ADEQ Arizona Department of Environmental Quality

Clean Air, Safe Water
Healthy Land for Everyone

DRAFT FACT SHEET

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 1.3 million gallons per day (MGD) and is considered to be a major facility under the AZPDES 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:	Foothills Water and Sewer, LLC
Permittee's Mailing Address:	13157 East 44th Street Yuma, AZ 85367
Facility Name:	Far West Sewer Section 14 Wastewater Treatment Plant (WWTP)
Facility Address or Location:	12651 South Avenue 14E, Yuma, AZ 85367
County:	Yuma
Contact Person(s): Phone/e-mail address	Matt Thompson (928) 919-5858 / mthompson@foothillsutilities.com
AZPDES Permit Number:	AZ0026239
Inventory Number:	105014
LTF Number:	106347

II. STATUS OF PERMIT(s)	
AZPDES permit applied for:	New
Date application received:	November 08, 2024
Date application was determined administratively complete:	November 15,2024
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.

Due to the facility being a new applicant for an AZPDES permit, a 208 Plan Consistency Review was required; the facility was determined to be consistent with the Regional Water Quality Management Plan (The Yuma 208 Plan) on December 19, 2024.		
Foothills Water and Sewer, LLC has the following permits issued by ADEQ applicable to the Far West Sewer Section 14 WWTP:		
Type of Permit		
Aquifer Protection Permit (APP)	P-105014	Regulates discharges to the local aquifer
Reuse Permit	R-105014	Regulates the practice of reusing treated wastewater for beneficial purposes

III. GENERAL FACILITY INFORMATION	
Type of Facility:	Privately owned wastewater treatment plant (WWTP)
Facility Location Description:	The Facility is located in Fortuna Hills, in Yuma County, Arizona. The Facility is bounded southwest by Fortuna Wash, approximately 1.36 miles south of Interstate 8, and east of S Avenue 14E. The cadastral location is Section 14 of Township 9 south, Range 21 West of the Gila and Salt River Baseline and Meridian.
Proximity to Tribal Nations	Far West Sewer Section 14 WWTP is approximately 14 miles upstream of the Fort Yuma Reservation.
Permitted Design Flow:	1.3 MGD
Treatment Level (WWTP):	Tertiary
Treatment Processes:	The treatment process is comprised of the headworks consisting of screen press, grit removal system, a collection chamber, two aerated equalization tanks, and one transfer pump station with two pumps. The influent passes through two biological nutrient removal (BNR) treatment trains. Each BNR train contains one 50,000 gallons pre-anoxic tank, two 70,000 gallons aeration tanks, one 35,000 gallon post anoxic tank and four aeration membrane tanks bioreactors (MBR). The permeate from each MBR is pumped through three ultraviolet (UV) disinfection units before discharge. The treatment process was designed to meet Class A+ Reclaimed Water Standards (A.A.C. R18-11, Article 3).
Sludge Handling and Disposal:	Sludge is hauled to an approved landfill for disposal (e.g. Copper Mountain Landfill in Wellton, AZ).
Nature of Facility Discharge:	Domestic wastewater from residential and / or light commercial sources.
Total Number of Significant Industrial Users (SIUs):	N/A
Average Flow Per Discharge:	N/A because Facility has not commenced discharge to Outfall 001.
Service Area:	Section 14 Service Area in Yuma, AZ

Service Population:	14,949
Reuse / Irrigation or other disposal method(s):	Currently, all treated effluent from the Far West Sewer Section 14 WWTP is reused for recharge in vadose zone wells and/or as irrigation on the Las Barrancas Golf Course. The proposed AZPDES permit will authorize discharge of treated effluent from Outfall 001 to Fortuna Wash.
Continuous or Intermittent Discharge:	Discharge for irrigation occurs daily, and as needed to vadose zone wells for recharge. Discharge to Fortuna Wash at Outfall 001 is expected to occur intermittently.
Discharge Pattern Summary:	The facility is expected to discharge to Outfall 001 six (6) times per year in the winter months of November through March. Currently treated effluent is discharged daily to vadose zone wells and to Golf course throughout the year.

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 receiving water is Fortuna Wash, which is not a Protected Surface Water (PSW) listed in A.A.C. R18-11 Appendix B. Fortuna Wash is likely ephemeral and thus cannot be a Water of the U.S. (WOTUS), however it is tributary to a listed PSW, the Gila River, a surface water listed in A.A.C. R18-11 Appendix B.
River Basin:	Colorado – Lower Gila Basin
Outfall Location(s):	Outfall 001: Township 9S, Range 21W, Section 15 Latitude: 32° 38’ 55” N, Longitude: 114° 23’ 43” W
Designated uses for the receiving water listed above:	The receiving water is not listed in A.A.C. R18-11 Appendix B; however, the Wash is a tributary to the Gila River. Therefore, the following designated uses will be applied to the receiving water according to A.A.C. R18-11-105. Aquatic and Wildlife ephemeral (A&We) Partial Body Contact (PBC)

Per A.A.C. R18-11-113(D), the water quality standards that apply to effluent-dependent waters (EDWs) will be applied to derive discharge limitations for any point source discharge of wastewater to an ephemeral water. The AZPDES permit includes discharge limitations and monitoring requirements designed to achieve compliance with A&Wedw standards.

Therefore, the following uses are being applied to the receiving water:

- Aquatic and Wildlife effluent dependent water (A&Wedw)
- Partial Body Contact (PBC)

The proposed permit uses the Designated Uses (DUs) and associated surface water quality standards (SWQS) for Fortuna Wash, a non-jurisdictional water. See Water Quality-Based Effluent Limitations below for information on how DUs and SWQS are used to determine effluent limitations in this permit.

Is the receiving water on the 303(d) list?	No, and there are no TMDL issues associated.

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.

V. DESCRIPTION OF DISCHARGE

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.

Parameters	**Units**	**Maximum Daily Discharge Concentration**
Biochemical Oxygen Demand (BOD)	mg/L	No data
Total Suspended Solids (TSS)	mg/L	No data
Total Kjeldahl Nitrogen (TKN)	mg/L	10
E. coli	cfu/100 mL	No data
Facility Design Removal Rates:		BOD 90 % TSS 90% N 90%

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. When appropriate data was available for analysis, these data was used to determine water-quality criteria.

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

The regulations found at 40 CFR §133 require that Publicly Owned Treatment Works (POTWs) achieve specified treatment standards for BOD, TSS, and pH based on the type of treatment technology available. The Far West Sewer Section 14 WWTP 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 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 pollutants *E. coli* and, if chlorine or bromine is used in the treatment process, total residual chlorine (TRC). These parameters have 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* and TRC. TRC monitoring is required only if chlorine or bromine compounds are used for disinfection (Table 1).

The proposed permit has WQBELs based on Designated Uses (DUs) and associated Surface Water Quality Standards (SWQS) for Fortuna Wash, a non-jurisdictional water. The WOTUS that is the receiving water in this permit is a downstream reach of the Gila River. Fortuna Wash was jurisdictional before the promulgation of the "Revised Definition of 'Waters of the United States'" rule by the US Army Corps and EPA. Pursuant to that rule, an ephemeral wash is no longer jurisdictional. The DUs for the now non-jurisdictional waterbody are set per A.A.C. R18-11-105 and A.A.C. R18-11-113(D), which have gone through public comment, were promulgated into rule in A.A.C. 18-11, and were approved by EPA as protective of both ephemeral washes and downstream waterbodies. Federal and State law require that DUs for Fortuna Wash provide for the attainment and maintenance of the water quality standards of downstream surface waters like the jurisdictional Gila River per 40 CFR 131.10(b) and A.A.C. 18-11-104(F). Therefore, use of WQBELs based on the DUs for Fortuna Wash are protective of the downstream DUs for jurisdictional waters.

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 4.a. – 4.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 considers 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 Sections 5.4.4 and 5.5.3 of the TSD.

Mixing Zone

Arizona water quality rules require that water quality standards be achieved without mixing zones unless the permittee applies and is approved for a mixing zone. Since the receiving stream for this discharge is ephemeral prior to the

discharge, no water is available for a mixing zone and all water quality criteria are applied at end-of pipe. This means that the effluent concentration must meet stream standards.

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 above). The ALs for oil and grease were determined based on BPJ as described above.

Ammonia water quality criteria vary based on the effluent pH and temperature at the time of effluent sampling. As a result, no single ammonia concentration can be included as a permit limit. To overcome this, an Ammonia Impact Ratio (AIR) of 1 for the monthly average and a value of 2 for the maximum daily limits has been established as the permit limits for ammonia. The AIR is calculated by dividing the ammonia concentration in the effluent by the applicable ammonia standard based on the effluent pH and temperature at the time of sampling. AIR values will be reported on DMRs and on the Ammonia Data Log which is included as Appendix B in the permit.

Hardness

The permittee is required to sample hardness as $CaCO_3$ at the same time the trace metals are sampled because the water quality standards for some metals are calculated using the water hardness values. Since no actual hardness effluent monitoring data are available, a protective default hardness value of 120 mg/L was used to calculate the applicable water quality standards and any assessment levels or limits for the hardness-dependent metals (cadmium, chromium III, copper, lead, nickel, silver, and zinc).

Whole Effluent Toxicity (WET)

WET testing is required in the permit (Parts I.C and IV) to evaluate the discharge according to the narrative toxic standard in A.A.C. R18-11-108(A)(5), as well as whether the discharge has RP for WET per 40 CFR 122.44(d)(iv). At a minimum, the results reported on an AZPDES application must include quarterly testing for a 12-month period within the past year or the results from four tests performed at least annually in the 4.5 years prior to the application, per 40 CFR 122.21(j)(5)(iv), using the following three species: (1) *Pseudokirchneriella subcapitata* (Green algae, also known as *Selenastrum capricornutum* or *Raphidocelis subcapitata*), (2) *Pimephales promelas* (Fathead minnow), and (3) *Ceriodaphnia dubia* (Water flea). However, because this permit is for a new facility, the permittee may report the required WET test results up to two years after either submitting the initial AZPDES permit application for an existing facility or beginning operations for a facility that is not yet constructed.

WET testing for chronic and/or acute toxicity is required. The requirement to conduct chronic toxicity testing is contingent upon the frequency or duration of discharges. Since completion of the chronic WET tests for *Ceriodaphnia dubia and Pimephales promelas* require the collection of three samples, preferably on days 1, 3, and 5 for daily solution renewal, these chronic tests are not required during any given monitoring period in which the discharge does not occur over seven consecutive calendar days during a monitoring period.

WET testing for chronic and acute toxicity shall be conducted using the following three surrogate species:

- *Ceriodaphnia dubia* (water flea) – for evaluating toxicity to invertebrates
- *Pimephales promelas* (fathead minnow) – for evaluating toxicity to vertebrates

- *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum or Raphidocelis subcapitata)* (a green alga) – for evaluating toxicity to plant life

ADEQ requires the permittee to analyze WET test data using the Test of Significant Toxicity (TST) statistical approach. This statistical approach is described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010; TST Implementation Document) and *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document* (EPA 833-R-10-004, 2010; TST Technical Document). This statistical approach supports important choices made within a toxicity laboratory which favor quality data and ADEQ's intended levels for statistical power when true toxicity is statistically determined to be unacceptably high or acceptably low. For both acute and chronic WET test methods, the low-risk Regulatory Management Decision (RMD) threshold is set at a 10 percent mean effect at the Instream-Waste Concentration (IWC). For mean effect levels greater than 10 percent but less than the unacceptable toxicity RMD threshold (20 percent for acute and 25 percent for chronic WET tests), the TST approach will declare the IWC non-toxic depending on within-test variability. The TST maintains ADEQ's desired low false positive rate for WET methods—the probability of declaring toxicity when true toxicity is acceptably low ≤ 5%—when quality toxicity laboratories conduct toxicity tests (EPA 833-R-10-004, 2010).

This is a new facility and WET monitoring data are not available.

Any failed test during a monitoring period where discharge occurred will trigger follow-up testing to determine if effluent toxicity is persistent. If toxicity above a limit or action level is found in a follow-up test, the permittee will be required to conduct a Toxicity Reduction Evaluation (TRE) based on a TRE Work Plan submitted within 90 days of the permit effective date and possibly a Toxicity Identification Evaluation (TIE) to identify the source of toxicity and decrease toxicity. The conditions described in this paragraph are required to identify and rectify sources of toxicity in discharges [A.A.C. R18-11-108(A)(5)]. A reopener clause is included in accordance with 40 CFR Parts 122 and 124 and AAC R18-9-B906.

The permit requires 24-hour composite samples be collected for WET testing. WET sampling must coincide with testing for all the parameters in Parts I.A and B of the permit when testing of those parameters is required to aid in determining the cause of toxicity if it is detected. Additional procedural requirements for the WET test are included in the permit.

The required WET monitoring frequency for this facility is consistent with the WET testing frequency required for facilities with a similar design flow. The permit requires WET test results to be reported on discharge monitoring reports (DMRs). WET laboratory reports for all WET tests performed must be attached to the corresponding DMR. When a WET limit is exceeded and the facility discharged during the monitoring period when the limit exceedance occurred, the result is subject to the Twenty-Four-Hour Reporting of Noncompliance requirements, per Part II.C. All action level and limit exceedance results and lab reports shall be emailed to AZPDES@azdeq.gov within five days.

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 4.a. through 4.f., *Effluent Characterization Testing,* as follows:

• Table 4.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 4.b.—Selected Metals, Hardness, Cyanide, and WET.

• Table 4.c.—Selected Volatile Organic Compounds.

• Table 4. d.—Selected Acid-Extractable Compounds.

• Table 4.e.—Selected Base-Neutral Compounds.

• Table 4.f.—Additional Parameters Based on Designated Uses (from Arizona Surface Water Quality Standards, Appendix A, Table 1).

NOTE: Some parameters listed in Tables 4.a. and 4.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 4.a. and / or 4.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 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*.

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	BOD: N/A TSS: N/A	BOD: N/A TSS: N/A	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)	5 µg/L A&Wedw chronic	N/A	N/A	N/A	RP always expected when chlorine or bromine is used for disinfection.	This facility uses UV for disinfection. TRC is to be monitored weekly as a discrete sample only if chlorine or bromine compounds are used for disinfection. 40 CFR Part 136 specifies that discrete samples must be collected for chlorine. At least one sample per quarter must coincide with WET testing to aid in the determination of the cause of toxicity if toxicity is detected.
E. coli	30-day geometric mean: 126 cfu /100 mL (4 sample minimum) Single sample maximum: 575 cfu /100 mL/ PBC	N/A	N/A	N/A	RP always expected for WWTPs. See explanation above.	*E. coli* is to be monitored as a discrete sample and a WQBEL is set in accordance with A.A.C. R18-11-109(A).
pH	Minimum: 6.5 Maximum: 9.0 A&Wedw and PBC A.A.C. R18-11-109(B) Minimum: 6.0 Maximum: 9.0 Technology-based limits 40 CFR 133.102	7.9	12	N/A	WQBEL 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. At least one sample must coincide with WET testing to aid in the determination of the cause of toxicity if toxicity is detected. pH sampling must also coincide with ammonia sampling when required (2).
Temperature	R18-11-109C the discharge shall not cause an increase in the ambient water temperature. A&Wedw: no more than 3.0°C	36ºC	12	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 (2).
Total Dissolved Solids (TDS)	No applicable standard	N/A	N/A	N/A	(No Data)	Monitoring required using composite samples 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)
Ammonia	Standard varies with temperature and pH	6 mg/L (< WQS)	1 (3)	79.18 µg/L	RP Indeterminate (4)	Ammonia is to be monitored by discrete sample and a WQBEL in the form of an ammonia impact ratio (AIR) of 1 is set in the permit (2). An ammonia data log with concurrent pH and temperature monitoring is also required. One sample must coincide with WET sampling to aid in the determination of the cause of toxicity, if toxicity is detected.
Nutrients (Total Nitrogen and Total Phosphorus)	No applicable standards	N/A	N/A	N/A	N/A	Monitoring required for effluent characterization.
Oil & Grease	BPJ Technology-Based Level of 10 mg/L monthly average and 15 mg/L daily maximum	N/A	N/A	N/A	RP Indeterminate (4)	Monitoring required and an assessment level is set.
Antimony	600 µg/L A&Wedw chronic	1.0 µg/L	3	5.62 µg/L	No RP	Monitoring is required for effluent characterization.
Arsenic	150 µg/L A&Wedw chronic	2.2 µg/L	3	12.37 µg/L	No RP	Monitoring is required for effluent characterization.
Beryllium	5.3 µg/L A&Wedw chronic	<0.5 µg/L	3	N/A	No RP	Monitoring is required for effluent characterization.
Boron	186,667 µg/L PBC	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an assessment level is set.
Cadmium (5)	2.6 µg/L A&Wedw chronic	<1.5 µg/L	3	N/A	No RP	Monitoring required for effluent characterization.
Chromium (Total)	No applicable standards	<5 µg/L	3	N/A	No RP	Monitoring is required for effluent characterization. If Total Chromium is detected in exceedance of 8 µg/L, monitoring for Chromium VI is required for the remainder of the permit term.
Chromium VI	11 µg/L A&Wedw chronic	N/A	N/A	N/A	No RP (Based on total chromium data)	Monitoring is required for effluent characterization. If Total Chromium is detected in exceedance of 8 µg/L, monitoring for Chromium VI is required for the remainder of the permit term.
Copper (5)	10.5 µg/L A&Wedw chronic	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an assessment level is set.
Cyanide	9.7 µg/L A&Wedw chronic	<25 µg/L	3	N/A µg/L	RP Indeterminate (High LOQ)(6)	Monitoring required and an assessment level is set
Hardness	No applicable standard. Hardness is used to determine standards for specific metal parameters.	N/A	N/A	N/A	N/A	A&W standards for cadmium, chromium III, copper, lead, nickel, silver and zinc used for RP determinations were based on the default effluent hardness value of 120 mg/L. Monitoring for hardness is required whenever monitoring for hardness dependent metals is required.
Hydrogen sulfide	2 µg/L A&Wedw chronic	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring is required for sulfides as an indicator parameter for hydrogen sulfide. If sulfides are detected, monitoring for hydrogen sulfide is required for the remainder of the permit term.
Iron	1,000 ug/L A&Wedw chronic	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring is required and an assessment level is set.

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)
Lead (5)	3.1 µg/L A&Wedw chronic		<7.5 µg/L	3	N/A	RP Indeterminate (High LOQ)(6)	Monitoring is required and assessment level is set.
Manganese	130,667 µg/L PBC		N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring is required and assessment level is set.
Mercury	0.01 µg/L A&Wedw chronic		0.23 µg/L	3	1.29 µg/L	RP Exists	Monitoring required and a WQBEL is set.
Nickel (5)	61 µg/L A&Wedw chronic		<5 µg/L	3	N/A	No RP	Monitoring required for effluent characterization.
Selenium	2 µg/L A&Wedw chronic		1.3 µg/L	3	7.31 µg/L	RP Exists	Monitoring required and a WQBEL is set.
Silver (5)	4.4 µg/L A&Wedw acute		N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an assessment level is set
Sulfides	No applicable standard		N/A	N/A	N/A	RP Indeterminate (No Data)	Indicator parameter for hydrogen sulfide. Monitoring required. If sulfides are detected, monitoring for hydrogen sulfide is required for the remainder of the permit term.
Thallium	75 µg/L PBC		<0.1 µg/L	3	N/A	No RP	Monitoring required for effluent characterization.
Zinc (5)	137 µg/L A&Wedw acute and chronic		N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an assessment level is set
Whole Effluent Toxicity (WET)	No toxicity (A.A.C. R18-11-108(A)	*Pseudo-kirchneriella subcapitata (7)*	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an action level is set.
		Pimephales promelas	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an action level is set.
		Ceriodaphnia dubia	N/A	N/A	N/A	RP Indeterminate (No Data)	Monitoring required and an action level is set.

Footnotes:

1. The monitoring frequencies are as specified in the permit.
2. An AIR will be calculated by dividing effluent ammonia concentration by the applicable standard using the effluent water pH and temperature.
3. Sample collected for reporting purposes under a different permit and analysis using a method that is not approved in 40 CFR 136. Data must be consistent with the AZPDES program Quality Assurance Project Plan (QAPP).
4. Monitoring with ALs or Action Levels always required for WWTPs for these parameters unless RP exists and limits are set.
5. Hardness-dependent metal - the standard for this parameter is based on a protective default hardness value of 120 mg/L.
6. All analytical results were non-detect, however the limit of quantitation (LOQ) exceeded the lowest applicable WQS for the receiving water designated uses.
7. Formerly known as *Selenastrum capricornutum or Raphidocelis subcapitata*.

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, Sections E and F 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.

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(j). 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), Ammonia Data Logs, 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.

The permit also requires annual submittal of an Ammonia Data Log that records the results for temperature, pH, and ammonia samples and date of sampling (Part II.B.4). Because the ammonia standards in 18 A.A.C. 11, Article 1, Appendix A are contingent upon the pH and temperature at the time of sampling for ammonia, the permittee must

determine the applicable ammonia standard using the ammonia criteria table(s) and calculate the Ammonia Impact Ratio for that ammonia sample result. The AIR is recorded on the DMR.

Requirements for retention of monitoring records are detailed in Part II.D.1 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)

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 Far West Sewer Section 14 WWTP will be to an effluent-dependent water. Except for flows resulting from rain events, the only water in the wash will be the effluent. Therefore, the discharge and the receiving water will normally be one and the same. 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: Juliana Lewis
400 W. Congress Street, Ste. 433
Phoenix, Arizona 85701

Or by contacting Juliana Lewis at (520) 628 – 6715 or by e-mail at lewis.juliana@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/2S received November 08, 2024, 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 November 14, 2024, December 02, 2024 and December 30, 2024.
3. 208 Consistency Review using The Yuma 2008 Plan (https://azdeq.gov/designated-planning-agencies-arizona).
4. ADEQ Geographic Information System (GIS) Web site
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 (EPA-505-2-90-001, 1991).
9. U.S. EPA NPDES Permit Writers' Manual, September 2010.
10. The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion, US EPA (EPA-823-B-96-007, 1996).
11. National Pollutant Discharge Elimination System Whole Effluent Toxicity Permit Writers' Manual, U.S. EPA (EPA-833-B-24-001).
12. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA-821-R-02-012, 2002).
13. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013, 2002).
14. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, U.S. EPA (EPA-833-R-10-003, 2010).
15. *Method Guidance and recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)* (EPA-821-B-00-004, 2000).
16. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document, U.S. EPA (EPA-833-R-10-004, 2010).