronic Ceriodaphnia	Pass
2nd Quarter, 2022	7 Day Chronic Pimephales Promelas	Pass
3rd Quarter, 2022	7 Day Chronic Ceriodaphnia	Pass
4th Quarter. 2022	7 Day Chronic Pimephales Promelas	Pass
1st Quarter, 2023	7 Day Chronic Ceriodaphnia	Pass

ATTACHMENT 3

Wasteload Analysis

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Utah Division of Water Quality
Statement of Basis
ADDENDUM
Preliminary Wasteload Analysis and Antidegradation Level I Review

Date: **July 28, 2023**

Prepared by: **Suzan Tahir**
Standards and Technical Services

Facility: **Payson City Wastewater Treatment Facility, Payson, UT**
UPDES No. UT0020427

Receiving water: **Beer Creek (2B, 3C, 4)**

This addendum summarizes the wasteload analysis that was performed to determine water quality based effluent limits (WQBEL) for this discharge. Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also takes into account downstream designated uses (UAC R317-2-8). Projected concentrations are compared to numeric water quality standards to determine acceptability. The numeric criteria in this wasteload analysis may be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

Discharge

Outfall 001: Irrigation Ditch → Beer Creek → Benjamin Slough → Utah Lake

The maximum daily design discharge is 6.03 MGD and the maximum monthly design discharge is 5.0 MGD for the facility.

Receiving Water

The receiving water for Outfall 001 is an unnamed irrigation ditch, which is tributary to Beer Creek, which drains to Benjamin Slough and then to Utah Lake.

Per UAC R317-2-13.5.c, the designated beneficial uses for Beer Creek (Utah County) from 4850 West (in NE1/4NE1/4 sec. 36, T.8 S., R.1 E.) to headwaters are 2B, 3C, and 4.

- *Class 2B - Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.*

- *Class 3C - Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain*

- *Class 4 - Protected for agricultural uses including irrigation of crops and stock watering.*

Typically, the critical flow for the wasteload analysis is considered the lowest stream flow for seven consecutive days with a ten year return frequency (7Q10). Due to a lack of flow records for Beer Creek, the 20th percentile of flow measurements was calculated to estimate seasonal critical flow in the receiving water (Table 1). No flow records were found for the irrigation ditch and it was assumed the ditch has no flow during critical conditions.

Payson Power (UPDES UT0025518) also discharges to the same irrigation ditch and has the potential to discharge concurrently with the Payson City Wastewater Treatment Plant discharge; however, based on information provided by the permittee, Payson Power would not discharge when the wastewater treatment plant discharge is at the maximum (AQUA Engineering 2017a).

Table 1: Annual critical low flow (cfs)

Season	BEER CK AB PAYSON WWTP AT U115 XING (4995420)
Summer	2.47
Fall	6.70
Winter	11.90
Spring	6.12

Protection of Downstream Uses

Per UAC R317-2-8, *all actions to control waste discharges under these rules shall be modified as necessary to protect downstream designated uses*. For this discharge, 3C numeric aquatic life use criteria apply to the immediate receiving water (Beer Creek).

TMDL

Beer Creek and tributaries from confluence with Spring Creek to headwaters (UT16020202-027_00) is listed as impaired for E. coli and O/E bioassessment according to the 303(d) list in the *Utah's Final 2021 Integrated Report* (UDWQ 2021). Benjamin Slough from confluence with Utah Lake to Beer Creek confluence is listed as impaired for total ammonia. Utah Lake other than Provo Bay (UT-L-16020201-004_01) is listed as impaired for E. coli, Harmful Algal Blooms (HABs), Eutrophication, PCBs in Fish Tissue, Phosphorus; and Total Dissolved Solids (TDS).

Mixing Zone

The maximum allowable mixing zone is 15 minutes of travel time for acute conditions, not to exceed 50% of stream width, and 2,500 feet for chronic conditions, per UAC R317-2-5. Water quality standards must be met at the end of the mixing zone.

The actual length of the mixing zone was not determined; however, it was presumed to remain within the maximum allowable mixing zone dimensions. Acute limits were calculated using 50% of the seasonal critical low flow.

Parameters of Concern

The potential parameters of concern identified for the discharge/receiving water were total suspended solids (TSS), dissolved oxygen (DO), BOD_5, total phosphorus (TP), total nitrogen (TN), total ammonia (TAN), E. coli, pH, and total residual chlorine (TRC) as determined in consultation with the UPDES Permit Writer.

Water Quality Modeling

A QUAL2Kw model of the receiving water was built and calibrated to synoptic survey data collected in October of 2013 by DWQ staff using standard operating procedures (UDWQ 2012). The model of Beer Creek extends 4 kilometers downstream from the confluence with the unnamed irrigation ditch to near the crossing with South 4850 West.

Receiving water quality data were obtained from monitoring site 4995420 Beer Creek above Payson WWTP at U-115 Crossing for the period 2002-2023. The average seasonal value was calculated for each constituent with available data in the receiving water. Effluent parameters were characterized using data from monitoring site 4995410 Payson WWTP and 4995480 Payson Power Project Outfall for the same period.

The QUAL2Kw model was used for determining the WQBELs. Effluent concentrations were adjusted so that water quality standards were not exceeded in the receiving water. Where WQBELs exceeded secondary standards or categorical limits, the concentration in the model was set at the secondary standard or categorical limit.

The calibration and wasteload models are available for review by request.

WET Limits

The percent of effluent in the receiving water in a fully mixed condition, and acute and chronic dilution in a not fully mixed condition are calculated in the WLA in order to generate WET limits. The LC_{50} (lethal concentration, 50%) percent effluent for acute toxicity and the IC_{25} (inhibition concentration, 25%) percent effluent for chronic toxicity, as determined by the WET test, needs to be below the WET limits, as determined by the WLA. The WET limit for LC_{50} is typically 100% effluent and does not need to be determined by the WLA.

Table 2: WET Limits for IC_{25}

Season	Percent Effluent
Summer	76%
Fall	54%
Winter	39%
Spring	56%

Effluent Limits

The effect of the effluent on the DO in the receiving water was evaluated using the QUAL2Kw model. A DO sag downstream resulting from the plant discharge was predicted by the model in Beer Creek. However, the DO recovered and limits beyond secondary standards are not required for DO and BOD_5 (Table 3). QUAL2Kw rates, input and output for DO and eutrophication related constituents are summarized in Appendix A.

The ammonia limits for both acute and chronic toxicity were determined. The previous permit only had limits for ammonia resulting from acute toxicity (max. daily limit). In 2008, the chronic ammonia criteria were extended to 3C and 3D waters.
The limits for total residual chlorine were determined assuming an average decay rate of 42 /day (at 20 C^o) and a travel time in the unnamed irrigation ditch of 107 minutes prior to discharge to Beer Creek (AQUA Engineering 2017b). The analysis for TRC is summarized in Appendix B.

A mass balance mixing analysis was conducted for conservative constituents such as dissolved metals. The WQBELs for conservative constituents are summarized in Appendix C.

Models and supporting documentation are available for review upon request.

Antidegradation Level I Review

The objective of the Level I ADR is to ensure the protection of existing uses, defined as the beneficial uses attained in the receiving water on or after November 28, 1975. No evidence is known that the existing uses deviate from the designated beneficial uses for the receiving water. Therefore, the beneficial uses will be protected if the discharge remains below the WQBELs presented in this wasteload.

A Level II Antidegradation Review (ADR) is required for this discharge since the pollutant concentration and load is an increasing flow under this permit renewal.

Documents:

WLA Document : *Payson_WWTP_2023.docx*
QUAL2Kw Wasteload Model: *Payson_WLA_2023-Final.xlsm*

References:

AQUA Engineering. 2017a. *Discharge Flows to Beer Creek from Payson City and UAMPS.*

AQUA Engineering. 2017b. *Payson Chlorine Decay Rates*.

Neilson, B.T., A.J. Hobson, N. von Stackelberg, M. Shupryt, and J.D. Ostermiller. 2012. *Using QUAL2K Modeling to Support Nutrient Criteria Development and Wasteload Analyses in Utah*.

Utah Division of Water Quality. 2021. *Utah Wasteload Analysis Procedures Version 2.0*.

Utah Division of Water Quality. 2012b. *Field Data Collection for QUAL2Kw Model Build and Calibration Standard Operating Procedures Version 1.0*.

Utah Division of Water Quality. 2022. *Final 2022 Integrated Report on Water Quality*

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Appendix A: QUAL2Kw Analysis for Eutrophication

Discharging Facility:	Payson WWTP		
UPDES No:	UT-0020427		
Permit Flow [MGD]:	5.00	Maximum Monthly Flow	
	6.03	Maximum Daily Flow	
Receiving Water:	Beer Creek		
Stream Classification:	2B, 3C, 4		
Stream Flows [cfs]:	2.47	Summer (July-Sept)	Critical Low Flow
	6.70	Fall (Oct-Dec)	
	11.90	Winter (Jan-Mar)	
	6.12	Spring (Apr-June)	
Fully Mixed:	NO		
Acute River Width:	50%		
Chronic River Width:	100%		

Modeling Information

A QUAL2Kw model was used to determine these effluent limits.

Model Inputs

The following is upstream and discharge information that was utilized as inputs for the analysis.
Dry washes are considered to have an upstream flow equal to the flow of the discharge.

Headwater/Upstream Information	Summer	Fall	Winter	Spring
Flow (cfs)	2.5	6.7	11.9	6.1
Temperature (deg C)	21.2	8.2	5.7	15.2
Specific Conductance (µmhos)	1253	998	1123	1218
Inorganic Suspended Solids (mg/L)	51.0	49.9	35.1	40.0
Dissolved Oxygen (mg/L)	8.6	10.8	11.9	9.3
$CBOD_5$ (mg/L)	3.2	3.3	4.9	5.9
Organic Nitrogen (mg/L)	1.500	1.500	1.500	1.500
NH4-Nitrogen (mg/L)	0.060	0.250	0.590	0.360
NO3-Nitrogen (mg/L)	1.280	1.840	1.540	1.220
Organic Phosphorus (mg/L)	0.080	1.560	0.080	0.080
Inorganic Ortho-Phosphorus (mg/L)	0.220	0.170	0.230	0.290
Phytoplankton (µg/L)	0.0	0.0	0.0	0.0
Detritus [POM] (mg/L)	5.7	5.5	3.9	4.4
Alkalinity (mg/L)	389	365	409	405
pH	7.9	8.2	8.3	8.3

Discharge Information - Payson POTW

Chronic	Summer	Fall	Winter	Spring
Flow (MGD)	5.0	5.0	5.0	5.0
Temperature (deg C)	22.3	15.8	11.6	16.9
Specific Conductance (µmhos)	1561	1500	1472	1349
Inorganic Suspended Solids (mg/L)	3.7	2.8	4.0	4.2
Organic Nitrogen (mg/L)	5.000	5.000	5.000	5.000
NO3-Nitrogen (mg/L)	23.440	27.210	27.660	25.260
Organic Phosphorus (mg/L)	0.000	0.000	0.000	0.000
Inorganic Ortho-Phosphorus (mg/L)	5.000	5.000	5.000	5.000
Phytoplankton (µg/L)	0.000	0.000	0.000	0.000
Detritus [POM] (mg/L)	0.0	0.0	0.0	0.0
Alkalinity (mg/L)	215	200	193	203
pH	7.4	7.3	7.3	7.4

Acute	Summer	Fall	Winter	Spring
Flow (MGD)	6.0	6.0	6.0	6.0
Temperature (deg C)	22.3	15.8	11.6	16.9
Specific Conductance (µmhos)	1561	1500	1472	1349
Inorganic Suspended Solids (mg/L)	3.7	2.8	4.0	4.2
Organic Nitrogen (mg/L)	10.000	10.000	10.000	10.000
NO3-Nitrogen (mg/L)	23.440	27.210	27.660	25.260
Organic Phosphorus (mg/L)	0.000	0.000	0.000	0.000
Inorganic Ortho-Phosphorus (mg/L)	10.000	10.000	10.000	10.000
Phytoplankton (µg/L)	0.000	0.000	0.000	0.000
Detritus [POM] (mg/L)	0.0	0.0	0.0	0.0
Alkalinity (mg/L)	215	200	193	203
pH	7.8	7.7	7.7	8.0

Discharge Information - Payson Power

Chronic	Summer	Fall	Winter	Spring
Flow (MGD)	0.0	0.0	0.0	0.0

Acute	Summer	Fall	Winter	Spring
Flow (MGD)	0.0	0.0	0.0	0.0

All model numerical inputs, intermediate calculations, outputs and graphs are available for discussion, inspection and copy at the Division of Water Quality.

Effluent Limitations

Current State water quality standards are required to be met under a variety of conditions including in-stream flows targeted to the 7-day, 10-year low flow (R317-2-9).

Other conditions used in the modeling effort reflect the environmental conditions expected at low stream flows.

Effluent Limitations based upon Water Quality Standards for DO, and Ammonia and Total Residual Chlorine Toxicity

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent limitation as follows:

Chronic	Standard	Summer	Fall	Winter	Spring
Flow (MGD)	N/A	5.00	5.00	5.00	5.00
NH4-Nitrogen (mg/L)	Varies	3.0	6.0	6.0	4.5
$CBOD_5$ (mg/L)	N/A	25.0	25.0	25.0	25.0
Dissolved Oxygen [30-day Ave] (mg/L)	5.0	5.0	5.0	5.0	5.0
Total Residual Chlorine (mg/L)	0.0110	0.5	0.3	0.2	0.3

Acute	Standard	Summer	Fall	Winter	Spring
Flow (MGD)	N/A	6.0	6.0	6.0	6.0
NH4-Nitrogen (mg/L)	Varies	4.5	7.0	8.5	4.0
$CBOD_5$ (mg/L)	N/A	35.0	35.0	35.0	35.0
Dissolved Oxygen [Minimum] (mg/L)	3.0	4.0	4.0	4.0	4.0
Total Residual Chlorine (mg/L)	0.0190	0.7	0.3	0.3	0.4

Summary Comments

The mathematical modeling and best professional judgement indicate that violations of receiving water beneficial uses with their associated water quality standards, including important down-stream segments, will not occur for the evaluated parameters of concern as discussed above if the effluent limitations indicated above are met.

Coefficients and Other Model Information

Parameter	*Value*	*Units*
Stoichiometry:		
Carbon	40	gC
Nitrogen	7.2	gN
Phosphorus	1	gP
Dry weight	100	gD
Chlorophyll	1	gA
Inorganic suspended solids:		
Settling velocity	0.001	m/d
Oxygen:		
Reaeration model	Thackston-Dawson	
Temp correction	1.024	
Reaeration wind effect	None	
O2 for carbon oxidation	2.69	gO2/gC
O2 for NH4 nitrification	4.57	gO2/gN
Oxygen inhib model CBOD oxidation	Exponential	
Oxygen inhib parameter CBOD oxidation	0.60	L/mgO2
Oxygen inhib model nitrification	Exponential	
Oxygen inhib parameter nitrification	0.60	L/mgO2
Oxygen enhance model denitrification	Exponential	
Oxygen enhance parameter denitrification	0.60	L/mgO2
Oxygen inhib model phyto resp	Exponential	
Oxygen inhib parameter phyto resp	0.60	L/mgO2
Oxygen enhance model bot alg resp	Exponential	
Oxygen enhance parameter bot alg resp	0.60	L/mgO2
Slow CBOD:		
Hydrolysis rate	0	/d
Temp correction	1.047	
Oxidation rate	0.103	/d
Temp correction	1.047	
Fast CBOD:		
Oxidation rate	10	/d
Temp correction	1.047	
Organic N:		
Hydrolysis	0.88120891	/d
Temp correction	1.07	
Settling velocity	0.099218	m/d
Ammonium:		
Nitrification	0.2064034	/d
Temp correction	1.07	
Nitrate:		
Denitrification	0.28353818	/d
Temp correction	1.07	
Sed denitrification transfer coeff	0.053355	m/d
Temp correction	1.07	
Organic P:		
Hydrolysis	0.79805215	/d
Temp correction	1.07	
Settling velocity	0.096605	m/d
Inorganic P:		
Settling velocity	0.04793	m/d
Sed P oxygen attenuation half sat constant	0.53889	mgO2/L

Phytoplankton:		
Max Growth rate	2.8944	/d
Temp correction	1.07	
Respiration rate	0.480803	/d
Temp correction	1.07	
Death rate	0.86518	/d
Temp correction	1	
Nitrogen half sat constant	15	ugN/L
Phosphorus half sat constant	2	ugP/L
Inorganic carbon half sat constant	1.30E-05	moles/L
Phytoplankton use HCO3- as substrate	Yes	
Light model	Smith	
Light constant	57.6	langleys/d
Ammonia preference	25.4151	ugN/L
Settling velocity	0.468545	m/d
Bottom Plants:		
Growth model	Zero-order	
Max Growth rate	10.8314	gD/m2/d or /d
Temp correction	1.07	
First-order model carrying capacity	100	gD/m2
Basal respiration rate	0.2458802	/d
Photo-respiration rate parameter	0.01	unitless
Temp correction	1.07	
Excretion rate	0.046004	/d
Temp correction	1.07	
Death rate	0.036896	/d
Temp correction	1.07	
External nitrogen half sat constant	711.113	ugN/L
External phosphorus half sat constant	123.473	ugP/L
Inorganic carbon half sat constant	7.44E-05	moles/L
Bottom algae use HCO3- as substrate	Yes	
Light model	Smith	
Light constant	41.6646	mgO^2/L
Ammonia preference	28.99375	ugN/L
Subsistence quota for nitrogen	31.0379	mgN/gD
Subsistence quota for phosphorus	2.26157	mgP/gD
Maximum uptake rate for nitrogen	770.252	mgN/gD/d
Maximum uptake rate for phosphorus	36.4362	mgP/gD/d
Internal nitrogen half sat ratio	1.468463	
Internal phosphorus half sat ratio	3.2861345	
Nitrogen uptake water column fraction	1	
Phosphorus uptake water column fraction	1	
Detritus (POM):		
Dissolution rate	2.318491	/d
Temp correction	1.07	
Settling velocity	0.08897	m/d
pH:		
Partial pressure of carbon dioxide	370	ppm
TRC:		
Decay rate	0.8	/d

Atmospheric Inputs:	Summer	Fall	Winter	Spring
Min. Air Temperature, F	57.7	29.5	24.0	45.0
Max. Air Temperature, F	90.5	51.0	44.9	74.2
Dew Point, Temp., F	58.6	35.0	30.3	48.5
Wind, ft./sec. @ 21 ft.	9.8	7.5	7.6	9.2
Cloud Cover, %	10%	10%	10%	10%

Other Inputs:	
Bottom Algae Coverage	100%
Bottom SOD Coverage	100%
Prescribed SOD, gO_2/m^2/day	0

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Appendix B: Total Residual Chlorine

Discharging Facility: Payson WWTP
UPDES No: UT-0020427

CHRONIC

	Season	Receiving Water	Standard	Payson WWTP Effluent	Payson Power Effluent	Total Effluent	Mixing Zone Boundary	Dilution Factor	Effluent Limit Without Decay	Temperature (°C)	Decay Rate @ 20 °C (/day)	Decay Rate @ T °C (/day)	Travel Time (min)	Decay Coefficient	Effluent Limit
Discharge (cfs)	Summer	2.5		7.7	0.0	7.7	10.2	0.3							
	Fall	6.7		7.7	0.0	7.7	14.4	0.9							
	Winter	11.9		7.7	0.0	7.7	19.6	1.5							
	Spring	6.1		7.7	0.0	7.7	13.9	0.8							
Temperature (°C)	Summer			22.3	29.9	22.3									
	Fall			15.8	22.3	15.8									
	Winter			11.6	27.0	11.6									
	Spring			16.9	25.7	16.9									
TRC (mg/L)	Summer	0.000	0.011						0.015	22.3	42	46.7	107.568	0.03	0.474
	Fall	0.000	0.011						0.021	15.8	42	34.6	107.568	0.08	0.271
	Winter	0.000	0.011						0.028	11.6	42	28.6	107.568	0.12	0.236
	Spring	0.000	0.011						0.020	16.9	42	36.5	107.568	0.07	0.301

ACUTE

	Season	Receiving Water	Standard	Payson WWTP Effluent	Payson Power Effluent	Total Effluent	Mixing Zone Boundary	Dilution Factor	Effluent Limit Without Decay	Temperature (°C)	Decay Rate @ 20 °C (/day)	Decay Rate @ T °C (/day)	Travel Time (min)	Decay Coefficient	Effluent Limit
Discharge (cfs)	Summer	1.2		9.3	0.0	9.3	10.6	0.1							
	Fall	3.4		9.3	0.0	9.3	12.7	0.4							
	Winter	6.0		9.3	0.0	9.3	15.3	0.6							
	Spring	3.1		9.3	0.0	9.3	12.4	0.3							
Temperature (°C)	Summer			22.3	29.9	22.3									
	Fall			15.8	22.3	15.8									
	Winter			11.6	27.0	11.6									
	Spring			16.9	25.7	16.9									
TRC (mg/L)	Summer	0.000	0.019						0.022	22.3	42	46.7	107.568	0.03	0.702
	Fall	0.000	0.019						0.026	15.8	42	34.6	107.568	0.08	0.341
	Winter	0.000	0.019						0.031	11.6	42	28.6	107.568	0.12	0.263
	Spring	0.000	0.019						0.025	16.9	42	36.5	107.568	0.07	0.385

124.66667

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Appendix C: Mass Balance Mixing Analysis for Conservative Constituents

Discharging Facility:	Payson WWTP		
UPDES No:	UT-0020427		
Permit Flow [MGD]:	5.00	Maximum Monthly Discharge	
	6.03	Maximum Daily Discharge	
Payson Power:	0.00	Discharge	
Receiving Water:	Beer Creek		
Stream Classification:	2B, 3C, 4		
Stream Flows [cfs]:	2.47	Summer (July-Sept)	Critical Low Flow
Fully Mixed:	NO		
Acute River Width:	50%		
Chronic River Width:	100%		
Mixed Flow [cfs]:	10.2	Chronic	
	5.9	Acute	

Modeling Information

A mass balance mixing analysis was used to determine these effluent limits.

All model numerical inputs, intermediate calculations, outputs and graphs are available for discussion, inspection and copy at the Division of Water Quality.

Effluent Limitations

Current State water quality standards are required to be met under a variety of conditions including in-stream flows targeted to the 7-day, 10-year low flow (R317-2-9).

Other conditions used in the modeling effort reflect the environmental conditions expected at low stream flows.

Effluent Limitations for Protection of Recreation (Class 2B Waters)

Physical

Parameter	Maximum Concentration
pH Minimum	6.5
pH Maximum	9.0

Bacteriological

E. coli (30 Day Geometric Mean)	206	(#/100 mL)
E. coli (Maximum)	668	(#/100 mL)

Effluent Limitations for Protection of Aquatic Wildlife (Class 3C Waters)

Physical

Parameter	Maximum Concentration
Temperature (deg C)	27
Temperature Change (deg C)	4

Inorganics	Chronic Standard (4 Day Average)	Acute Standard (1 Hour Average)
Parameter	Standard	Standard
Phenol (mg/L)		0.010
Hydrogen Sulfide (Undissociated) [mg/L]		0.002

Total Recoverable Metals	Chronic Standard (4 Day Average)[1]			Acute Standard (1 Hour Average)[1]		
Parameter	Standard	Background[2]	Limit	Standard	Background[2]	Limit
Aluminum (µg/L)	N/A[3]	5.4	NONE	750	5.4	503
Arsenic (µg/L)	150	7.7	195	340	7.7	227
Cadmium (µg/L)	0.7	0.5	0.8	8.5	0.5	5.6
Chromium VI (µg/L)	11.0	2.5	13.7	16.0	2.5	10.4
Chromium III (µg/L)	263	2.5	346	5,497	2.5	3,690
Copper (µg/L)	29.8	5.3	37.7	50.5	5.3	33.1
Cyanide (µg/L)	5.2	3.5	5.7	22.0	3.5	14.3
Iron (µg/L)				1,000	6.7	671
Lead (µg/L)	18.0	0.3	23.6	462	0.3	310
Mercury (µg/L)	0.012	0.008	0.013	2.4	0.0	1.6
Nickel (µg/L)	165	0.5	217	1,484	0.5	996
Selenium (µg/L)	4.6	1.9	5.5	18.4	1.9	12.1
Silver (µg/L)				39.3	0.1	26.4
Tributylin (µg/L)	0.072	0.048	0.080	0.46	0.05	0.30
Zinc (µg/L)	380	10.0	498	380	10.0	253

1: Based upon a Hardness of 390 mg/l as CaCO3

2: Background concentration average of monitoring data

3: Where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as $CaC0_3$ in the receiving water after mixing, the 87 ug/L chronic criterion (expressed as total recoverable) will not apply, and aluminum will be regulated based on compliance with the 750 ug/L acute aluminum criterion (expressed as total recoverable).

Organics [Pesticides]	Chronic Standard (4 Day Average)			Acute Standard (1 Hour Average)		
Parameter	Standard	Background[1]	Limit	Standard	Background[1]	Limit
Aldrin (µg/L)				1.5	1.0	0.9
Chlordane (µg/L)	0.0043	0.0029	0.0048	1.2	0.0	0.8
DDT, DDE (µg/L)	0.001	0.001	0.001	0.55	0.00	0.37
Diazinon (µg/L)	0.17	0.11	0.19	0.17	0.11	0.10
Dieldrin (µg/L)	0.0056	0.0038	0.0062	0.24	0.00	0.16
Endosulfan, a & b (µg/L)	0.056	0.038	0.062	0.11	0.04	0.07
Endrin (µg/L)	0.036	0.024	0.040	0.086	0.024	0.054
Heptachlor & H. epoxide (µg/L)	0.0038	0.0025	0.0042	0.26	0.00	0.17
Lindane (µg/L)	0.08	0.05	0.09	1.0	0.1	0.7
Methoxychlor (µg/L)				0.03	0.02	0.02
Mirex (µg/L)				0.001	0.001	0.001
Nonylphenol (µg/L)	6.6	4.4	7.3	28.0	4.4	18.2
Parathion (µg/L)	0.0130	0.0087	0.0144	0.066	0.009	0.043
PCB's (µg/L)	0.014	0.009	0.015			
Pentachlorophenol (µg/L)	15.0	10.1	16.6	19.0	10.1	11.3
Toxephene (µg/L)	0.0002	0.0001	0.0002	0.73	0.00	0.49

1: Background concentration assumed 67% of chronic standard

Radiological	Maximum Concentration		
Parameter	Standard	Background[1]	Limit
Gross Alpha (pCi/L)	15	10.1	8.7

1: Background concentration assumed 67% of chronic standard; TDS is based on observed ambient data

Effluent Limitation for Protection of Agriculture (Class 4 Waters)

	Maximum Concentration		
Parameter	Standard	Background[1]	Limit
Total Dissolved Solids (mg/L)	1,200	754	1,343
Boron (mg/L)	0.75	0.2	0.9
Arsenic, Dissolved (µg/L)	100	7.7	129
Cadmium, Dissolved (µg/L)	10	0.5	13.0
Chromium, Dissolved (µg/L)	100	2.5	131
Copper, Dissolved (µg/L)	200	5.3	262
Lead, Dissolved (µg/L)	100	0.3	132
Selenium, Dissolved (µg/L)	50	1.9	65.4
Gross Alpha (pCi/L)	15	10.1	16.6

1: Background concentration assumed 67% of chronic standard; TDS is based on observed ambient data

ATTACHMENT 4

Reasonable Potential Analysis

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REASONABLE POTENTIAL ANALYSIS

Water Quality has worked to improve our reasonable potential analysis (RP) for the inclusion of limits for parameters in the permit by using an EPA provided model. As a result of the model, more parameters may be included in the renewal permit. A Copy of the Reasonable Potential Analysis Guidance (RP Guide) is available at water Quality. There are four outcomes for the RP Analysis[1]:

Outcome A:	A new effluent limitation will be placed in the permit.
Outcome B:	No new effluent limitation. Routine monitoring requirements will be placed or increased from what they are in the permit,
Outcome C:	No new effluent limitation. Routine monitoring requirements maintained as they are in the permit,
Outcome D:	No limitation or routine monitoring requirements are in the permit.

Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at some of the metals is needed. A copy of the initial screening is included in the "Effluent Metals and RP Screening Results" table in this attachment. The initial screening check for metals showed that the full model needed to be run on mercury, selenium, free cyanide, and total cyanide.

Mercury RP Analysis

The RP model was run on mercury using the most recent data back through September 2018. This resulted in 50 data points to use for the run. The data was entered into ProUCL to check the goodness of fit of the data (GOF) and determine the distribution of the data. The data did not follow a discernible distribution at (0.05) Level of Significance, so the Default distribution was used. No check for outliers was conducted. The result of the model run is that there is a RP for the effluent to exceed the Chronic WQBEL of 0.000013 mg/L but not RP for the Acute WQBEL of 0.0016 mg/L at both the 95th and 99th percentile confidence interval. This result is the same as last renewal, and the limit will remain in the permit.

(Outcome A from Reasonable Potential Guide)

Selenium RP Analysis

The RP model was run on selenium using the most recent data back through September 2018. This resulted in 52 data points to use for the run. The data was entered into ProUCL to check the goodness of fit of the data (GOF) and determine the distribution of the data. At a 0.5 significance level, the data was not Normal (Normal Distribution), but did appear to be Gamma Distribution and Lognormal Distribution. The Lognormal distribution was used. No check for outliers was conducted. The result of the model run is that there is a RP for the effluent to exceed the Chronic WQBEL of 0.0055 mg/L at the at the 95th percentile confidence interval, and no RP for the Acute WQBEL of 0.0121 mg/L at both the 95th and 99th percentile confidence interval. This result is similar to the last renewal, but the RP for the Acute WQBEL has disappeared. For this renewal the limit and monitoring requirements will remain, and the RP can be repeated at the next Renewal.

(Outcome A from Reasonable Potential Guide)

Cyanide RP Analysis

The RP model was run on cyanide using the most recent data back through September 2018. This resulted in 91 data points for total cyanide (TCN) and 96 data points for free cyanide (FCN) to use for the analysis. The data was entered into ProUCL to check the goodness of fit of the data (GOF) and determine the distribution of the data. At a 0.5 significance level, the data did not appear to be Gamma or Lognormal Distributed, but did appear to be Normal Distributed. The Normal distribution was used. The lab reports for the data were all provided and did not indicate any issues with the cyanide results, so no check for outliers was conducted.

[1] See Reasonable Potential Analysis Guidance for definitions of terms

Since the lab reports for the monitoring were provided the sample date, result, method detection level (MDL), and method reporting level (MRL) were all able to be entered into a spread sheet for comparison. On most days a sample for free and total cyanide were collected. The majority of the FCN data was reported as below the MRL and/or the MDL. Only a few samples of TCN were reported as below the MRL or MDL, and a few were reported as below the actual value of the MDL (<0.0005 mg/L). For both free and total cyanide, the earlier data was usually below the MRL which was higher than the MDL, and by April of 2023 the laboratory has improved their methodology for FCN analysis that the MRL and MDL have lowered enough for actual results to be indicated.

FCN is a subset of the TCN in a sample. By arranging the data chronologically, it could be compared in such a way that if the FCN was reported as below MRL or MDL, which was higher that the value reported for TCN, the TCN value could be substituted. The RP model uses a non-detect indicator of ND and interprets it as whatever value was included as the reporting limit. One may also swap out the ND for the actual MRL or MDL. This results in multiple scenarios to run for both FCN and TCN. For both FCN and TCN the model can be run at the 95th and 99th percentile confidence interval with the ND in place and the reporting limit values as the MDL and then MRL. They can also be run with the values for the MDL or MRL substituted in place of the ND indicator. Lastly, for FCN you can also run the model using the lowest valid number. This is determined by comparing the indicator on each sample.

The rules for determining the value are

> The TCN result used for comparison is what is indicated in the TCN report. It would be the actual value, or if it was indicated as below the MRL or MDL, the corresponding limit would be used.
>
> The FCN result used for comparison is what is indicated in the FCN report. It would be the actual value, or if it was indicated as below the MRL or MDL, the corresponding limit would be used
>
> The FCN result would be compared to the TCN result for the same days sample.
>
> > If there was no TCN sample that corresponded with an FCN sample, then the FCN value was used.
> > If the TCN value was above the FCN value, then the FCN value was used,
> > If the TCN value was below the FCN Value, then the TCN was used.
> > If there was no FCN sample that corresponded with a TCN sample, then no sample would be used.

This comparison resulted in a rationalized best value to be compared.

In all there are is 6 TCN scenarios and 8 FCN scenarios to run.

They were all run and the inputs, settings and results are all summarized in the tables below.

The result of the model runs is that there is RP for the effluent to exceed the TCN Acute WQBEL of 0.0143 mg/L and Chronic WQBEL of 0.0057 mg/L.

The result of the model runs is that there is no RP for the effluent to exceed the FCN Acute WQBEL of 0.0143 mg/L at the at the 95th percentile confidence interval, but there is at the 99th percentile confidence interval, and there is RP for the FCN Chronic WQBEL of 0.0057 mg/L.

For this renewal the limits will remain in place, and be adjusted at the end of the CS.

Over the previous permit cycle there have been several violations of the Chronic WQBEL for TCN, and would have been violations of the Acute WQBEL for TCN if it had been implemented during the previous permit renewal.

Cyanide Monthly Max Average Effluent Violations			
Monitoring Period End Date	Effluent Limitation	Reported Value	% Exceedance
04/30/2019	0.0067 mg/L	0.008 mg/L	19%
11/30/2019	0.0067 mg/L	0.007 mg/L	4%
08/31/2020	0.0067 mg/L	0.009 mg/L	79%
10/31/2020	0.0067 mg/L	0.007 mg/L	4%
01/31/2021	0.0067 mg/L	0.0135 mg/L	101%
03/31/2021	0.0067 mg/L	0.013 mg/L	94%
04/30/2021	0.0067 mg/L	0.0105 mg/L	57%
05/31/2021	0.0067 mg/L	0.012 mg/L	30%
11/30/2021	0.0067 mg/L	0.0078 mg/L	16%
12/31/2021	0.0067 mg/L	0.011 mg/L	64%
01/31/2022	0.0067 mg/L	0.007 mg/L	4%
03/31/2022	0.0067 mg/L	0.011 mg/L	64%
05/31/2022	0.0067 mg/L	0.012 mg/L	79%
06/30/2022	0.0067 mg/L	0.007 mg/L	9%
07/31/2022	0.0067 mg/L	0.0133 mg/L	99%
08/31/2022	0.0067 mg/L	0.0096 mg/L	43%
10/31/2022	0.0067 mg/L	0.0071 mg/L	6%
11/30/2022	0.0067 mg/L	0.0078 mg/L	16%
01/31/2023	0.0067 mg/L	0.0092 mg/L	37%
02/28/2023	0.0067 mg/L	0.0084 mg/L	25%
05/31/2023	0.0067 mg/L	0.0079 mg/L	29%
07/31/2023	0.0067 mg/L	0.0075 mg/L	12%

As a result, there will be an increase in the monitoring frequency for both TCN and FCN to attempt to develop a better understanding of the Effluent TCN and FCN concentrations. The monitoring requirements will be changed to include the requirement of FCN Sampling, and increase the monitoring frequency to twice a month for both.

(Outcome A from Reasonable Potential Guide)

The RP can be run at the next renewal and if the conditions merit it, the limits for included as a result of the RP could be removed. The facility is in the early stages of an upgrade and the new treatment process may reduce some of these pollutants, and eliminate the RP. With the lab methodology improvements, improved treatment, the facility upgrades, and the continued aggressive monitoring of FCN and TCN for the next renewal could result in an indication of No RP for cyanide, and the other metals, which could be grounds to justify removal of the limits at that time.

A Summary of the RP Model inputs and outputs are included in the table below.

The Metals Initial Screening Table and RP Outputs Table are included in this attachment.

RP input/output summary

RP Procedure Output		Run #1	Run #2	Run #3	Run #4	Run #5	Run #6
Facility Name:	Payson WTP City	Using WQBEL from 2023 WLA, Total Cyanide Data, With ND as MRL (0.002)		Using WQBEL from 2023 WLA, Total Cyanide Data, With ND as MDL (0.0005)		Using WQBEL from 2023 WLA, Total Cyanide Data, With MDL (0.0005) or MRL (0.002) as listed	
Permit Number:	UT0020427						
Outfall Number:	_001						
Parameter	Cyanide (Total)						
Distribution	Normal						
Data Units	mg/L						
Reporting Limit		0.002		0.0005			
Significant Figures		2					
Maximum Reported Effluent Conc.		0.034	0.034	0.034	0.034	0.034	0.034
Coefficient of Variation (CV)		0.55				0.68	0.68
Acute Criterion		0.0143					
Chronic Criterion		0.0057					
Confidence Interval		95	99	95	99	95	99
Projected Maximum Effluent Conc. (MEC)		0.033	0.041	0.033	0.041	0.032	0.041
RP Multiplier		0.96	1.2	0.96	1.2	0.94	1.2
RP for Acute?		YES	YES	YES	YES	YES	YES
RP for Chronic?		YES	YES	YES	YES	YES	YES
Outcome		A	A	A	A	A	A

Data used for Cyanide (Total) RP Run #1, Run #2, Run #3, and Run #4									
#		#		#		#		#	
1	0.013	21	0.005	41	0.012	61	0.009	81	0.01
2	0.008	22	0.01	42	0.006	62	0.015	82	0.011
3	ND	23	ND	43	0.002	63	0.008	83	0.006
4	0.012	24	ND	44	0.009	64	0.008	84	0.005
5	0.008	25	0.004	45	0.005	65	0.008	85	0.003
6	0.014	26	0.01	46	0.006	66	0.011	86	ND
7	0.011	27	0.006	47	ND	67	0.01	87	0.002
8	0.012	28	0.011	48	0.006	68	0.004	88	0.004
9	0.012	29	0.009	49	0.006	69	0.008	89	0.002
10	0.017	30	0.008	50	0.008	70	0.01	90	0.005
11	0.034	31	0.008	51	0.006	71	0.011	91	0.006
12	0.007	32	0.01	52	0.004	72	0.013	92	
13	0.003	33	0.004	53	0.009	73	0.01	93	
14	0.004	34	0.005	54	ND	74	ND	94	
15	ND	35	ND	55	ND	75	ND	95	
16	0.008	36	0.01	56	0.012	76	ND	96	
17	0.004	37	0.007	57	0.008	77	0.005	97	
18	0.007	38	0.009	58	0.013	78	0.006	98	
19	0.004	39	0.005	59	0.017	79	0.007	99	
20	ND	40	0.01	60	0.005	80	0.003	100	

Data used for Cyanide (Total) RP Run #5, and Run #6									
#		#		#		#		#	
1	0.013	21	0.005	41	0.012	61	0.009	81	0.01
2	0.008	22	0.01	42	0.006	62	0.015	82	0.011
3	0.002	23	0.002	43	0.002	63	0.008	83	0.006
4	0.012	24	0.002	44	0.009	64	0.008	84	0.005
5	0.008	25	0.004	45	0.005	65	0.008	85	0.003
6	0.014	26	0.01	46	0.006	66	0.011	86	0.0005
7	0.011	27	0.006	47	0.0005	67	0.01	87	0.002
8	0.012	28	0.011	48	0.006	68	0.004	88	0.004
9	0.012	29	0.009	49	0.006	69	0.008	89	0.002
10	0.017	30	0.008	50	0.008	70	0.01	90	0.005
11	0.034	31	0.008	51	0.006	71	0.011	91	0.006
12	0.007	32	0.01	52	0.004	72	0.013	92	
13	0.003	33	0.004	53	0.009	73	0.01	93	
14	0.004	34	0.005	54	0.0005	74	0.0005	94	
15	0.002	35	0.0005	55	0.0005	75	0.0005	95	
16	0.008	36	0.01	56	0.012	76	0.0005	96	
17	0.004	37	0.007	57	0.008	77	0.005	97	
18	0.007	38	0.009	58	0.013	78	0.006	98	
19	0.004	39	0.005	59	0.017	79	0.007	99	
20	0.002	40	0.01	60	0.005	80	0.003	100	

RP Procedure Output		Run #1	Run #2	Run #3	Run #4
Facility Name:	Payson WTP City	Using WQBEL from 2023 WLA, Free Cyanide Data, With ND as MRL (0,016)		Using WQBEL from 2023 WLA, Free Cyanide Data, With ND as MDL (0.008)	
Permit Number:	UT0020427				
Outfall Number:	_001				
Parameter	Cyanide (WAD)				
Distribution	Default				
Data Units	mg/L				
Significant Figures	2				
Coefficient of Variation (CV)	0.6				
Reporting Limit		0.016	0.016	0.008	0.008
Maximum Reported Effluent Conc.		0.008	0.008	0.008	0.008
Confidence Interval		95	99	95	99
RP Multiplier		1.6	2.7	1.6	2.7
Projected Maximum Effluent Conc. (MEC)		0.013	0.022	0.013	0.022
Acute Criterion		0.0143			
Chronic Criterion		0.0057			
RP for Acute?		YES	YES	YES	YES
RP for Chronic?		NO	YES	NO	YES
Outcome			A		A

Data used for Cyanide (Free, WAD) RP Run #1, Run #2, Run #3, and Run #4									
#		#		#		#		#	
1	ND	21	ND	41	ND	61	ND	81	ND
2	ND	22	ND	42	ND	62	ND	82	ND
3	ND	23	ND	43	ND	63	ND	83	ND
4	ND	24	ND	44	ND	64	ND	84	ND
5	ND	25	ND	45	ND	65	ND	85	0.003
6	ND	26	ND	46	ND	66	ND	86	0.004
7	ND	27	ND	47	ND	67	ND	87	0.003
8	ND	28	ND	48	ND	68	ND	88	0.002
9	ND	29	ND	49	0.008	69	ND	89	0.008
10	ND	30	ND	50	ND	70	ND	90	0.003
11	ND	31	ND	51	ND	71	ND	91	0.003
12	ND	32	ND	52	ND	72	ND	92	0.004
13	ND	33	ND	53	ND	73	ND	93	0.004
14	ND	34	ND	54	ND	74	ND	94	0.005
15	ND	35	ND	55	ND	75	ND	95	0.002
16	ND	36	ND	56	ND	76	ND	96	0.004
17	ND	37	ND	57	ND	77	ND	97	
18	ND	38	ND	58	ND	78	ND	98	
19	ND	39	ND	59	ND	79	ND	99	
20	ND	40	ND	60	ND	80	ND	100	

RP Procedure Output		Run #5	Run #6	Run #7	Run #8
Facility Name:	Payson WTP City	Using WQBEL from 2023 WLA, Free Cyanide Data, With MDL (0.008) or MRL (0.016) as listed		Using WQBEL from 2023 WLA, Free Cyanide Data, With MDL (0.008) or MRL (0,016) as listed, all compared to the Total Cyanide as overall Max (if sample was also taken)	
Permit Number:	UT0020427				
Outfall Number:	_001				
Parameter	Cyanide (WAD)				
Distribution	Default				
Data Units	mg/L				
Significant Figures	2				
Coefficient of Variation (CV)	0.6				
Reporting Limit					
Maximum Reported Effluent Conc.		0.016	0.016	0.016	0.016
Confidence Interval		95	99	95	99
RP Multiplier		0.88	1.4	0.88	1.4
Projected Maximum Effluent Conc. (MEC)		0.0143			
Acute Criterion		0.0057			
Chronic Criterion		0.0143	0.0143	0.0143	0.0143
RP for Acute?		YES	YES	YES	YES
RP for Chronic?		NO	YES	NO	YES
Outcome					

Data used for Cyanide (Free, WAD) RP Run #5, and Run #6									
#		#		#		#		#	
1	ND	21	ND	41	ND	61	ND	81	ND
2	ND	22	ND	42	ND	62	ND	82	ND
3	ND	23	ND	43	ND	63	ND	83	ND
4	ND	24	ND	44	ND	64	ND	84	ND
5	ND	25	ND	45	ND	65	ND	85	0.003
6	ND	26	ND	46	ND	66	ND	86	0.004
7	ND	27	ND	47	ND	67	ND	87	0.003
8	ND	28	ND	48	ND	68	ND	88	0.002
9	ND	29	ND	49	0.008	69	ND	89	0.008
10	ND	30	ND	50	ND	70	ND	90	0.003
11	ND	31	ND	51	ND	71	ND	91	0.003
12	ND	32	ND	52	ND	72	ND	92	0.004
13	ND	33	ND	53	ND	73	ND	93	0.004
14	ND	34	ND	54	ND	74	ND	94	0.005
15	ND	35	ND	55	ND	75	ND	95	0.002
16	ND	36	ND	56	ND	76	ND	96	0.004
17	ND	37	ND	57	ND	77	ND	97	
18	ND	38	ND	58	ND	78	ND	98	
19	ND	39	ND	59	ND	79	ND	99	
20	ND	40	ND	60	ND	80	ND	100	

Data used for Cyanide (Free, WAD) RP Run #7, and Run #8									
#		#		#		#		#	
1	0.013	21	0.003	41	0.004	61	0.008	81	0.0005
2	0.008	22	0.004	42	0.005	62	0.0005	82	0.0005
3	0.002	23	0.002	43	0.0005	63	0.0005	83	0.005
4	0.016	24	0.008	44	0.008	64	0.008	84	0.006
5	0.016	25	0.004	45	0.007	65	0.008	85	0.003
6	0.016	26	0.007	46	0.008	66	0.008	86	0.003
7	0.012	27	0.004	47	0.005	67	0.008	87	0.003
8	0.016	28	0.002	48	0.008	68	0.005	88	0.002
9	0.008	29	0.005	49	0.008	69	0.008	89	0.006
10	0.016	30	0.01	50	0.006	70	0.008	90	0.003
11	0.016	31	0.002	51	0.002	71	0.008	91	0.003
12	0.016	32	0.002	52	0.008	72	0.008	92	0.0005
13	0.016	33	0.004	53	0.005	73	0.008	93	0.004
14	0.014	34	0.008	54	0.006	74	0.008	94	0.002
15	0.011	35	0.006	55	0.0005	75	0.004	95	0.002
16	0.012	36	0.011	56	0.006	76	0.008	96	0.004
17	0.012	37	0.009	57	0.006	77	0.008	97	
18	0.016	38	0.008	58	0.008	78	0.008	98	
19	0.016	39	0.008	59	0.006	79	0.008	99	
20	0.007	40	0.01	60	0.004	80	0.0005	100	

RP Procedure Output		Run #1	Run #2
Facility Name:	Payson WTP City		
Permit Number:	UT0020427		
Outfall Number:	_001		
Parameter	Mercury		
Distribution	Default		
Data Units	mg/L		
Significant Figures	2		
Coefficient of Variation (CV)	0.6		
	Reporting Limit	0.00000008	0.00000008
	Maximum Reported Effluent Conc.	0.000031	0.000031
	Confidence Interval	95	99
	RP Multiplier	1.0	1.7
	Projected Maximum Effluent Conc. (MEC)	0.000032	0.000053
	Acute Criterion	0.0016	0.0016
	Chronic Criterion	0.000013	0.000013
	RP for Acute?	NO	NO
	RP for Chronic?	YES	YES
	Outcome	A	A

Data used for Mercury RP Run #1, and Run #2					
#		#		#	
1	0.0000006	21	0.0000022	41	0.0000021
2	0.0000035	22	0.000031	42	0.0000025
3	0.00000008	23	0.0000015	43	0.0000081
4	0.0000019	24	0.0000029	44	0.0000027
5	0.0000012	25	0.0000019	45	0.000031
6	0.0000027	26	0.0000012	46	0.000003
7	0.000002	27	0.0000027	47	0.0000049
8	0.0000033	28	0.0000029	48	0.0000054
9	0.0000047	29	0.000002	49	0.000003
10	0.0000116	30	0.0000019	50	0.0000038
11	0.0000081	31	0.0000015	51	
12	0.000003	32	0.0000039	52	
13	0.0000134	33	0.000031	53	
14	0.0000035	34	0.000002	54	
15	0.0000005	35	0.0000034	55	
16	0.0000005	36	0.0000013	56	
17	0.000007	37	0.0000028	57	
18	0.000025	38	0.0000017	58	
19	0.0000008	39	0.0000036	59	
20	0.0000021	40	0.0000016	60	

RP Procedure Output		Run #1	Run #2
Facility Name:	Payson WTP City		
Permit Number:	UT0020427		
Outfall Number:	_001		
Parameter	Selenium		
Distribution	Lognormal		
Data Units	mg/L		
Significant Figures	2		
Coefficient of Variation (CV)	0.43		
Reporting Limit		0.0006	0.0006
Maximum Reported Effluent Conc.		0.005	0.005
Confidence Interval		95	99
RP Multiplier		1.0	1.5
Projected Maximum Effluent Conc. (MEC)		0.0051	0.0074
Acute Criterion		0.0121	0.0121
Chronic Criterion		0.0055	0.0055
RP for Acute?		NO	NO
RP for Chronic?		NO	YES
Outcome		C	B

Data used for Selenium RP Run #1, and Run #2					
#		#		#	
1	0.0021	21	0.0011	41	0.0008
2	0.0023	22	0.001	42	0.0009
3	0.003	23	0.0008	43	0.0011
4	0.0023	24	0.0006	44	0.0011
5	0.0017	25	0.0013	45	0.0014
6	0.0015	26	0.0016	46	0.0013
7	0.0021	27	0.0012	47	0.0013
8	0.0022	28	0.0013	48	0.0017
9	0.0022	29	0.0014	49	0.0017
10	0.0012	30	0.0016	50	0.001
11	0.0012	31	0.0012	51	0.0021
12	0.0019	32	0.0012	52	0.0016
13	0.0008	33	0.0015	53	0
14	0.001	34	0.0012	54	0
15	0.001	35	0.0009	55	0
16	0.005	36	0.0013	56	0
17	0.0009	37	0.0006	57	0
18	0.0023	38	0.0013	58	0
19	0.0018	39	0.0006	59	0
20	0.0015	40	0.0014	60	0

Metals Screening and RP Check

Effluent Metals Reporting, mg/L													
Param	As	Cd	Cr	Cr	Cu	Total CN	Free CN	Pb	Hg	Ni	Se	Ag	Zn
MRL or MDL	None Specified In DMR					0.002	0.016	None Specified In DMR					
Max	0.05	0.0002	0.005	0.005	0.009	0.034	0.016	0.0005	0.000031	0.008	0.005	0.0005	0.05
2023 WLA													
Param	As	Cd	Cr VI	Cr III	Cu	Total CN	Free CN	Pb	Hg	Ni	Se	Ag	Zn
Acute WQBEL	0.195	0.0008	0.0137	0.346	0.0377	0.0143	0.0143	0.0236	0.000013	0.217	0.0055	0.0264	0.498
Chronic WQBEL	0.05	0.0056	0.0104	3.69	0.0331	0.0057	0.0057	0.31	0.0016	0.996	0.0121	0.0264	0.253
Acute Check	No	No	No	No	No	Yes	Yes	No	Yes	No	Yes	No	No
Chronic Check	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No	No

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ATTACHMENT 5

Application and Level II ADR

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part I. General Information (40 CFR 122.21(j)(1) and (9))

UPDES Permit No.: UT0020427

Facility Name: Payson City Wastewater Treatment Plant

Facility Location: 1062 N Main St

City Payson State UT Zip 84651

Facility Mailing Address: Same

City _____ State _____ Zip _____

Facility Contact: Jeff Hiatt **Title:** Sewer Superintendent

Phone Number: 801-465-5277 **Email Address:** jeffh@payson.org

Name of Signatory: _____ **Title:** _____

Is the applicant the facility owner, operator or both? (check only one response.)

☒ Owner ☐ Operator ☐ Both

Indicate below any existing environmental permits. (Check all that apply and type the corresponding permit number for each.)

☐ RCRA (hazardous waste) ☐ UIC (underground injection control) ☐ PSD (air emissions)

☐ Nonattainment program (CAA) ☐ NESHAPs (CAA) ☐ Dredge or fill (CWA Section 404)

☐ Other (specify) _____

Nature of Business CFR (40 CFR 122.21(f)(8))

Describe the nature of your business

This is a publicly owned treatment work treating wastewater from Payson City.

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Payson Renewal Application Updated Page 2

UPDES Municipal (POTW) Permit Application

Part II. Facility Information

Population served? 24,000

Design and Actual Flow Rates

Provide design and actual flow rates in designated spaces.

Design Flow Rate	
4.03	mgd

Annual Average Flow Rates (Actual)					
Five Years Ago		**Four Years Ago**		**Three Years Ago**	
1.68	mgd	1.66	mgd	1.72	mgd
Two Years Ago		**Last Year**		**Current Year**	
1.67	mgd	1.72	mgd	1.76	mgd

Maximum Daily Flow Rates (Actual)					
Five Years Ago		**Four Years Ago**		**Three Years Ago**	
2.81	mgd	2.26	mgd	3.09	mgd
Two Years Ago		**Last Year**		**Current Year**	
1.98	mgd	2.34	mgd	2.20	mgd

Describe the treatment for each outfall

	Outfall No. 001	**Outfall No.** 001R	**Outfall No.** _____
Highest Level of Treatment (check all that apply per outfall)	☐ Primary ☐ Equivalent to secondary ☐ Secondary ■ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ■ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall			
BOD_5	85 %	85 %	%
TSS	85 %	85 %	%
Phosphorus	■ Not applicable %	■ Not applicable %	☐ Not applicable %
Nitrogen	■ Not applicable %	■ Not applicable %	☐ Not applicable %
Other (specify)	■ Not applicable %	■ Not applicable %	☐ Not applicable %

UPDES Municipal (POTW) Permit Application

Part II. Facility Information *continued*

Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent? ■ YES ☐ NO

Describe the type of disinfection used for the effluent for each outfall. If disinfection varies by season, describe below.

Chlorine is used for disinfection for both outfalls on a year-round basis.

	Outfall No. _____	**Outfall No. _____**	**Outfall No. _____**
Disinfection type			
Seasons used			
Dechlorination used?	☐ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No

MAP: Attach a USGS topographic map or aerial photo extending one mile beyond the property boundaries of the site, the facility or activity boundaries, any treatment area(s), outfall(s), major drainage patterns, and the receiving surface waters stated above.

■ Map Attached

UPDES Municipal (POTW) Permit Application

Part II. Facility Information *continued*

Are improvements to the facility scheduled?

■ YES If YES, explain below.

☐ NO If NO, Skip to Part III

Briefly list and describe the schedule improvements.

1. Upgrade to BNR and expand capacity (see CFP amendment)

2.

3.

4.

Provide scheduled or actual dates of completion for improvements.

Scheduled or Actual Dates of Completion for Improvements

Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
1. Upgrade	001, 001R	01/01/2023	12/31/2024	10/01/2024	01/01/2025
2.					
3.					
4.					

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Part III. Sampling Information

Provide all parameter sampling data with analytical results, reporting limit and any laboratory flags on an Excel spreadsheet. *An Excel Spreadsheet will be provided upon request.*

Has WET testing been conducted during the last 5 years? ■ YES ☐ NO

Indicate the acute and chronic WET tests (PASS or FAIL) results for the past 5 years. If no WET testing for the quarter, then leave blank (e.g., for semi-annual or annual testing or missed testing events).

See attached summary table

Year	Outfall No. ________				Outfall No. ________				Outfall No. ________			
	Acute		Chronic		Acute		Chronic		Acute		Chronic	
	Qtr 1	☐ PASS	Qtr 1	☐ PASS	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Q				Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Q	☐ FAIL		☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL

Describe any cause(s) of toxicity:

We did have some high ammonia which caused a fail. We did do 2 weeks of testing more to get two passes in a row.

UPDES Municipal (POTW) Permit Application

Part IV. Compliance Information

Has the facility had an parameter exceedances over the past five years? ☑YES ☐NO

If Yes, provide the below information:

Parameter	Exceedance	Month/Year	Cause
See attached data spreadsheet			

UPDES Municipal (POTW) Permit Application

Part IV. Compliance Information *continued*

Facility monitoring data.

Please provide the past **five years** of all parameters required to be monitored in the UPDES permit. The data can be entered in the section below or an excel spreadsheet. Attached additional sheets if needed.

Month	Year	Parameter	Min	Max	Avg	MDL/RL*

See attached data spreadsheets

*MDL/RL is the analysis method detection limit or reporting limit located on the laboratory analysis report.

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Part V. Outfalls and Receiving Water(s)

Provide the latitude and longitude to the nearest second for each dewatering outfall. The specified location should be after all treatment and before release to the receiving water. Provide the name of the initial receiving water. If the initial receiving water is unnamed, please also indicate the closed named drainage the receiving water flows into (i.e. unnamed tributary of City Creek). Attach additional sheets if necessary for more outfalls.

Each outfall to a different receiving water segment is subject to additional application fees and annual fees.

Outfall No.	Average daily flow rate	Latitude	Longitude	Receiving Surface Waters (Name)
001	0-1.75 mgd	40 ° 03 ' 41 "	111 ° 43 ' 49 "	Beer Creek
001R	0-1.75 mgd	40 ° 03 ' 41 "	111 ° 43 ' 49 "	Payson Power Plant
	mgd	° ' "	° ' "	

Do any of the outfalls described above have a season or periodic discharges?

☐ YES ■ NO

If so, provide the following information for each applicable outfall.

	Outfall No. _____	Outfall No. _____	Outfall No. _____
Number of times per year discharges occurs			
Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd
Months in which discharge occurs			

Part VI. Collection System

Service Area(s)	Population Served	Miles of Pipe
Payson City	24,000	90
Total Population Served	24,000	**Total Miles of Pipe** 90

USMP Program implemented? ■ YES ☐ NO

UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information

Does the facility have an approved pretreatment program? ■ YES ☐ NO

If YES, skip to next section

If No, complete the below industrial user forms and inspections as needed.

A. Industrial Pretreatment Wastewater Survey

Check any of the following that have occurred in the past five years either at the wastewater treatment plant or in the collection system:

- ☐ Foaming
- ☐ Unusual colors
- ☐ Plugged collection lines caused by grease
- ☐ Plugged collection lines caused by sand
- ☐ Plugged collection lines caused by other debris
- ☐ Discharging of excessive BOD
- ☐ Discharging of excessive suspended solids
- ☐ Smells unusually bad or unusual smells
- ☐ Upsets of the treatment plant due to unknown conditions

Does the facility have any industrial users (IUs) which meet any of the following criteria:

1. **Has a lot of process wastewater (5% of the flow at the waste treatment facility or more than 25,000 gallons per work day.)**
   a. Examples: food processor, dairy, slaughterhouse, industrial laundry.

☐ YES ☐ NO

1. **Is subject to federal categorical pretreatment standards**;
   a. Examples: metal plating, cleaning or coating of metals, blueing of metals, aluminum extruding, circuit board manufacturing, tanning animal skins, pesticide formulating or packaging, and pharmaceutical manufacturing or packaging,

☐ YES ☐ NO

2. **Is a concern to the POTW.**
   a. Examples: septage hauler, restaurant and food service, car wash, hospital, photo lab, carpet cleaner, commercial laundry.

☐ YES ☐ NO

Do any users of the water treatment facility caused any of the following to occur:

☐ YES ☐ NO A discharge which creates a fire or explosion hazard in the collection system.
☐ YES ☐ NO A discharge which creates toxic gases, vapor or fumes in the collection system.
☐ YES ☐ NO A discharge of solids or thick liquids which creates flow obstructions in the collection system.
☐ YES ☐ NO An acidic discharge (low pH) which causes corrosive damage to the collection system.
☐ YES ☐ NO Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause problems in the collection system or at the waste treatment facility.
☐ YES ☐ NO Waste haulers are prohibited from discharging without permission.
☐ YES ☐ NO Does the facility believe that illegal dumping is occurring in the jurisdiction?

UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information *continued*

Complete and submit a preliminary inspection of each business that is discharging process wastewater to the wastewater treatment plant

B. PRELIMINARY INSPECTION FORM

Inspection Date _____ Inspection Time _____

Name of Business _____ Person Contacted _____
Street Address _____ City _____
Email Address _____ Phone Number _____

Description of Business:

Principal product or service:

Raw Materials used:

Production process is: ☐ Batch ☐ Continuous ☐ Both

If yes, briefly describe seasonal production cycle.

This facility generates the following types of wastes (check all that apply):

1. ☐ Domestic wastes (Restrooms, employee showers, etc.)
2. ☐ Cooling water, non-contact
3. ☐ Boiler/Tower blowdown
4. ☐ Cooling water, contact
5. ☐ Process
6. ☐ Equipment/Facility washdown
7. ☐ Air Pollution Control Unit
8. ☐ Storm water runoff to sewer
9. ☐ Other describe

Wastes are discharged to (check all that apply):

☐ Evaporation
☐ Ground water
☐ Sanitary sewer
☐ Other (describe below)
☐ Storm sewer
☐ Surface water
☐ Waste haulers

Name of waste hauler(s), if used

_____ _____ _____

Is a grease trap installed? ☐ Yes ☐ No
Is it operational? ☐ Yes ☐ No

UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information *continued*

B. PRELIMINARY INSPECTION FORM *continued*

Does the business discharge a lot of process wastewater?

- More than 5% of the flow to the waste treatment facility? ☐ Yes ☐ No
- More than 25,000 gallons per work day? ☐ Yes ☐ No

Does the business do any of the following or manufacture any of the following?

- ☐ Adhesives
- ☐ Aluminum Forming
- ☐ Battery Manufacturing
- ☐ Car Wash
- ☐ Carpet Cleaner
- ☐ Copper Forming
- ☐ Dairy
- ☐ Electric & Electronic Components
- ☐ Explosives Manufacturing
- ☐ Food Processor
- ☐ Foundries
- ☐ Hospital
- ☐ Industrial Porcelain Ceramic Manufacturing
- ☐ Inorganic Chemicals Mfg. or Packaging
- ☐ Iron & Steel
- ☐ Laundries
- ☐ Metal Finishing, Coating or Cleaning
- ☐ Mining
- ☐ Nonferrous Metals Manufacturing
- ☐ Organic Chemicals Manufacturing or Packaging
- ☐ Paint & Ink Manufacturing
- ☐ Pesticides Formulating or Packaging
- ☐ Petroleum Refining
- ☐ Pharmaceuticals Manufacturing or Packaging
- ☐ Photo Lab
- ☐ Plastics Manufacturing
- ☐ Restaurant & Food Service
- ☐ Rubber Manufacturing
- ☐ Septage Hauler
- ☐ Slaughter House
- ☐ Soaps & Detergents Manufacturing
- ☐ Steam Electric Generation
- ☐ Tanning Animal Skins
- ☐ Textile Mills

Are any process changes or expansions planned during the next three years? ☐ Yes ☐ No

If yes, attach a separate sheet to this form describing the nature of planned changes or expansions.

_____ _____

Inspector Name Printed | Wastewater Treatment Facility

Any questions regarding the form or assistance with inspecting business please contact

Jennifer Robinson
Pretreatment Coordinator
Division of Water Quality
P. O. Box 144870
Salt Lake City, Utah 84114-4870

Phone: (801) 536-4383
Fax: (801) 536-4301
E-Mail:jenrobinson@utah.gov

UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information *continued*

Either list all businesses below or provide a list of business licenses issued in the facilities service area.

	Name of Business	Jurisdiction	SIC Codes	Total Average Process Flow (gpd)	Total Average Facility Flow (gpd)	Facility Description (dentist, manufacturing [state product], dairy, assisted living facility, etc.)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						

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Part VIII. Bisolids Information

Was the Biosolids Annual Report submitted? ■ YES ☐ NO

■ Attach a Biosolids Management Plan with application

Serve Connections? 8,200

Provide the total dry metric tons per the latest 365-day period of sewage sludge generated, treated, used and disposed of:

Practice	Dry Metric Tons per 365-day Period
Amount generated at the facility	377
Amount treated at the facility	377
Amount used (i.e., received from offsite) at the facility	
Amount disposed of at the facility	377

Treatment Provided at Your Facility

Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge

- ☐ Preliminary operations (e.g., sludge grindling and degritting)
- ☐ Stablilization
- ☐ Composting
- ☐ Disinfection
- ☐ Heat drying
- ☐ Methane or biogas capture and recovery
- ■ Thickening (concentration)
- ■ Anaerobic digestion
- ☐ Conditioning
- ■ Dewatering (e.g. centrifugation, sludge drying beds, sludge lagoons)
- ☐ Thermal reduction

Sewage Sludge Disposal Method

Land Application of Bulk Sewage Sludge

Is sewage sludge form your facility applied to the land? ☐ YES ■ NO If No, Skip to next section

Total dry metric tons per 365-day period of sewage sludge applied to all land sites:

Surface Disposal

Is sewage sludge from your facility placed on a surface disposal site?

☐ YES ☐ NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility placed on all surface disposal sites per 365-day period: _____

Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?

☐ YES ☐ NO If No, complete the below information

Surface disposal site *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip _____

Contact Name _____ Title _____

Phone Number _____ Email Address _____

UPDES Municipal (POTW) Permit Application

Part VIII. Bisolids Information *continued*

Incineration

Is sewage sludge from your facility fired in a sewage sludge incinerator?
☐ YES ■ NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period: _____

Do you own or operate all sewage sludge incinerators in which sewage sludge from facility is fired?
☐ YES ☐ NO If No, complete the below information

Incinerator location *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip

Contact Name _____ Title _____

Phone Number _____ Email Address _____

Disposal in a Municipal Solid Waste Landfill

Is sewage sludge from your facility placed on a municipal solid waste landfill?
■ YES ☐ NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period: _____

Do you own or operate the municipal solid waste landfill in which sewage sludge is disposed?
■ YES ☐ NO If No, complete the below information

Municipal Solid Waste Landfill *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip _____

Contact Name _____ Title _____

Phone Number _____ Email Address _____

UPDES Municipal (POTW) Permit Application

Part IX. Reuse Information

Is wastewater applied to land?
☐ YES ■ NO If YES, complete the below information.

Land Application Site and Discharge Data

Location	Size	Average Daily Volume Applied	How often
	acres	gpd	☐ Seasonal ☐ Continuous ☐ Intermittent
	acres	gpd	☐ Seasonal ☐ Continuous ☐ Intermittent
	acres	gpd	☐ Seasonal ☐ Continuous ☐ Intermittent

Seasonal land application.

Indicate months of seasonal land application

☐ January	☐ April	☐ July	☐ October
☐ February	☐ May	☐ August	☐ November
☐ March	☐ June	☐ September	☐ December

Where is the Reuse water distributed

- ☐ Residential irrigation
- ☐ Urban uses
  - ○ Non-residential landscape irrigation
  - ○ Golf course irrigation
  - ○ Toilet flushing
  - ○ Fire protection
- ☐ Irrigation of food crops (direct contact with edible part) – spray irrigation
- ☐ Irrigation of food crops *(Non direct contact with edible part) – no spray irrigation*
- ☐ Irrigation
  - ○ Sod farms
  - ○ Silviculture
  - ○ Limited access highway rights of way
  - ○ Other areas where human access is restrict or unlikely to occur
- ☐ Irrigation of animal feed crops other than pasture for milking animals
- ☐ Impoundment of wastewater where direct human contact is not allowed or is unlikely to occur
- ■ Cooling water
- ☐ Soil compaction or duct control in construction areas
- ☐ Other

☐ **Attached an updated Reuse Project Plan**

An updated Reuse Project Plan is required during every permit renewal.

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review

The objective of antidegradation rules and policies is to protect existing high quality waters and set forth a process for determining where and how much degradation is allowable for socially and/or economically important reasons. In accordance with Utah Administrative Code (UAC R317-2-3), an antidegradation review (ADR) is a permit requirement for any project that will increase the level of pollutants in waters of the state. The rule outlines requirements for both Level I and Level II ADRs, as well as public comment procedures. This review form is intended to assist the applicant and Division of Water Quality (DWQ) staff in complying with the rule but is not a substitute for the complete rule in R317-2-3.5. Additional details can be found in the *Utah Antidegradation Implementation Guidance* and relevant sections of the guidance are cited in this review form.

ADRs should be among the first steps of an application for a UPDES permit because the review helps establish treatment expectations. The level of effort and amount of information required for the ADR depends on the nature of the project and the characteristics of the receiving water. To avoid unnecessary delays in permit issuance, DWQ recommends that the process be initiated at least one year prior to the date a final approved permit is required.

DWQ will determine if the project will impair beneficial uses (Level I ADR) using information provided by the applicant and whether a Level II ADR is required. The applicant is responsible for conducting the Level II ADR. For the permit to be approved, the Level II ADR must document that all feasible measures have been undertaken to minimize pollution for socially, environmentally or economically beneficial projects resulting in an increase in pollution to waters of the state.

For permit requiring a Level II ADR, this antidegradation form must be completed and approved by DWQ before any UPDEs permit can be issued. Typically, the ADR form is completed in an iterative manner in consultation with DWQ. The applicant should first complete the statement of social, environmental and economic importance (SEEI) in Section C and determine the parameters of concern (POC) in Section D. Once the POCs' are agreed upon by DWQ, the alternatives analysis and selection of preferred alternative Section E can be conducted based on minimizing degradation resulting from discharge of the POCs. Once the applicant and DWQ agree upon the preferred alternative, the review is considered complete, and the form is submitted to DWQ.

What are the designated uses of the receiving water (R317-2-6)?

- ☐ Domestic Water Supply
- ■ Recreation
- ■ Aquatic Life
- ■ Agricultural Water Supply
- ☐ Great Salt Lake

Antidegradation Category 1, 2 or 3 of receiving water (R317-2-3.2, -3.3, and -3.4): 3

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

Effluent flow reviewed: *typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.*

The upgrade design is based on projections for the year 2045, which are for 4.03 MGD annual average flow, 5.02 MGD max month flow, and 6.03 MGD max daily flow.

What is the application for? (Check all that apply)

- ☐ A UPDES permit for a new facility, project, or outfall.
- ■ A UPDES permit renewal with an expansion of modification of an existing wastewater treatment works.
- ☐ A UPDES permit renewal requiring limits for a pollutant not covered by the previous permit and/or an increase to existing permit limits.
- ☐ A UPDES permit renewal with no charges in facility operations.

Section B. Is a Level II ADR required?

This section of the form is intended to help applicants determine if a Level II ADR is required for specific permitted activities. In addition, the Executive Secretary may require a Level II ADR for an activity with the potential for major impact on the quality of waters of the state (R317-2-3.5a.1).

B1. The UPDES permit is new or is being renewed and the proposed effluent concentration and loading limits are higher than the concentration and loading limits in the previous permit and any previous antidegradation review(s).

- ■ YES – (Proceed to B3 of the Form)
- ☐ NO – No Level II ADR is required and there is no need to proceed further with the review questions. Continue to the Certification Statement and Signature page.

B2. Will any pollutants use assimilative capacity of the receiving water, i.e. do the pollutant concentrations in the effluent exceed those in the receiving waters at critical conditions? For most pollutants, effluent concentrations that are higher than the ambient concentrations require an antidegradation review? For a few pollutants such as dissolved oxygen, and antidegradation review is required if the effluent concentrations are less than the ambient concentrations in the receiving water. (Section 3.3.3 of Implementation Guidance)

- ☐ YES – (Proceed to B4 of the Form)
- ☐ NO – No Level II ADR is required and there is no need to proceed further with the review questions. Continue to the Certification Statement and Signature page.

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

B3. Are water quality impacts of the proposed project temporary and limited (Section 3.3.4 of Implementation Guidance)? Proposed projects that will have temporary and limited effects on water quality can be exempted form a Lev le II ADR.

☐ YES – Identify the reason used to justify this determination if B4.1 and proceed to Section G. No Level II ADR is required.

☒ NO – A Level II ADR is required (Proceed to Section C)

B3.1 Complete this question only if the applicant is requesting a Level II review exclusion for temporary and limited projects (See R317-2-3.5(b)(3) and R317-2-3.5(b)(4)). For projects requesting a temporary and limited exclusion please indicate the factor(s) used to justify this determination (check all that apply and provide details as appropriate) (Section 3.3.4 of Implementation Guidance):

☐ Water quality impacts will be temporary and related exclusively to sediment or turbidity and fish spawning will not be impaired.

Factors to be considered in determining whether water quality impacts will be temporary and limited:

a) The length of time during which water quality will be lowered:	
b) The perfect change in ambient concentrations of pollutants:	
c) Pollutants affected:	
d) Likelihood for long-term water quality benefits:	
e) Potential for any residual long-term influences on existing uses:	
f) Impairment of fish spawning, survival and development of aquatic fauna excluding fish removal efforts:	
Additional justification, as needed:	

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

Level II ADR

Section C, D, E, and F of the form constitute the Level II ADR Review. The applicant must provide as much detail as necessary for DWQ to perform the antidegradation review. Questions are provided for the convenience of applicants; however, for more complex permits it may be more effective to provide the required information in a separate report. Applicants that prefer a separate report should record the report name here and proceed to Section G of the form.

Option Report Name:

Section C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located? *The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in the section. More information is available in Section 6.2 of the Implementation Guidance.*

C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated tax revenues.

The benefits include providing additional treatment capacity to serve the projected future population of the city. Population growth will allow for additional commercial and industrial jobs and associated tax revenues.

C2. Describe any environmental benefits to be realized through implementation of the proposed project.

The upgraded system will provide a higher level of treatment, including increased removal of nutrients (nitrogen and phosphorus).

C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.

No losses have been identified.

C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.

The project is designed to serve the population projected through 2045.

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving water.

None.

C6. Will the discharge potentially impact a drinking water source, e.g., Class 1C waters? Depending upon the locations of the discharge and its proximity to downstream drinking water diversions, additional treatment or more stringent effluent limits or additional monitoring, beyond that which may otherwise be required to meet minimum technology standards or in stream water quality standards, may be required by the Director in order to adequately protect public health and the environment (R317-2-3.5 d.).

☐ YES
■ NO

Section D. Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern. *Parameters of concern are parameters in the effluent at concentrations greater than ambient concentrations in the receiving water. The applicant is responsible for identifying parameter concentrations in the effluent and DWQ will provide parameter concentrations for the receiving water. More information is available in Section 3.3.3 of the Implementation Guidance.*

Parameters of Concern:

Rank	Pollutant	Ambient Concentration	Effluent Concentration
1. BOD			<15 mg/L
2. TSS			<15 mg/L
3. Ammonia			<2 mg/L
4. Dissolved Oxygen			>5 mg/L
5. Phosphorus			<1 mg/L

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

Pollutants Evaluated that are not Considered Parameters of Concern:

Pollutant	Ambient Concentration	Effluent Concentration	Justification
1. TRC			Switching to UV disinfection
2.			
3.			
4.			
5.			

Section E. Alternative Analysis Requirements of Level II Antidegradation Review. *Level II ADRs require the applicant to determine whether there are feasible less-degrading alternatives to the proposed project. More information is available in Section 5.5 and 5.6 of the Implementation Guidance.*

E1. The UPDES permit is being renewed without any changes to flow or concentrations. Alternative treatment and discharge options including changes to operations and maintenance were considered and compared to the current processes. NO economically feasible treatment or discharge alternatives were identified that were not previously considered for any previous antigradation review(s).

☐ YES – (Proceed to Section F)

■ NO or Does Not Apply (Proceed to E2)

E2. Attach as an appendix to this form a report that describes that following factors for all alternative treatment options (see 1) a technical descriptions of the treatment process, including construction costs and continued operation and maintenance expenses, 2) the mass and concentration of discharge constituents, and 3) a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants. Most of this information is typically available from a Facility Plan, if available.

Report Name: Payson City WWTP Capital Facilities Plan, and CFP Amendment

E3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum treatment required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLC) and any secondary or categorical effluent limits.

See reports

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

E4. Were any of the following alternatives feasible and affordable?

Alternative	Feasible	Reason Not Feasible/Affordable
Pollutant Trading	☐ YES ■ NO	Not applicable
Water Recycling/Reuse	■ YES ☐ NO	
Land Application	☐ YES ■ NO	All water is used for cooling tower
Connection to Other Facilities	☐ YES ■ NO	Not practical
Upgrade to Existing Facility	■ YES ☐ NO	
Total Containment	☐ YES ■ NO	Not practical
Improved O&M of Existing Systems	■ YES ☐ NO	
Seasonal or Controlled Discharge	☐ YES ■ NO	Not applicable
New Construction	■ YES ☐ NO	
No Discharge	☐ YES ■ NO	Not pratical

E5. From the applicant's perspective, what is the preferred treatment option?

BNR oxidation ditch as presented in the CFP Amendment.

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review *continued*

E6. Is the preferred option also the least polluting feasible alternative?

☒ YES ☐ NO

If No, what were less degrading feasible alternative(s)?

If No, provide a summary of the justification for not selecting the least polluting feasible alternative and if appropriate, provide a more detailed justification as an attachment.

Section F. Optional Information

F1. Does the applicant want to conduct optional public review(s) in addition to the mandatory public review? Level II ADRs are public noticed for a thirty day comment period. More information is available in Section 3.7.1 of the Implementation Guidance.

☐ YES ☒ NO

F2. Does the project include an optional mitigation plan to compensate for the proposed water quality degradation?

☐ YES ☒ NO

Report Name: _____

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part XI. Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with system designed to assure that quailed personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations.

DAVID C. TUCKETT	David C Tuckett	Bayson City Manager	8/31/2022
PRINT Signatory Authority	**Signature**	**Title**	**Date**

The Division of Water Quality may request addition information.

Important: The UPDES Permit Application will not be considered complete unless you answer every question. If an item does not apply to you, enter "Not Applicable" to show that you considered the question.

The UPDES Permit Application, must be signed as follows:

1) For a corporation, a responsible corporate officer shall sign the NOT, a responsible corporate officer means:
   a. A President, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
   b. The manager of one or more manufacturing, production, or operating facilities, if
      i. The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations:
      ii. The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
      iii. Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2) For a partnership of sole proprietorship, the general partner or the proprietor, respectively; or
3) For a municipality, state or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of any agency means;
   a. The chief executive officer of the agency; or
   b. A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Where to File the UPDES Permit Application form:

Please submit the original form with a signature in ink to the below address. Remember to retrain a copy for your records.

UPDES sent by mail:

Division of Water Quality
195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

OFFICE USE ONLY

Date received: ___/___/___ **Received by:** _____ **Document No:** _____

via: ☐ Email ☐ Fax ☐ Webportal ☐ Mail ☐ Hand Delivery


Unnamed Drainage Ditch
Leading to Beer Creek
Central Utah Veterans Home
Outfall 001
Outfall 001R
Payson WWTP
Facility Boundary
Beer Creek
McDonald's
Olson's Garden Shoppe
3315 ft
1985
Payson WWTP Area Map
Google Earth
Imagery Date: 8/28/2021 lat 40.060693° lon -111.732802° elev 4565 ft eye alt 18977 ft

Payson City Corporation WWTP

Biosolids Disposal & Site Inspection Log

2021

By Signing this log you certify the following:

Dump site was chosen at the Payson City Landfill for the disposal of our bio-solids, in accordance with Payson City Biosolids UPDES Permit UTL-020427, Part III, section B-1 & 2. The dumping site will not interfere with regular dumpers and will not be accessible to the general public.

Certification

I certify under penalty of law, that the vector atrraction requirements in Part III.B.1, have been met, This determination has been made under my direction and supervision in accordance with the system designed to assure that qualifed personnel preperly gathered and evaluated the information used to determine that the vector attraction reduction requirements have been met. I am asware that there are significant penalties for false certification including the possibility of imprisonment.

Indicate		Date	Time	# of LOADS	Paint Filter Test Performed	Paint Filter Test Result	Location of Paint Filter Test	Date of Paint Filter Test	Paint Filter Test Result	Disposal Site Isolated?	Net Weight of disposal in tons	Operator Initial
Disposal	Inspection											
		1-4-21	12:52	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.23	RG
		1-4-21	2:02	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.18	RG
		1-4-21	2:59	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.44	RG
		1-5-21	9:46	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.82	RG
		1-7-21	1:50	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.76	RG
		1-7-21	2:47	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.82	RG
		1-11-21	8:53	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.98	RG
		1-11-21	10:11	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.54	RG
		1-11-21	1:39	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.59	RG
		1-11-21	3:01	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.0	RG
		1-13-21	3:43	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.01	RG
		1-14-21	10:01	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.37	RG
		1-14-21	1:45	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.67	RG
		1-14-21	2:39	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.99	RG
		1-20-21	10:40	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.59	RG
		1-20-21	2:57	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.28	RG
		1-21-21	1:51	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.23	RG
		1-21-21	3:18		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.21	RG
		1-26-21	2:38	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.14	CF
		2-3-21	8:48	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.98	CF
		2-3-21	9:32	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.09	CF
		2-3-21	1:31	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.21	CF

*** REMEMBER to get weight ticket from the landfill. It is very important for it to have the correct date and waste type on the ticket. Afterwards, give tickets to Sarah for state report.

Payson City Corporation WWTP

Biosolids Disposal & Site Inspection Log

2021

By Signing this log you certify the following:

Dump site was chosen at the Payson City Landfill for the disposal of our bio-solids, in accordance with Payson City Biosolids UPDES Permit UTL-020427, Part III, section B-1 & 2. The dumping site will not interfere with regular dumpers and will not be accessible to the general public.

Certification

I certify under penalty of law, that the vector atrraction requirements in Part III.B.1, have been met, This determination has been made under my direction and supervision in accordance with the system designed to assure that qualifed personnel preperly gathered and evaluated the information used to determine that the vector attraction reduction requirements have been met. I am asware that there are significant penalties for false certification including the possibility of imprisonment.

Indicate		Date	Time	# of LOADS	Paint Filter Test Performed	Paint Filter Test Result	Location of Paint Filter Test	Date of Paint Filter Test	Paint Filter Test Result	Disposal Site Isolated?	Net Weight of disposal in tons	Operator Initial
Disposal	Inspection											
		2-3-21	2:26	1	☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.39	CF
		2-11-21	8:43	1	☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.19	CF
		2-11-21	9:43	1	☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.29	CF
		2-16-21	9:56	1	☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.99	CF
		2-16-21	11:15	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.1	CF
		2-16-21	1:13	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.48	CF
		2-16-21	1:57	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.91	CF
		2-17-21	2:33	1	☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.31	KB
		3-8-21	9:59	1	☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.52	KB
		3-24-21	8:29	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.01	CF
		3-25-21	8:26	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.02	CF
		3-30-21	2:54	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.31	CF
		4-5-21	11:58	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.14	KB
		4-5-2021	3:43	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	7.96	KB
		4-6-21	9:08	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.97	KB
		4-6-21	9:49	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.68	KB
		4-7-21	8:45	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.96	CF
		4-7-21	3:16	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.02	CF
		4-20-21	3:26	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	19920 9.96	BD
		4-22-21	8:51	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	16800 8.4	BD
		4-22-21	1:45	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	23460 9.7	BD
		4-27-21	1:19	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	18880 9.44	BD

*** REMEMBER to get weight ticket from the landfill. It is very important for it to have the correct date and waste type on the ticket. Afterwards, give tickets to Sarah for state report.

Payson City Corporation WWTP

Biosolids Disposal & Site Inspection Log

2021

By Signing this log you certify the following:

Dump site was chosen at the Payson City Landfill for the disposal of our bio-solids, in accordance with Payson City Biosolids UPDES Permit UTL-020427, Part III, section B-1 & 2. The dumping site will not interfere with regular dumpers and will not be accessible to the general public.

Certification

I certify under penalty of law, that the vector atrraction requirements in Part III.B.1, have been met, This determination has been made under my direction and supervision in accordance with the system designed to assure that qualifed personnel preperly gathered and evaluated the information used to determine that the vector attraction reduction requirements have been met. I am asware that there are significant penalties for false certification including the possibility of imprisonment.

Indicate		Date	Time	# of LOADS	Paint Filter Test Performed	Paint Filter Test Result	Location of Paint Filter Test	Date of Paint Filter Test	Paint Filter Test Result	Disposal Site Isolated?	Net Weight of disposal in tons	Operator Initial
Disposal	Inspection											
		4-27-21	2:52	1	☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	~~2~~ 10.18	BD
		4-29-21	10:43		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.69	BD
		5-3-21	3:08		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.01	BD
		5-4-21	2:00		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.65	BD
		5-4-21	2:58		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.13	BD
		5-17-21	1:46		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.34	BD
		5-17-21	3:45		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.64	BD
		5-27-21	10:12		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.03	RG
		5-27-21	11:02		☐Yes ☐No		☑ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.50	RG
		5-27-21	1:51		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	10.10	RG
		6-28-21	3:36		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.19	RG
		6-29-21	9:58		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	7.37	RG
		6-29-21	12:08		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.01	RG
		6-29-21	1:03		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.40	RG
		6-29-21	2:36		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8:45	RG
		6-29-21	3:36		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8:42	RG
		6-30-21	9:43		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	5.46	RG
		6-30-21	10:42		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	5.82	RG
		6-30-21	1:19		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.98	RG
		7-14-21	9:18		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	9.37	RG
		7-14-21	10:24		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.61	RG
		7-14-21	2:18		☐Yes ☐No		☐ Screw Press ☑ Drying Bed		☐ Pass ☐ Fail	☑Yes ☐No	8.91	RG

*** REMEMBER to get weight ticket from the landfill. It is very important for it to have the correct date and waste type on the ticket. Afterwards, give tickets to Sarah for state report.

Payson City Corporation WWTP

Biosolids Disposal & Site Inspection Log

2021

By Signing this log you certify the following:

Dump site was chosen at the Payson City Landfill for the disposal of our bio-solids, in accordance with Payson City Biosolids UPDES Permit UTL-020427, Part III, section B-1 & 2. The dumping site will not interfere with regular dumpers and will not be accessible to the general public.

Certification

I certify under penalty of law, that the vector atrraction requirements in Part III.B.1, have been met, This determination has been made under my direction and supervision in accordance with the system designed to assure that qualifed personnel preperly gathered and evaluated the information used to determine that the vector attraction reduction requirements have been met. I am asware that there are significant penalties for false certification including the possibility of imprisonment.

Indicate		Date	Time	# of LOADS	Paint Filter Test Performed	Paint Filter Test Result	Location of Paint Filter Test	Date of Paint Filter Test	Paint Filter Test Result	Disposal Site Isolated?	Net Weight of disposal in tons	Operator Initial
Disposal	Inspection											
		8-3-21	9:48	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.32	RG
		8-3-21	10:31	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.63	RG
		8-3-21	1:25	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.20	RG
		8-3-21	2:37	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.50	RG
		8-11-21	8:33	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.31	RG
		8-11-21	9:22	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.60	RG
		8-11-21	10:11	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.30	RG
		8-11-21	12:58	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.89	RG
		8-11-21	1:52	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.66	RG
		9-1-21	2:06	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.86	RG
		9-1-21	3:01	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.67	RG
		9-15-21	1:32	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.19	RG
		9-15-21	2:32	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.25	RG
		9-20-21	10:09	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.95	RG
		9-22-21	10:09	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.14	RG
		9-22-21	11:06	1	☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.38	RG
		9-22-21	12:41	1	☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.46	RG
		9-22-21	2:20	1	☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	11.05	RG
		11-10-21	1:15	1	☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.74	RG
		11-11-21	12:56	1	☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.54	RG
		11-11-21	2:03	1	☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.34	RG
		11-11-21	3:17	1	☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.23	RG

*** REMEMBER to get weight ticket from the landfill. It is very important for it to have the correct date and waste type on the ticket. Afterwards, give tickets to Sarah for state report.

Payson City Corporation WWTP

Biosolids Disposal & Site Inspection Log

2021

By Signing this log you certify the following:

Dump site was chosen at the Payson City Landfill for the disposal of our bio-solids, in accordance with Payson City Biosolids UPDES Permit UTL-020427, Part III, section B-1 & 2. The dumping site will not interfere with regular dumpers and will not be accessible to the general public.

Certification

I certify under penalty of law, that the vector atrraction requirements in Part III.B.1, have been met, This determination has been made under my direction and supervision in accordance with the system designed to assure that qualifed personnel preperly gathered and evaluated the information used to determine that the vector attraction reduction requirements have been met. I am asware that there are significant penalties for false certification including the possibility of imprisonment.

Indicate		Date	Time	# of LOADS	Paint Filter Test Performed	Paint Filter Test Result	Location of Paint Filter Test	Date of Paint Filter Test	Paint Filter Test Result	Disposal Site Isolated?	Net Weight of disposal in tons	Operator Initial
Disposal	Inspection											
		11-15-21	2:06		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.78	RG
		11-15-21	2.57		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.89	RG
		11-16-21	9:10		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.29	RG
		11-16-21	10:35		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.35	RG
		11-16-21	12:31		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.65	RG
		11-16-21	1:24		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.66	RG
		11-16-21	2:11		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.92	RG
		11-16-21	3:12		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.00	RG
		11-18-21	9:58		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	11.5	MW
		11-18-21	10:34		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.96	MW
		11-18-21	9:12		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.12	MW
		11-23-21	10:52		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.89	RG
		11-29-21	11:43		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.21	RG
		11-30-21	10:19		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.27	RG
		11-30-21	1:33		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.02	RG
		11-30-21	2:34		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	10.91	RG
		12-13-21	1:11		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.25	RG
		12-13-21	2:01		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	9.16	RG
		12-23-21	12:25		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	8.38	RG
		12-27-21	10:25		☐Yes ☐No		☐ Screw Press ☒ Drying Bed		☐ Pass ☐ Fail	☒Yes ☐No	7.14	RG
					☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☐Yes ☐No		
					☐Yes ☐No		☐ Screw Press ☐ Drying Bed		☐ Pass ☐ Fail	☐Yes ☐No		

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Payson Renewal Application Replaced Page 2

UPDES Municipal (POTW) Permit Application

Part II. Facility Information

Population served? 24,000

Design and Actual Flow Rates

Provide design and actual flow rates in designated spaces.

Design Flow Rate	
3.0	mgd

Annual Average Flow Rates (Actual)

Five Years Ago		Four Years Ago		Three Years Ago	
1.68	mgd	1.66	mgd	1.72	mgd
Two Years Ago		**Last Year**		**Current Year**	
1.67	mgd	1.72	mgd	1.76	mgd

Maximum Daily Flow Rates (Actual)

Five Years Ago		Four Years Ago		Three Years Ago	
2.81	mgd	2.26	mgd	3.09	mgd
Two Years Ago		**Last Year**		**Current Year**	
1.98	mgd	2.34	mgd	2.20	mgd

Describe the treatment for each outfall

	Outfall No. 001	Outfall No. 001R	Outfall No. _____
Highest Level of Treatment (check all that apply per outfall)	☐ Primary ☐ Equivalent to secondary ☐ Secondary ■ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ■ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall			
BOD_5	85 %	85 %	%
TSS	85 %	85 %	%
Phosphorus	■ Not applicable %	■ Not applicable %	☐ Not applicable %
Nitrogen	■ Not applicable %	■ Not applicable %	☐ Not applicable %
Other (specify)	■ Not applicable %	■ Not applicable %	☐ Not applicable %