

ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

This document gives pertinent information concerning the issuance of the AZPDES permit listed below. This facility is a wastewater treatment plant (WWTP) with a design capacity of 4.4 million gallons per day (mgd) and is considered to be a major facility under the NPDES program. The effluent limitations contained in this permit will maintain the Water Quality Standards listed in Arizona Administrative Code (A.A.C.) R18-11-101 *et seq.* This permit is proposed to be issued for a period of 5 years.

I. PERMITTEE INFORMATION	
Permittee's Name:	Liberty Utilities
Permittee's Mailing Address:	14920 W. Camelback Road Litchfield Park, Arizona 85340
Facility Name:	Sarival Water Reclamation Facility (WRF)
Facility Address or Location:	1570 N. Sarival Avenue Goodyear, Arizona 85338
County:	Maricopa County
Contact Person(s): Phone/e-mail address	Mr. Terry Gilbertson, Operations Manager (623) 298-4825 / Terry.Gilbertson@libertyutilities.com
AZPDES Permit Number:	AZ0026425
Inventory Number:	514111
LTF Number:	96995

II. STATUS OF PERMIT(S)	
AZPDES permit applied for:	New
Date application received:	November 22, 2022
Date application was determined administratively complete:	January 17, 2023
Previous permit number (if different):	N/A
Previous permit expiration date:	N/A

208 Consistency:

In accordance with A.A.C. R18-9-A903(6), a permit cannot be issued for any discharge inconsistent with a plan or plan amendment approved under section 208(b) of the Clean Water Act.

Based on review of application and the Maricopa Association of Governments' (MAG) 208 Water Quality Management Plan Amendment dated December 18, 2014, Sarival WRF is consistent with the Regional Water Quality Management plan.

Liberty Utilities has the following permits issued by ADEQ applicable to the Sarival WRF:

Type of Permit

Aquifer Protection Permit (APP)	P - 513981	Regulates discharges to the local aquifer
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III. GENERAL FACILITY INFORMATION

Type of Facility:	Privately owned wastewater treatment plant (WWTP)
Facility Location Description:	Facility is located on South West corner of McDowell Road and Sarival Avenue.
Permitted Design Flow:	4.4 million gallons per day (mgd).
Treatment Level (WWTP):	Tertiary treatment level.
Treatment Processes:	The treatment process will consist of an influent headworks and grit removal system with two (2) coarse screens, two (2) vortex grit removal units, and two (2) fine screens; two (2) Closed Loop Reactor (CLR) secondary treatment process trains, four (4) membrane separation trains, two (2) sodium hypochlorite disinfection / chlorine contact basins.
Sludge Handling and Disposal:	Two (2) Waste Activated Sludge (WAS) pumps will convey sludge and scum from the MBR separation tanks/WAS Collection Pit to the Sludge Holding Tank (SHT) located at the Bio-solids Dewatering Building. The dewatering equipment will consist of an aerated SHT and two (2) centrifuges, as part of a packaged skid system, which will dewater sludge to a cake. The aerated WAS storage tank will have a nominal capacity of 12,000 gallons and a connection for emergency liquid hauling. In an emergency, liquid sludge can be transported to the Liberty's Palm Valley WRF (APP permit #100310) for storage, digestion and dewatering prior to disposal. The dewatered solids will be discharged to an off-loading conveyor and transferred to 20-ton roll-off bins. Dewatered solids, screenings and grit will be hauled off to an approved landfill for disposal.
Nature of Facility Discharge:	Domestic wastewater from residential, commercial, and industrial sources.

Total Number of Significant Industrial Users (SIUs):	Two (2) – 1. Western Facilities, LLC – Fluid Milk Manufacturing Facility 2. Ball Metal Beverage Container Corp. – Can Manufacturing Facility
Average Flow Per Discharge:	4.4 million gallons per day (mgd)
Service Area:	Western Service Area which includes portions of Litchfield Park, Glendale, Goodyear, and unincorporated Maricopa County.
Service Population:	Approximately 50,000 people
Reuse / Irrigation or other disposal method(s):	Treated effluent from the Sarival WRF is recharged at Liberty’s Sustainable Effluent Aquifer Project (SEAP) Site located at the Northwest corner of Camelback Road and Bullard Avenue. This AZPDES permit will authorize discharge of treated effluent to the Roosevelt Irrigation District Canal (at a new outfall located at west of Sarival Avenue and south of McDowell Road).
Continuous or Intermittent Discharge:	Continuous

The Sarival WRF will utilize the existing Liberty effluent reuse distribution system, which currently supplies customers with Class A+ recycled water under valid reuse permit, and also provides groundwater recharge at Liberty’s sustainable Effluent Aquifer Project (SEAP) site located at Northwest corner of Camelback Rd. and Bullard Ave. The existing Palm Valley effluent distribution system has an AZPDES permit (AZ0025712) and agreement with Roosevelt irrigation District (RID) to discharge treated effluent to their irrigation canal where it crosses under North Bullard Avenue. Additionally, the Sarival WRF will have a new, second discharge point to the RID canal under this AZPDES permit. This new discharge point is located on the northside of the treatment plant site and on the south side of the existing canal and will be designed to accommodate the full capacity effluent discharge pump station.

IV. RECEIVING WATER

The State of Arizona has adopted water quality standards to protect the designated uses of its surface waters. Streams have been divided into segments and designated uses assigned to these segments. The water quality standards vary by designated use depending on the level of protection required to maintain that use.

Receiving Water (Federal):	The Water of the U.S. Protected Surface Water (WOTUS PSW) for facility/ outfall is the Roosevelt Irrigation District (RID) Canal. The RID Canal is a Phoenix Area Canal – Below Municipal WTP intakes and all other locations, which is a Water of the US (WOTUS) on the Protected Surface Water List (PSWL).
River Basin:	Middle Gila River Basin
Outfall Location(s):	Outfall 001: Township 01 N, Range 02 W, Section 1 Latitude 33° 27' 53.1" N, Longitude 112° 24' 43.8" W

Designated uses for the receiving water listed above:	Agricultural Irrigation (Agl) Agricultural Livestock watering (Agl)
Is the receiving water on the 303(d) list?	No, and there are no TMDL issues associated.
<p>Given the uses stated above, the applicable narrative water quality standards are described in A.A.C. R18-11-108, and the applicable numeric water quality standards are listed in A.A.C. R18-11-109 and in Appendix A thereof. There are two standards for the Aquatic and Wildlife uses, acute and chronic. In developing AZPDES permits, the standards for all applicable designated uses are compared and limits that will protect for all applicable designated uses are developed based on the standards.</p>	

V. DESCRIPTION OF DISCHARGE		
<p>Because this is a new facility and no discharges have yet occurred, effluent monitoring data are not available. The following is the effluent quality based on the treatment processes designed, as outlined in the application.</p>		
Parameters	Units	Maximum Daily Discharge Concentration
Biochemical Oxygen Demand (BOD)	mg/L	< 10
Total Suspended Solids (TSS)	mg/L	None
Total Kjeldahl Nitrogen (TKN)	mg/L	< 10
<i>E. coli</i>	cfu/100 mL	Non-detect
Facility Design Removal Rates:	BOD 98 % TSS 96 % N 86 %	

VI. STATUS OF COMPLIANCE WITH THE EXISTING AZPDES PERMIT
This section is not applicable because this is a new permit.

VII. PROPOSED PERMIT CHANGES
This section is not applicable because this is a new permit.

VIII. DETERMINATION OF EFFLUENT LIMITATIONS and ASSESSMENT LEVELS

When determining what parameters need monitoring and/or limits included in the permit, both technology-based and water quality-based criteria were compared and the more stringent criteria applied.

Technology-based Limitations: As outlined in 40 CFR Part 133:

The regulations found at 40 CFR §133 require that POTWs achieve specified treatment standards for BOD, TSS, and pH based on the type of treatment technology available. The Sarival WRF is a privately-owned plant using the same technology for treatment of domestic sewage as a POTW. Therefore, technology-based effluent limitations (TBELs) have been established in the permit for these parameters based on Best Professional Judgment (BPJ). Additionally, oil & grease will be monitored with an assessment level based on best professional judgment (BPJ). The average monthly assessment level of 10 mg/L and daily maximum of 15 mg/L are commonly accepted values that can be achieved by properly operated and maintained WWTPs. This level is also considered protective of the narrative standard at A.A.C. R18-11-108(B).

Water Quality-Based Effluent Limitations:

Per 40 CFR 122.44(d)(1)(ii), (iii) and (iv), discharge limits must be included in the permit for parameters with “reasonable potential” (RP), that is, those known to be or expected to be present in the effluent at a level that could potentially cause any applicable numeric water quality standard to be exceeded. Numeric water quality standards are outlined in A.A.C. R18-11-109 and Appendix A. RP refers to an analysis, based on the statistical calculations using the data submitted or consideration of other factors, to determine whether the discharge may exceed the Water Quality Standards. The procedures used to determine RP are outlined in the *Technical Support Document for Water Quality-based Toxics Control (TSD)* (EPA/505/2-90-001). In most cases, the highest reported value for a parameter is multiplied by a factor (determined from the variability of the data and number of samples) to determine a “highest estimated value”. This value is then compared to the lowest applicable Water Quality Standard for the receiving water. If the value is greater than the standard, RP exists and a water quality-based effluent limitation (WQBEL) is required in the permit for that parameter. RP may also be determined from BPJ based on knowledge of the treatment facilities and other factors. The basis for the RP determination for each parameter with a WQBEL is shown in the table below.

It is assumed that RP exists for exceedance of water quality criteria for the pollutant *E. coli*. This parameter has been shown through extensive monitoring of WWTPs to fluctuate greatly and thus are not conducive to exclusion from limitation due to a lack of RP. Therefore, the permit contains WQBELs for *E. coli*.

Since this is a new facility and effluent data are not yet available, RP could not be calculated for other potential pollutants that are subject to numeric water quality standards. Instead of WQBELs, assessment levels (ALs) were established for Trace Substances (Table 2 in the permit). ALs and relatively frequent monitoring are necessary for these parameters because they are commonly present in WWTP effluents at variable concentrations and at a level that could exceed the applicable water quality criteria for them. (See discussion under “Assessment Levels” below for further details.) For a number of other pollutants, Effluent Characterization (EC) monitoring is required at a lesser frequency and without established ALs or numeric limits (Tables 3.a. – 3.f in the permit). (See discussion under “Effluent Characterization” below for further details).

The proposed permit limits were established using a methodology developed by EPA. Long Term Averages (LTA) were calculated for each designated use and the lowest LTA was used to calculate the average monthly limit (AML) and maximum daily limit (MDL) necessary to protect all uses. This methodology takes into account criteria, effluent variability, and the number of observations taken to determine compliance with the limit and is described in Chapter 5 of the TSD. Limits based on A&W criteria were developed using the “two-value steady state wasteload allocation” described on page 99 of the TSD. When the limit is based on human health criteria, the monthly average was set at

the level of the applicable standard and a daily maximum limit was determined as specified in Section 5.4.4 of the TSD.

Mixing Zone

The limits in this permit were determined without the use of a mixing zone. Arizona state water quality rules require that water quality standards be achieved without mixing zones unless the permittee applies for and is approved for a mixing zone. Since a mixing zone was not applied for or granted, all water quality criteria are applied at end-of-pipe.

Assessment Levels (ALs)

ALs are listed in Part I.B of the permit. An AL differs from a discharge limit in that an exceedance of an AL is not a permit violation. Instead, ALs serve as triggers, alerting the permitting authority when there is cause for re-evaluation of RP for exceeding a water quality standard, which may result in new permit limitations. The AL numeric values also serve to advise the permittee of the analytical sensitivity needed for meaningful data collection. Trace substance monitoring is required when there is uncertain RP (based on non-detect values or limited datasets) or a need to collect additional data or monitor treatment efficacy on some minimal basis. A reopener clause is included in the permit should future monitoring data indicate water quality standards are being exceeded.

The requirement to monitor for these parameters is included in the permit according to A.A.C. R18-11-104(C) and Appendix A. Except for oil and grease, ALs listed for each parameter were calculated in the same manner that a limit would have been calculated (see **Water Quality-Based Effluent Limitations**). The ALs for oil and grease were determined based on BPJ as described above.

Manganese trace substance is not included as limit or assessment levels in the permit due to a lack of RP based on best professional judgment (BPJ). The numeric standard for this pollutant is well above what would be expected from a WWTP discharge.

Hardness

The permittee is not required to sample hardness as CaCO₃ at the same time the trace metals are sampled as there are no aquatic and wildlife uses that require hardness monitoring.

Whole Effluent Toxicity (WET)

ADEQ does not require WET testing if the receiving water has no aquatic and wildlife designated uses. Although the narrative standard prohibiting the discharge of toxic pollutants applies to all discharges, the test species are not appropriate for these receiving waters and no alternative tests are readily available. Therefore, WET testing is not required in this permit, and Part IV for WET testing is shown as “not applicable.”

Effluent Characterization (EC)

In addition to monitoring for parameters assigned either a limit or an AL, sampling is required to assess the presence of pollutants in the discharge at certain minimum frequencies for additional suites of parameters, whether the facility is discharging or not. This monitoring is specified in Tables 3.a. through 3.e., *Effluent Characterization Testing*, as follows:

- Table 3.a.—General Chemistry and Microbiology: ammonia, BOD-5, *E. coli*, total residual chlorine (TRC), dissolved oxygen, total Kjeldahl nitrogen (TKN), nitrate/nitrite, oil and grease, pH, phosphorus, temperature, total dissolved solids (TDS), and total suspended solids (TSS)
- Table 3.b.—Selected Metals, and Cyanide
- Table 3.c.—Selected Volatile Organic Compounds

- Table 3. d. — Selected Base-Neutral Compounds

- Table 3. e. — Additional Parameters Based on Designated Uses (from Arizona Surface Water Quality Standards, Appendix A, Table 1)

NOTE: Some parameters listed in Tables 3.a. and 3.b. are also listed in Tables 1 or 2. In this case, the data from monitoring under Tables 1 or 2 may be used to satisfy the requirements of Tables 3.a. and / or 3.b., provided the specified sample types are the same. In the event the facility does not discharge to a Protected Surface Water during the life of the permit, EC monitoring of representative samples of the effluent is still required.

The purpose of EC monitoring is to characterize the effluent and determine if the parameters of concern are present in the discharge and at what levels. This monitoring will be used to assess RP per 40 CFR 122.44(d)(1)(iii). EC monitoring is required in accordance with 40 CFR 122.43(a), 40 CFR 122.44(i), and 40 CFR 122.48(b) as well as A.R.S. §49-203(A)(7). If pollutants are noted at levels of concern during the permit term, this permit may also be reopened to add related limits or conditions.

Permit Limitations and Monitoring Requirements

Table 1 below summarizes the parameters that are limited in the permit and the rationale for that decision. Also included are the parameters that require monitoring without any limitations or that have not been included in the permit at all and the basis for those decisions. The corresponding monitoring requirements are shown for each parameter. In general, the regulatory basis for monitoring requirements is per 40 CFR §122.44(i) *Monitoring requirements*, and 40 CFR §122.48(b), *Required monitoring*; all of which have been adopted by reference in A.A.C. R18-9-A905, *AZPDES Program Standards*.

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Table 1. Permit limitations and monitoring requirements.

Parameter	Lowest Standard/Designated Use	Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Flow	---	---	---	---	---	Discharge flow is to be monitored on a continual basis using a flow meter.
Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS)	30 mg/L 30-day average 45 mg/L 7-day average Technology-based limits 40 CFR 133.102	No Data	0	N/A	TBELs for BOD and TSS are always applicable to WWTPs.	Monitoring for influent and effluent BOD and TSS to be conducted using composite samples of the influent and the effluent. The sample type required was chosen to be representative of the discharge. The requirement to monitor influent BOD and suspended solids is included to assess compliance with the 85% removal requirement in this permit. At least one sample must coincide with WET testing to aid in the determination of the cause of toxicity, if toxicity is detected.
Chlorine, Total Residual (TRC)	No applicable Standard	N/A	0	N/A	N/A	Monitoring not required, as there are no applicable standards.
<i>E. coli</i>	No applicable standard PBC (partial Body contact) standard is applied as a Technology based limit based on BPJ. Well operated Secondary Treatment WWTPs are capable of meeting the PBC standard. 30-day geometric mean: 126 cfu / 100 mL (4 sample minimum) Single sample maximum: 575 cfu / 100 mL / PBC	No Data	0	N/A	RP always expected for WWTPs. See explanation above.	<i>E. coli</i> is to be monitored as a discrete sample and a TBEL is set in the permit.
pH	Minimum: 6.5 Maximum: 9.0 AgL A.A.C. R18-11-109(B) Minimum: 6.0 Maximum: 9.0 Technology-based limits 40 CFR 133.102	No Data	0	N/A	WQBEL or TBEL is always applicable to WWTPs.	pH is to be monitored using a discrete sample of the effluent and a WQBEL is set. 40 CFR Part 136 specifies that grab samples must be collected for pH. pH sampling must also coincide with ammonia sampling when required.

Table 1. Permit limitations and monitoring requirements.

Parameter	Lowest Standard/Designated Use	Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Temperature	No applicable standard	No Data	0	N/A	N/A	Effluent temperature is to be monitored for effluent characterization by discrete sample. 40 CFR Part 136 specifies that discrete samples must be collected for temperature. Temperature sampling must also coincide with ammonia sampling when required.
Total Dissolved Solids (TDS)	No applicable standard	No Data	0	N/A	N/A	Monitoring required for effluent characterization.
Ammonia	Standard varies with temperature and pH	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
Nutrients (Total Nitrogen and Total Phosphorus)	No applicable standards	No Data	0	N/A	N/A	Monitoring required for effluent characterization.
Oil & Grease	BPJ Technology-Based Level. The 10 mg/L monthly average and 15 mg/L daily maximum is a commonly accepted value that can be achieved by properly operated and maintained WWTPs. This level is also considered protective of the narrative standard A. A. C. R 18-11-108(B)	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Antimony	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Arsenic	200 µg/L / AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Beryllium	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Boron	1,000 µg/L / Agl	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Cadmium	50 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.

Table 1. Permit limitations and monitoring requirements.

Parameter	Lowest Standard/Designated Use	Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Chromium (Total)	1,000 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit. Monitoring required as an indicator parameter for Chromium VI.
Chromium VI	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Copper	500 µg/L / AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Cyanide	200 µg/L / AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Hardness	No applicable standard. Hardness is used to determine standards for specific metal parameters.	No Data	0	N/A	N/A	Monitoring not required, as there are no aquatic and wildlife uses that require hardness monitoring.
Hydrogen sulfide	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Iron	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Lead	100 µg/L / AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Mercury	10 µg/L / AgL	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Nickel	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Selenium	20 µg/L / Agl	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Silver	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Sulfides	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.

Table 1. Permit limitations and monitoring requirements.

Parameter	Lowest Standard/Designated Use	Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Thallium	No applicable standard	No Data	0	N/A	N/A	Monitoring not required, as there is no applicable standard.
Zinc	10,000 µg/L / Agl	No Data	0	N/A	RP Indeterminate (2)	Monitoring required and an assessment level is set in the permit.
Aldrin	0.003 µg/L / AgL (3)	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
Benzidine	0.01 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
4,4' - DDT (p,p' - Dichlorodiphenyltric hloroethane)	0.001 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
4,4' - DDD (p,p' – Dichlorodiphenyldic hloroethane)	0.001 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
4,4' - DDE (p,p' – Dichlorodiphenyldic hloroethylene)	0.001 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate (Monitoring required for effluent characterization.
Dieldrin	0.003 µg/L / AgL (3)	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
Endrin	0.004 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
Manganese	10,000 µg/L / Agl	No Data	0	N/A	N/A	Monitoring required for effluent characterization.
Polychlorinatedbiph enyls (PCBs)	0.001 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
Toxaphene	0.005 µg/L / Agl & AgL	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.
1,1,1 - Trichloroethane	1,000 µg/L / Agl	No Data	0	N/A	RP Indeterminate	Monitoring required for effluent characterization.

Table 1. Permit limitations and monitoring requirements.

Parameter	Lowest Standard/Designated Use	Maximum Reported Daily Value	No. of Samples	Estimated Maximum Value	RP Determination	Proposed Monitoring Requirement/Rationale (1)
Whole Effluent Toxicity (WET)	No applicable standard	N/A	N/A	N/A	N/A	Monitoring not required, as there are no aquatic and wildlife designated uses.

Footnotes:

1. The monitoring frequencies are as specified in the permit.
2. Monitoring with ALs or Action Levels always required for WWTPs for these parameters unless RP exists and limits are set.
3. The aldrin/dieldrin standard is exceeded when the sum of the two compounds exceeds 0.003 µg/L.

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VIII. NARRATIVE WATER QUALITY STANDARDS

All narrative limitations in A.A.C. R18-11-108 that are applicable to the receiving water are included in Part I, Section E of the permit.

IX. MONITORING AND REPORTING REQUIREMENTS (Part II of Permit)

Section 308 of the Clean Water Act and 40 CFR Part 122.44(i) require that monitoring be included in permits to determine compliance with effluent limitations. Additionally, monitoring may be required to gather data for future effluent limitations or to monitor effluent impacts on receiving water quality.

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Monitoring frequencies for some parameters may be reduced in subsequent permits if all monitoring requirements have been met and the limits or ALs for those parameters have not been exceeded during the first permit term.

For the purposes of this permit, a "24-hour composite" sample has been defined as a flow-proportioned mixture of not less than three discrete samples (aliquots) obtained at equal time intervals over a 24-hour period. The volume of each aliquot shall be directly proportional to the discharge flow rate at the time of sampling.

These criteria for composite sampling are included in order to obtain samples that are representative of the discharge given the potential variability in the duration, frequency and magnitude of discharges from this facility.

Discrete (i.e., grab) samples are specified in the permit for parameters that for varying reasons are not amenable to compositing.

Monitoring locations are specified in the permit (Part I.A and Part II.A) in order to ensure that representative samples of the influent and effluent are consistently obtained.

The requirements in the permit pertaining to Part II, Monitoring and Reporting, are included to ensure that the monitoring data submitted under this permit is accurate in accordance with 40 CFR 122.41(e). The permittee has the responsibility to determine that all data collected for purposes of this permit meet the requirements specified in this permit and is collected, analyzed, and properly reported to ADEQ.

The permit (Part II.A.3) requires the permittee to keep a Quality Assurance (QA) manual at the facility, describing sample collection and analysis processes; the required elements of the QA manual are outlined.

Reporting requirements for monitoring results are detailed in Part II, Section B of the permit, including completion and submittal of Discharge Monitoring Reports (DMRs), and AZPDES Flow Record forms.

The permittee is responsible for conducting all required monitoring and reporting the results to ADEQ on DMRs or as otherwise specified in the permit.

Electronic reporting

The US EPA has published a final regulation that requires electronic reporting and sharing of Clean Water Act National Pollutant Discharge Elimination System (NPDES) program information instead of the current paper-based reporting (Federal Register, Vol. 80, No. 204, October 22, 2015). Beginning December 21, 2016 (one year after the effective date of the regulation), the Federal rule required permittees to make electronic submittals of any monitoring reports and

forms called for in their permits. ADEQ has created an online portal called myDEQ that allows users to submit their discharge monitoring reports and other applicable reports required in the permit.

Requirements for retention of monitoring records are detailed in Part II.C.3 of the permit.

X. BIOSOLIDS REQUIREMENTS (Part III in Permit)

Standard requirements for the monitoring, reporting, record keeping, and handling of biosolids, as well as minimum treatment requirements for biosolids according to 40 CFR Part 503 are incorporated in the permit.

XI. SPECIAL CONDITIONS (Part V in Permit)

Pretreatment

The facility is a privately-owned treatment works, and in accordance with A.A.C. R18-9-A906, it is not subject to pretreatment requirements based solely on design flow. However, the permittee is required to notify ADEQ in writing three months prior to connecting any significant industrial user (SIU) to the facility in order to determine if any pretreatment requirements are necessary as specified in the Regional Water Quality Plan (208) Amendment.

Operation

This permit condition requires the permittee to ensure that the WWTP has an operator who is certified at the appropriate level for the facility, in accordance with A.A.C. R18-5-104 through -114. The required certification level for the WWTP operator is based on the class (Wastewater Treatment Plant) and grade of the facility, which is determined by population served, level of treatment, and other factors.

Permit Reopener

This permit may be modified based on newly available information; to add conditions or limits to address demonstrated effluent toxicity; to implement any EPA-approved new Arizona water quality standard; or to re-evaluate reasonable potential (RP), if assessment levels in this permit are exceeded [A.A.C. R18-9-B906 and 40 CFR Part 122.62 (a) and (b)].

XII. ANTIDegradation

Antidegradation rules have been established under A.A.C. R18-11-107 to ensure that existing surface water quality is maintained and protected. The discharge from the Sarival WRF will be to a canal which is subject to Tier 1 antidegradation protection. Effluent quality limitations and monitoring requirements have been established under the proposed permit to ensure that the discharge will meet the applicable water quality standards. As long as the permittee maintains consistent compliance with these provisions, the designated uses of the receiving water will be presumed protected, and the facility will be deemed to meet currently applicable antidegradation requirements under A.A.C. R18-11-107.

XIII. STANDARD CONDITIONS

Conditions applicable to all NPDES permits in accordance with 40 CFR, Part 122 are attached as an appendix to this permit.

XIV. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-A907)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft AZPDES permit or other significant action with respect to an AZPDES permit or application. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit will be public noticed in a local newspaper after a pre-notice review by the applicant and other affected agencies.

Public Comment Period (A.A.C. R18-9-A908)

Rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-A908(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

EPA Review (A.A.C. R18-9-A908(C))

A copy of this permit and any revisions made to this draft as a result of public comments received will be sent to EPA Region 9 for review. If EPA objects to a provision of the draft, ADEQ will not issue the permit until the objection is resolved.

XV. ADDITIONAL INFORMATION

Additional information relating to this proposed permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Surface Water Permits Unit
Attn: Swathi Kasanneni
1110 West Washington Street
Phoenix, Arizona 85007

Or by contacting Swathi Kasanneni at (602) 771 – 4577 or by e-mail at kasanneni.swathi@azdeq.gov.

XVI. INFORMATION SOURCES

While developing effluent limitations, monitoring requirements, and special conditions for the permit, the following information sources were used:

1. AZPDES Permit Application Form(s) 2A and 2S, received November 22, 2022, along with supporting data, facility diagram, and maps submitted by the applicant with the application forms.
2. Supplemental information to the application received by ADEQ on December 21, 2022.
3. ADEQ Geographic Information System (GIS) Web site.
4. MAG 208 Water Quality Management Plan Amendment document dated December 18, 2014

5. Arizona Administrative Code (AAC) Title 18, Chapter 11, Article 1, *Water Quality Standards for Surface Waters*, adopted December 31, 2016.
6. A.A.C. Title 18, Chapter 9, Article 9. *Arizona Pollutant Discharge Elimination System* rules.
7. Code of Federal Regulations (CFR) Title 40:
 - Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System*.
 - Part 124, *Procedures for Decision Making*.
 - Part 133. *Secondary Treatment Regulation*.
 - Part 503. *Standards for the Use or Disposal of Sewage Sludge*.
8. EPA Technical Support Document for Water Quality-based Toxics Control dated March 1991.
9. *Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs*, US EPA, May 31, 1996.
10. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA /821-R-02-013).
11. U.S. EPA NPDES Permit Writers' Manual, September 2010.
12. *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit From A Dissolved Criterion*, US EPA, June 1996.