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 reissuance of the AZPDES permit listed below. The facility consists of the Yuma Desalting Plant (YDP), a reverse osmosis desalination plant, including the YDP Research Facility, also known as the Water Quality Improvement Center (WQIC). The permit authorizes a maximum discharge of 22.5 million gallons per day (MGD) for this facility. The permit includes separate effluent limitations and monitoring requirements for the YDP and the WQIC to address the operational characteristics of each component. The facility is classified as 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:	Yuma Area Office U.S. Department of the Interior – Bureau of Reclamation
Permittee's Mailing Address:	7301 South Calle Agua Salada Yuma, Arizona 85364
Facility Name:	Yuma Desalting Plant
Facility Address or Location:	7301 South Calle Agua Salada Yuma, Arizona 85364
County:	Yuma County
Contact Person(s): Phone/e-mail address	Bryon Green, Environmental Protection Specialist (928) 343-8201, (928) 210-6257 / bhgreen@usbr.gov
AZPDES Permit Number:	AZ0025348
Inventory Number:	100306
LTF Number:	113729

II. STATUS OF PERMIT(s)	
AZPDES permit applied for:	Renewal
Date application received:	December 02, 2025
Date application was determined administratively complete:	December 03, 2025
Previous permit number (if different):	N/A
Previous permit expiration date:	June 16, 2026

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 the application, there are no changes to the facility that require a new determination of consistency with the Regional Water Quality Management Plan.

The U.S. Department of the Interior – Bureau of Reclamation has the following permit issued by ADEQ applicable to the Yuma Desalting Plant:

Type of Permit		
Aquifer Protection program (APP) permit	P - 100180	Regulates discharges to the local aquifer

III. GENERAL FACILITY INFORMATION	
Type of Facility:	The YDP is a desalination treatment plant that receives irrigation return flows from the Wellton-Mohawk Valley. The return flows are chemically treated and processed through reverse osmosis to remove dissolved salts and discharged to the Colorado River.
Facility Location Description:	The facility is located in Yuma County, approximately 20 miles southwest of the City of Yuma, near the Colorado River and the United States-Mexico border in the southwestern portion of the State of Arizona. The site is situated on federal land managed by the U.S. Bureau of Reclamation.
Proximity to Tribal Nations:	The facility is not located on tribal land. The nearest tribal lands include the Quechan Tribe (Fort Yuma Indian Reservation) and Cocopah Indian Tribe (Cocopah Indian Reservation), both located within approximately 5-10 miles of the facility.
Design Flow:	The YDP, including the WQIC and its Pilot System 1 component, has a combined design treatment capacity of 22.5 million gallons per day (MGD). The WQIC, including Pilot System 1 (PS 1), operates as a component of the overall facility with a design treatment capacity of approximately 0.4 MGD.
Applicable Treatment Processes:	The YDP, including the WQIC / pilot system 1 facility, treats influent water diverted from the Main Outlet Drain Extension (MODE) Canal through a multi-stage process consisting of screening, chemical conditioning, clarification, filtration, reverse osmosis (RO), and final conditioning. Influent water first passes through traveling water screens to remove debris and large organic material and is subsequently chlorinated to provide biological control. The water then undergoes grit sedimentation to remove sand and coarse suspended solids. Chemical conditioning is performed upstream of the solids contact reactor (SCR), where coagulant addition and

	lime softening are applied to promote suspended solids removal and hardness reduction. The conditioned water is treated in the SCR, which provides coagulation, flocculation, and sedimentation, with sludge removed for off-line management. Effluent from the SCR is pH-adjusted to minimize scaling and treated through dual media filtration to achieve low turbidity. Following filtration, additional chemical conditioning is performed, including pH adjustment, chloramination, and anti-scalant addition prior to reverse osmosis treatment. The facility operates two-stage RO systems to reduce dissolved solids and produce treated water with low total dissolved solids (TDS). The water treated is subsequently conditioned to finish water quality objectives. Sludge from the SCR is pumped to the A-22 evaporation ponds (APP permit P-100180)
Nature of facility discharge:	The facility discharge consists of desalinated water produced by reverse osmosis.
Average flow per discharge:	The full-scale YDP is not currently operational. However, the WQIC continues to operate as a component of the YDP facility. The current average discharge flow is approximately 0.19 MGD from Pilot System 1 (PS1), a component of the WQIC.
Continuous or intermittent discharge:	The full-scale YDP is not currently operational. However, the WQIC continues to operate as a component of the YDP facility. Discharges from the WQIC are generally continuous but may be temporarily interrupted during maintenance activities, such as reverse osmosis (RO) membrane replacement.

The AZPDES permit for the YDP became effective on February 8, 2010. Full-scale operations were subsequently suspended in May 2011. when the facility was brought online and operated at approximately 11 – 22% of its production capacity for a one-month period, followed by operation at approximately one-third of its production capacity for the remaining active duration.

Although full-scale operation of the YDP is currently suspended, the WQIC continues to operate as a component of the facility and produces approximately 0.4 MGD of desalinated water of similar quality to that produced by YDP for discharge through Outfall 001 to the Colorado River.

A major permit modification was issued in February 2012 to allow for reduced monitoring frequencies when only the WQIC is in operation. The permit was subsequently renewed in 2016. Maximum allowable discharge limits were developed based on a discharge rate of 22.5 MGD when the YDP is operating and 0.40 MGD when only the WQIC is operating.

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 YDP, including WQIC (PS 1), through Outfall 001 is the Colorado River. This is a surface water listed in A.A.C. R18-11 Appendix B. The applicable receiving water segment is the Colorado River from the Topock Marsh to Morelos Dam.
River Basin:	Colorado – Lower Gila Watershed
Outfall Location(s):	Outfall 001: MODE II Canal Township 16 S, Range 21 E, Section 36 Latitude 32° 43' 44.5" N, Longitude 114° 42' 51.62" W Coordinates in Decimal Degrees: [32.72903, -114.71434]
Designated uses for the receiving water listed above:	Aquatic and Wildlife warm water (A&Ww) Full Body Contact (FBC) Fish Consumption (FC) Agricultural Irrigation (AgI) Agricultural Livestock watering (AgL) Domestic Water Supply (DWS)
Is the receiving water on the 303(d) list?	The receiving water, Colorado River (Water Segment 15030107-001), is listed as impaired on Arizona's 303(d) list for selenium and dissolved oxygen in the 2024 Arizona Integrated Report. No total maximum daily loads (TMDLs) have been established for these impairments.
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 the facility is in operation and discharges have occurred, effluent monitoring data are available. The following is the measured effluent quality reported in the application.

Parameters	Units	Maximum Daily Discharge Concentration
Biochemical Oxygen Demand (BOD)	mg/L	< 2
Total Suspended Solids (TSS)	mg/L	18
Temperature (Winter)	°C	19.96
Temperature (Summer)	°C	35.27
pH	S.U.	8.5

VI. STATUS OF COMPLIANCE WITH THE EXISTING AZPDES PERMIT	
Date of Most Recent Inspection:	April 7, 2026; no potential violations were noted as a result of this inspection.
Discharge Monitoring Reports (DMR) Reviewed:	07/2021 through 04/2026
Lab Reports Reviewed:	07/2021 through 04/2026
DMR Exceedances:	Chlorine (total residual) (January 2026).
Notice(s) of Violation (NOV) Issued:	NOV was issued on March 10, 2026: The January 2026 Discharge Monitoring Report (DMR), indicated an average chlorine concentration of 10.35 µg/L which exceeded the established permit limit of 9 µg/L.
NOVs Closed:	NOV closed on April 20, 2026.
Formal Enforcement Action(s):	None

VII. PROPOSED PERMIT CHANGES

The following table lists the major changes from the previous permit in this permit.

Parameter	Existing Permit	Proposed Permit	Reason for Change
Noncompliance Reporting Hotline	(602) 771-2330	Noncompliance resulting in imminent threat to human health or the environment must be reported to (602) 771-2330, while all other noncompliance must be reported to (602) 771-1440.	Routing emergency calls to the emergency hotline, but all other calls to a non-emergency number.

Reporting Location for Effluent Characterization Monitoring	Submit results through DMRs	Report results on the EC Monitoring Data Sheet Excel form provided by ADEQ and submit annually to azpdes_data@azdeq.gov by January 28th following each annual reporting period. See Part I.D.2 and Part II.B.3 of permit. Laboratory reports for EC monitoring shall be submitted through myDEQ with the last DMR of the calendar year. See Part II.B.3.b. of the permit.	ADEQ is implementing this new procedure to facilitate data analysis by ADEQ and reporting by permittees. Outcomes include expedited data processing and improved data quality review, per ADEQ Surface Water Protection Quality Assurance Program Plan (2022).
Sufficiently Sensitive Test Methods and Limit of Quantitation (LOQ) Reporting Requirements	Limited explanation of analytical requirements for LOQ and sufficiently sensitive test methods.	Analytical test sensitivity requirements are specified in the footnotes of Part I Tables 1-4 of the permit and associated definitions in Appendix A. Part B. The requirement to use sufficiently sensitive test methods is specified in Part II.A.5.	The Limit of Quantitation (LOQ) must be low enough to allow comparison of the results to the applicable water quality standards (WQS) to be protective of the receiving water designated uses. New language clarifies the requirement that parameters must be analyzed using sufficiently sensitive test methods in accordance with 40 CFR 136.1(c).
Use of Metal Translators to Calculate Total Recoverable Permit Limits from Dissolved Criteria (Applicable to Cadmium, Chromium VI, Copper, Lead, Mercury, Nickel, Silver, and Zinc).	No metal translators were used. Assumed the ratio of dissolved to total recoverable is 1 to 1 for all metals with water quality criteria expressed as dissolved.	WQBELs and ALs were converted from dissolved to total recoverable using the process from the EPA's *The Metals Translator: Guidance for Calculating A Total Recoverable Permit Limit from A Dissolved Criterion.*	New procedure for ADEQ to incorporate default metal translators when calculating total recoverable WQBELs and ALs from dissolved criteria.

Whole Effluent Toxicity Data Evaluation and Reporting	Calculation of the no observed effect concentration (NOEC) and the 25% inhibition effect concentration (IC25). Report results on the DMR as Pass (0)/Fail (1) for acute tests and 100/NOEC result in toxicity units (TUc) for chronic tests. An exceedance was any one test result greater than 1.6 TUc or any calculated monthly median value greater than 1.0 TUc or a Fail.	Pass and Fail results are declared by comparing percent effect (PE) to the regulatory management decision (RMD) threshold established for the test. For acute tests, report results as Pass (0)/Fail (1) on the DMR. For chronic tests, report Pass (0)/Fail (1) and report the PE on the DMR.	The permit requirements are established in accordance with the Test for Significant Toxicity (TST) statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA-833-R-10-003, 2010) and National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document (EPA-833-R-10-004, 2010). This change is intended to decrease the occurrence of false positive and false negative results.
WET tests with a result of Fail	WET lab reports and any required additional attachments shall be submitted to ADEQ using the myDEQ electronic portal by the 28th day of the month following the end of the WET monitoring period, or upon request.	Certified laboratory reports with a Fail test result for either an Action Level or Limit shall be emailed to azpdes_data@azdeq.gov within five days of receipt.	The updated submittal method of a WET test Failure ensures prompt initiation of the required accelerated monitoring.
TRE Work Plan	TRE plan developed following detection of effluent toxicity.	TRE Work Plan submitted to AZPDES@azdeq.gov within 90 days of permit effective date. This is required for all permittees regardless of whether effluent toxicity has been detected or not. Use the template supplied by ADEQ (See Part IV of the permit).	Preparation of a Toxicity Reduction Evaluation (TRE) Work Plan allows a timely response when the TRE requirements are triggered. A TRE Work Plan ensures that the permittee understands the expectations prior to detection of toxicity and can respond in a timely manner to protect A&W designated uses.

Suspended Sediment Concentration (SSC)	Monitoring not required.	Monitoring required for the effluent and the receiving water, downstream of the discharge.	ADEQ is requiring monitoring of the effluent and downstream receiving water to assess compliance with the numeric standard listed in R18-11-109(D).
Temperature	Monitoring required for the effluent or receiving water.	Monitoring required for the effluent. Monitoring required for the receiving water, both upstream and downstream of the discharge.	ADEQ is requiring monitoring of the effluent, the upstream receiving water upstream and downstream receiving water to assess compliance with the numeric standard listed in R18-11-109(C).
Narrative Surface Water Quality Standards	Narrative surface water quality standards applicable to the receiving water listed in Part I.E of the permit.	Other limitations for the effluent listed in Part I.E of the permit to ensure the discharge is protective of the narrative surface water quality standards of the receiving water.	ADEQ is clarifying all narrative permit requirements are applicable to the discharge rather than the "end result" in the receiving water in accordance with *City & County of San Francisco v. EPA.*
Iron	Effluent Characterization	Limited	Data submitted indicated reasonable potential (RP) for an exceedance of a standard.
Selenium	Limited	Effluent Characterization	Data submitted indicated no reasonable potential (RP) for an exceedance of a standard.

Sample Type for selected monitoring parameters	Composite sampling for applicable parameters	Discrete sampling for the applicable parameters identified in the proposed permit.	Changed from composite to discrete sampling based on facility's continuous steady-state treatment process; relatively consistent discharge flow during normal operations; and evaluation of the available monitoring data, which included the standard deviation and coefficient of variation (CV), were considered together in determining that representative discrete samples are appropriate for compliance monitoring.

Anti-backsliding considerations — "Anti-backsliding" refers to statutory (Section 402(o) of the Clean Water Act) and regulatory (40 CFR 122.44(l)) requirements that prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limits, permit conditions, or standards that are less stringent than those established in the previous permit. The rules and statutes do identify exceptions to these circumstances where backsliding is acceptable. This permit has been reviewed and drafted with consideration of anti-backsliding concerns.

Limits for the following parameter have been removed from the permit because evaluation of current data allows the conclusion that no reasonable potential (RP) for an exceedance of a standard exists:

• Selenium

Limits are retained in the permit for parameters where reasonable potential (RP) for an exceedance of a standard continues to exist or is indeterminate. In these cases, limits will be recalculated using the most current Arizona Water Quality Standards (WQS). If less stringent limits result due to a change in the WQS then backsliding is allowed in accordance with 303(d)(4) if the new limits are consistent with antidegradation requirements and the receiving water is in attainment of the new standard; see Section XII for information regarding antidegradation requirements.

No limits are less stringent due to a change in the WQS in this permit.

VIII. DETERMINATION OF EFFLUENT LIMITATIONS, OTHER 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 YDP treats drainage water using desalination processes to reduce salinity prior to discharge. The United States Environmental Protection Agency (EPA) has not promulgated effluent limitation guidelines (ELGs) applicable to this facility category. As a result, no technology-based effluent limitations (TBELs) are established in this permit.

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.

Chloramination is used as part of the treatment process at the YDP; therefore, Total Residual chlorine (TRC) is considered a pollutant of concern. The current permit includes WQBELs and monitoring requirements for TRC, which are continued in this permit to ensure protection of the applicable water quality standards. Continued monitoring is required to demonstrate compliance with the existing WQBELs and to verify that the discharge does not cause or contribute to an exceedance of the applicable water quality criterion.

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 is described in Chapter 5 of the *TSD*, and considers water quality criteria, effluent variability, and the number of observations taken to determine compliance with prescribed limits. 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 requests and ADEQ approves a mixing zone in accordance with A. A.C. R18-11-114. The permittee has existing approved mixing zones for boron, copper, pH, and whole effluent toxicity (WET) associated with the WQIC. For all other parameters, applicable water quality criteria are applied at the end of pipe.

Because mixing conditions may different depending on whether YDP is operating, separate mixing zone evaluations are required for YDP and WQIC. As part of the permit renewal, ADEQ reviewed the submitted mixing zone information and determined that additional information is necessary to evaluate the continued appropriateness of the existing approved mixing zones under the current requirements of A.A.C. R18-11-114.

The updated evaluations for YDP and WQIC must demonstrate that each mixing zone is as small as practicable, does not extend beyond the point of complete mixing under critical flow conditions, and addresses the applicable factors in A.A.C. R18-11-114 (C).

Accordingly, the permit continues the existing WQBELs and associated monitoring requirements for born, copper, pH, and continues the existing chronic WET monitoring requirements. The permit also includes a special condition requiring the Permittee to submit an updated mixing zone evaluation report for the WQIC and to develop and submit a mixing zone evaluation report for the YDP. Each report must demonstration compliance with the current requirements of A.A.C. R18-11-114, including information necessary to evaluate the WET mixing zone and the applicable Zone of Initial Dilution (ZID) requirements. The updated WQIC mixing zone evaluation report shall be

submitted to ADEQ within twenty four (24) months of the effective date of this permit. Because the YDP is not currently operating, the YDP mixing zone evaluation report shall be submitted to ADEQ within six (6) months after the YDP returns to operation and begins discharging.

Upon review of the updated mixing zone reports, ADEQ will determine whether the existing approved mixing zone continue to satisfy the current regulatory requirements and whether modifications to the mixing zones, associated WQBELs, monitoring requirements, or other permit conditions are necessary.

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.

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. The hardness value of 357 mg/L (the average hardness of the receiving stream as supplied in the application) 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).

WET testing for chronic 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).

ADEQ analyzed the available data and determined that the discharge does have reasonable potential for WET for all three-surrogate species. This is because at least one toxicity test result for all three surrogate species is Fail (1) or at least one associated PE (Percent Effect) value is ≥ 10 indicating unacceptable toxicity is present in the effluent (see Table 1 of this fact sheet and section 1.4 and Appendix E in EPA's TST Technical Document). Thus, chronic toxicity WQBELs are required for the permitted discharge (40 CFR § 122.44(d)(1)). Therefore, WQBELs are set for WET monitoring and reporting for toxicity (see Part I.C of the permit).

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 A.A.C. R18-9-B906.

A mixing zone for WET is continued in the permit. Mixing zone requirements are included in Part V.A of the permit and are discussed in the mixing zone section of this factsheet. ADEQ determined that additional information is necessary to evaluate the continued appropriateness of the approved WET mixing zone under the current requirements of A.A.C. R18-11-114. Therefore, the permit includes a special condition requiring the permittee to submit an updated mixing zone report demonstrating compliance with the current mixing zone requirements. The existing chronic WET monitoring requirements are continued in the permit.

Discrete sample type was chosen for WET testing in order to have consistency with the type of sample or other parameters required in the permit. 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.d., *Effluent Characterization Testing,* as follows:

- Table 4.a.—General Chemistry and Microbiology: ammonia, BOD-5, *E. coli*, total residual chlorine (TRC), dissolved oxygen, hydrogen sulfide, total Kjeldahl nitrogen (TKN), nitrate/nitrite, oil and grease, pH, phosphorus, temperature, sulfides, 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.—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.

Ammonia water quality criteria vary based on the upstream receiving water 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, ADEQ uses an Ammonia Impact Ratio (AIR) to determine if the effluent ammonia concentration may exceed the ammonia water quality criteria. The AIR is calculated by dividing the ammonia concentration in the effluent by the applicable ammonia standard based on the upstream receiving water 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. Submittal of the Ammonia Data log is required annually each for each year ammonia monitoring was required to be conducted.

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	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
For YDP and WQIC								
Flow	- - -	- - -	- - -	- - -	- - -	- - -	- - -	Discharge flow is to be monitored on a continual basis using a flow meter.
Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS)	BOD: 5 TSS: 5	BOD: < 2 mg/L TSS: 18 mg/L	N/A	N/A	N/A	No applicable Numeric WQS	N/A	Monitoring is required for effluent characterization to verify discharge characteristics and support future permit renewals.
Chlorine, Total Residual (TRC)	83	9.61 µg/L	N/A	N/A	11 µg/L	A&Ww chronic	RP always expected when chlorine or bromine is used for disinfection.	TRC is to be monitored as a discrete sample and a WQBEL remains in the permit. 40 CFR Part 136 specifies that discrete samples must be collected for chlorine. At least one sample per month must coincide with WET testing to aid in the determination of the cause of toxicity, if toxicity is detected.
Dissolved Oxygen	16	10.26 mg/L	N/A	N/A	A surface water meets the water quality standard for dissolved oxygen when either: 1. The percent saturation of dissolved oxygen is equal to or greater than 90 percent, or, 2. A Single sample **minimum** concentration of 6 mg/L A.A.C R18-11-109(E).	A&Ww	N/A	Monitoring is required for the effluent characterization to verify discharge characteristics, evaluate the potential effects of the discharge on receiving water dissolved oxygen conditions, and support future permit renewals.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
E. coli	3	12 cfu /100 mL	N/A	N/A	Geometric mean (minimum of four samples in 30 days): 126 cfu /100 mL Statistical threshold value: 410 cfu /100 mL	FBC	N/A	Monitoring requirements remains in the permit for effluent characterization to verify discharge characteristics and support future renewal. YDP is not a wastewater treatment plant and does not treat domestic sewage.
pH	16	Effluent: Min: 4.25 S.U. Max: 8.5 S.U. Colorado River (500 m downstream of Outfall 001): Min: 7.25 S.U. Max: 8 S.U.	N/A	N/A	Minimum: 6.5 Maximum: 9.0 A.A.C. R18-11-109(B)	FBC, A&Ww, & AgL	RP Exists	Existing pH effluent limitations and monitoring requirements are continued in the permit. ADEQ determined that additional information is necessary to evaluate the existing mixing zone under the current requirements of A.A.C. R18-11-114. Therefore, the permit includes a special condition requiring submittal of an updated mixing zone report and, if necessary, additional information, supporting data, or explanation sufficient to demonstrate compliance with the current mixing zone requirements.
Temperature	8	(Apr. – Sep.) 35.3 °C	N/A	N/A	R18-11-109 (C) the discharge shall not cause an increase in the ambient water temperature. no more than 3.0°C	A&Ww	N/A	Temperature of the effluent and the receiving water, both upstream and downstream of the discharge, 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.
Suspended Sediment Concentration	0	No Data	N/A	N/A	80 mg/L (5)	A&Ww	RP Indeterminate (No Data)	Monitoring of the effluent and downstream receiving water is required for effluent characterization. Samples shall not be collected within during or within 48 hours after a local storm event.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Total Dissolved Solids (TDS)	13	444 mg/L	N/A	N/A	N/A	No applicable Numeric WQS	N/A	TDS monitoring is retained to characterize effluent salinity. Monitoring supports evaluation of facility operations and consistency with International Boundary and Water Commission (IBWC) Minute 242 salinity commitments for Colorado River deliveries to Mexico.
Ammonia	Ammonia: 3 AIR: 0	Ammonia: < 1 mg/L AIR: No data	N/A	N/A	Standard varies with temperature and pH	A&Ww; criterion not calculated due to lack of concurrent receiving water pH and temperature data.	RP Indeterminate (Insufficient data)	Monitoring is retained for effluent characterization. The permittee shall continue to collect discrete effluent ammonia samples and concurrent receiving water pH and temperature to calculate the Ammonia Impact Ration (AIR) (6). One sample must coincide with WET sampling to aid in the determination of the cause of toxicity, if toxicity is detected.
Nutrients: Total Nitrogen Total Phosphorus	N: 3 P: 3	N: 2.69 mg/L P: 0.14 mg/L	N/A	N/A	TN: 2.50 mg/L 90th percentile TP: 0.33 mg/L 90th percentile	Colorado River at the northern International Boundary near Morelos Dam A.A.C. R18-11-109(F)(7).	RP Indeterminate (Insufficient data)	Sufficient effluent monitoring data are not available to evaluate the applicable nutrient criterion under A.A.C. R18-11-109(F)(7), including the 90th percentile criterion. Therefore, monitoring for Total Nitrogen and Total Phosphorus is retained to collect additional data to support future evaluations and determine whether WQBELS are required.
Oil & Grease	3	< 5 mg/L	N/A	N/A	BPJ Technology-Based Level of 10 mg/L monthly average and 15 mg/L daily maximum	BPJ Technology-Based	No RP	Monitoring required for effluent characterization.
Hardness	11	430 mg/L	N/A	N/A	No applicable standard. Hardness is used to determine standards for specific metal parameters.	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 average receiving water hardness value of 357 mg/L. Monitoring for hardness is required whenever monitoring for hardness dependent metals is required.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Antimony	5	< 1 µg/L	4.19	N/A	6 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Arsenic	5	< 1 µg/L	4.19	N/A	10 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Barium	3	13 µg/L	5.62	73.09 µg/L	2,000 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Boron	Effluent: 11 Colorado River (500 m downstream of Outfall 001): 10	Effluent: 780 µg/L Colorado River (500 m downstream of Outfall 001): 300 µg/L	Effluent: 1.64	Effluent: 1282.37 µg/L	1,000 µg/L	AgI	RP Exists	WQBELs and monitoring requirements are continued in the permit. ADEQ determined that additional information is necessary to evaluate the existing mixing zone under the current requirements of A.A.C. R 18-11-114. Therefore, the permit includes a special condition requiring submittal of an updated mixing zone report and, if necessary, additional information, supporting data, or explanation sufficient to demonstrate compliance with the current mixing zone requirements.
Beryllium	5	< 2 µg/L	N/A	N/A	4 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Cadmium (7)	5	< 0.1 µg/L	N/A	N/A	5 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Chromium VI	11	< 15 µg/L	N/A	N/A	11 µg/L	A&Ww chronic	RP Indeterminate (High LOQ and based on Total chromium data)	Monitoring required and an assessment level remains in the permit.
Chromium (Total)	12	< 10 µg/L	N/A	N/A	100 µg/L	DWS	No RP	Monitoring required as an indicator parameter for Chromium VI.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Copper (7)	Effluent: 11 Colorado River (500 m downstream of Outfall 001): 10	Effluent: 210 µg/L Colorado River (500 m downstream of Outfall 001): < 10 µg/L	Effluent: 2.32	Effluent: 486.77 µg/L	26.57 µg/L	A&Ww chronic	RP Exists	WQBELs and monitoring requirements are continued in the permit. ADEQ determined that additional information is necessary to evaluate the existing mixing zone under the current requirements of A.A.C. R 18-11-114. Therefore, the permit includes a special condition requiring submittal of an updated mixing zone report and, if necessary, additional information, supporting data, or explanation sufficient to demonstrate compliance with the current mixing zone requirements.
Cyanide	11	< 10 µg/L	N/A	N/A	9.7 µg/L	A&Ww chronic	RP Indeterminate (High LOQ)	Monitoring is required and a WQBEL remains in the permit.
Hydrogen sulfide	10	< 40 µg/L	N/A	N/A	2 µg/L	A&Ww chronic	RP Indeterminate (High LOQ)	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	4	340 µg/L	4.74	1,610.25 µg/L	1,000 ug/L	A&Ww chronic	RP Exists	Monitoring is required and a WQBEL is set in the permit.
Lead (7)	5	< 1 µg/L	N/A	N/A	9.74 µg/L	A&Ww chronic	No RP	Monitoring required for effluent characterization.
Manganese	3	40 µg/L	5.62	N/A	980 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Mercury	12	0.029 µg/L	9.13	0.26 µg/L	0.01 µg/L	A&Ww chronic	RP Exists	Monitoring required and a WQBEL remains in the permit.
Nickel (7)	5	< 20 µg/L	N/A	N/A	140 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Selenium	12	< 2 µg/L	N/A	N/A	2 µg/L	A&Ww chronic	No RP	Monitoring required for effluent characterization.
Silver (7)	5	< 0.1 µg/L	N/A	N/A	28.71 µg/L	A&Ww acute	No RP	Monitoring required for effluent characterization.

Table 1. Permit Limitations and Monitoring Requirements.

Parameter	No. of Samples	Maximum Reported Concentration (1)	RP Multiplier (2)	Critical Concentration (Calculated)	Most Stringent Criterion	Most Stringent Criterion Basis (3)	Does Reasonable Potential Exist?	Proposed Monitoring Requirement/Rationale (4)
Sulfides	12	< 50 µg/L	N/A	N/A	N/A	No applicable standard	N/A	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	5	< 0.25 µg/L	N/A	N/A	2 µg/L	DWS	No RP	Monitoring required for effluent characterization.
Zinc (7)	5	38 µg/L	4.19	159.3 µg/L	344.45 µg/L	A&Ww acute and chronic	No RP	Monitoring required for effluent characterization.
Whole Effluent Toxicity (WET):								
Ceriodaphnia dubia (Water flea)	5	100 PE	N/A	N/A	No toxicity (A.A.C. R18-11-108(A) (6)	A&Ww	RP Exists	WET WQBELs and monitoring requirements are continued in the permit. ADEQ determined that additional information is necessary to evaluate the existing mixing zone, including the requirements applicable to acute toxicity and the Zone of Initial Dilution (ZID), under A.A.C. R18-11-114. Therefore, the permit includes a special condition requiring submittal of an updated mixing zone report and, if necessary, additional information, supporting data, or explanation sufficient to demonstrate compliance with the current mixing zone requirements.
Pimephales promelas (Fathead minnow)	5	100 PE	N/A	N/A	No toxicity (A.A.C. R18-11-108(A) (6)	A&Ww	RP Exists	
Pseudo-kirchneriella subcapitata (Green Alga) (8)	5	24 PE	N/A	N/A	No toxicity (A.A.C. R18-11-108(A) (6)	A&Ww	RP Exists	

Footnotes:

1. Maximum quantified result or maximum reporting limit, whichever is highest. A maximum reporting limit is indicated with less than "<" sign.
2. Reasonable potential (RP) multiplier is a factor applied to the limited dataset reported to ADEQ by the permittee over the current permit term. This factor is a function of the sample count and coefficient of variation for the dataset that is used to approximate the 99th percentile value at a 99% confidence level based on a lognormal distribution.
3. This refers to the applicable designated use that determines the lowest (most protective) water quality standard for each pollutant. Designated use abbreviations are defined in A.A.C. R18-11-101.
4. The monitoring frequencies are as specified in the permit.
5. The SSC standard is expressed as a median value determined from a minimum of four samples collected at least seven days apart. The results of a suspended sediment concentration sample collected during or within 48 hours after a local storm event shall not be used to determine the median.
6. An AIR will be calculated by dividing effluent ammonia concentration by the applicable standard using the receiving water pH and temperature.
7. Hardness-dependent metal - the standard for this parameter is based on the average hardness value of the receiving water as indicated above.
8. Formerly known as *Selenastrum capricornutum or Raphidocelis subcapitata.*

VIII. NARRATIVE WATER QUALITY STANDARDS

Narrative standards applicable to the receiving water are listed in A.A.C. R18-11-108. Part I of the permit contains discharge limitations, other limitations, and monitoring requirements to ensure the discharge is protective of the receiving water, including the narrative standards.

The applicable narrative standards follow below in italics. How ADEQ implements the standard in the permit follows the standard.

A surface water shall not contain pollutants in amounts or combinations that:

Settle to form bottom deposits that inhibit or prohibit the habitation, growth, or propagation of aquatic life;

- The permit requires Total Suspended Solids (TSS) and Suspended Sediment Concentration (SSC) monitoring for effluent characterization. No TSS and SSC effluent limitations are proposed at this time because the permit records does not identify a basis for establishing such limitations for this discharge. ADEQ will continue to evaluate monitoring results in future permit actions.

Cause objectionable odor in the area in which the surface water is located; and Cause off-taste or odor in drinking water;

- The permit contains a narrative requirement that the discharge must not contain objectionable odor.

Cause off-flavor in aquatic organisms; and Are toxic to humans, animals, plants, or other organisms;

- This permit contains requirements for chronic Whole Effluent Toxicity (WET) Testing to ensure the discharge is free from toxicity. The permit also contains effluent characterization monitoring to assess the quality and identify pollutants that may be present in the discharge. WQBELs and monitoring requirements are continued for applicable parameters, including boron, copper, pH, and WET, as appropriate. These requirements support continued evaluation of the discharge and help ensure that the discharge does not cause toxicity to aquatic organisms, wildlife, and human health or cause off-flavor in aquatic organisms.

Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses;

- The permit contains monitoring requirements for ammonia, nitrate-nitrite, Total Kjeldahl Nitrogen (TKN), total nitrogen, and total phosphorus to assess the amount of nutrients present in the discharge. Where reasonable potential exists for these parameters, ADEQ includes effluent limitations for these parameters to prevent the growth of algae and other aquatic plants that may inhibit or prohibit the habitation, growth, or propagation of other aquatic life or impair recreational uses.

Change the color of the surface water from natural background levels of color.

- The permit contains a narrative requirement that the discharge must not contain unnatural color.

A surface water shall not contain oil, grease, or any other pollutant that floats as debris, foam, or scum; or that causes a film or iridescent appearance on the surface of the water; or that causes a deposit on a shoreline, bank, or aquatic vegetation.

- The permit contains a narrative requirement that the discharge shall be free from oil, grease and other pollutants that float as debris, foam, or scum; and a film or iridescent appearance.

A surface water shall not contain a discharge of suspended solids in quantities or concentrations that interfere with the treatment processes at the nearest downstream potable water treatment plant or substantially increase the cost of handling solids produced at the nearest downstream potable water treatment plan.

- The permit contains a monitoring for Total Suspended Solids (TSS). The monitoring for TSS will ensure the discharge does not contain suspended solids in quantities or concentrations that would interfere with or increase the cost to the nearest downstream potable water treatment plant.

A surface water shall not contain solid waste such as refuse, rubbish, demolition or construction debris, trash, garbage, motor vehicles, appliances, or tires.

- The permit contains a narrative requirement that the discharge must not contain refuse, rubbish, demolition or construction debris, trash, or garbage. Motor vehicles, appliances, or tires are not expected to be present in the discharge.

A wadeable, perennial stream shall support and maintain a community of organisms having a taxa richness, species composition, tolerance, and functional organization comparable to that of a stream with reference conditions in Arizona.

- This permit contains requirements for Whole Effluent Toxicity (WET) Testing to ensure the discharge is free from toxicity. The permit also contains effluent characterization monitoring to assess the quality of the effluent and determine what parameters of concern are present in the discharge and at what levels. WQBELs and monitoring requirements are continued for applicable parameters, including boron, copper, pH, and WET, as appropriate. These requirements support continued evaluation of the discharge and help ensure that the discharge does not cause toxicity to aquatic organisms, wildlife, and human health.

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.

Discrete (i.e., grab) samples are specified in the permit for all parameters. The quality of the discharge is not expected to be highly variable.

Monitoring locations are specified in the permit (Part I.A and Part II.A) in order to ensure that representative samples of the effluent and receiving water 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.5). 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)

Biosolids requirements are not applicable to this permit because the YDP is not a wastewater treatment plant and does not generate sewage sludge or biosolids subject to 40 CFR part 503. Therefore, biosolids requirements are not included in the permit.

XI. SPECIAL CONDITIONS (Part V in Permit)

Mixing zone Requirements

The previous permit required the permittee to develop and submit mixing zone evaluation reports for the approved mixing zones. The Permittee submitted those reports in accordance with the previous permit requirements. Since that time, the mixing zone requirements in A.A.C. R18-11-114 have been revised. As a result, the evaluations developed under the previous regulatory framework do not provide all of the information needed for ADEQ to evaluate the existing mixing zones under the current rule. Therefore, this permit includes a special condition requiring revised mixing zone evaluation reports for WQIC and YDP. The existing mixing zones and associated monitoring and compliance requirements remain in effect unless modified by ADEQ following its review of the revised evaluations. Additional information regarding the mixing zone requirements is provided in Section VIII of this factsheet.

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 YDP will be to a perennial water with Tier 1 antidegradation protection. This is a renewal permit for an existing facility with no new or expanded discharge, and the existing uses have been maintained. Therefore, an antidegradation review is not required at this time. 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 on ADEQ's website or 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 on ADEQ's website or 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 (or insert other forms submitted), received December 2, 2025, 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 May 6, 2026 and June 8, 2026.
3. ADEQ files on Yuma Desalting Plant.
4. ADEQ Geographic Information System (GIS) Website
5. Arizona Administrative Code (A.A.C.) 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).