NPDES PERMIT NO. NM0028762
STATEMENT OF BASIS

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

City of Aztec - Water Treatment Plant
201 West Chaco
Aztec, New Mexico 87410

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

PREPARED BY

Maria Okpala
Environmental Engineer
NPDES Permits Branch (6WQ-PE)
Water Division
VOICE: 214-665-3152
EMAIL: Okpala.maria@epa.gov

DATE PREPARED

September 13, 2021

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued July 28, 2016, with an effective date of September 1, 2016, and an expiration date of August 31, 2021.

40 CFR CITATIONS: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of September 10, 2021.

RECEIVING WATER – BASIN

The discharge from the facility is to Lower Animas Ditch, an irrigation facility with return flows at various locations, including diversions to Hampton Arroyo and Williams Arroyo, subject to Section 20.6.4.98 New Mexico Administrative Code (NMAC) (if non-perennial) and Section

20.6.4.99 NMAC (if perennial); then Animas River, from Estes Arroyo upstream to the Southern Ute Indian Tribal boundary, a classified segment described in Section 20.6.4.404 NMAC and from the confluence with the San Juan River upstream to Estes Arroyo, a classified segment described in Section 20.6.4.403 NMAC; then San Juan River, a classified segment described from the Navajo Nation Boundary at Hogback to Animas River in Section 20.6.4.401 NMAC in the San Juan River Basin.

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
ML	Method Minimum Level
MG	Million gallons
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publicly owned treatment works
RP	Reasonable potential
SS	Settleable solids
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the previous permit issued July 28, 2016, with an effective date of September 1, 2016, and an expiration date of August 31, 2021 are:

1. Discharges from the facility may enter Lower Animas Ditch / Hampton Arroyo and/or Williams Arroyo in Water body Segment 20.6.4.98 / 99, with a critical low flow of 0 cfs. Discharges may also enter Water body Segment 20.6.4.404 or Segment 20.6.403 in the San Juan River Basin. Previous permit identified the receiving water as a classified perennial stream, with a critical low flow (4Q3) for the Animas River, above Estes Arroyo as 184 cfs.
2. Updated Minimum Quantification Level language in Part II of the draft permit.
3. Biomonitoring test is changed from 48-hour Acute test to 7-day Chronic test based on updated critical dilution and updated receiving stream information.
4. TRC limit is changed from 0.019 mg/L to 0.011 mg/L based on updated critical dilution.
5. Quarterly monitoring and reporting requirements for Cyanide total recoverable have been established in the draft permit.
6. Monitoring and reporting requirements for Delta-BHC study have been established in the draft permit based on delta-BHC effluent testing data submitted by the permittee.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at 201 New Mexico Highway 173 in the City of Aztec in San Juan County, New Mexico. Under the SIC Code 4941, the applicant operates a Water Treatment plant. This permitting action is for the discharge of backwash and flushing water originating from the potable water treatment plant.

The Water Treatment Plant (WTP) consists of four plants, operated separately, at the same location. The plant utilizes a combination of coagulation, flocculation, and various media filters, including anthracite coal, plastic pellets, and garnet & silica sand, depending on the plant. The intake water source for all the four plants is the Animas River. Intake water is treated with aluminum sulfate and a non-ionic polyacrylamide polymer (coagulation and flocculation depending on the plant), clarification and filtering prior to disinfection and distribution. Two of the four plants go through a flush cycle with raw water approximately every four to five hours. Filter backwash using potable water occurs from once per day to once every three to four days depending on the plant and the time of year.

The backwash and system flush flows through the WTP's sump system to an on-site settling pond (i.e., backwash pond) with an outlet to an open ditch, then through a driveway culvert, then through a pipe to an open channel to the Lower Animas Ditch. Samples are collected prior to discharge at the entrance to the pipe leading to the open channel to the Lower Animas Ditch. The Animas Ditch is approximately 15 miles long before it enters the Animas river

Solids are removed from the settling pond once every year, stacked on the sides, and stockpiled adjacent to the pond to dry. The sediment stockpile is tested using Toxicity Characteristic

Leaching Procedure. Based on the test results, the sediment is either sent to Bondad Landfill/WCA in Durango, Colorado or provided to the public.

The discharge is located at Latitude 36° 50' 0" North, Longitude 107° 58' 45" West. The discharge from the facility is to Lower Animas Ditch, an irrigation facility with return flows at various locations, including diversions to Hampton Arroyo and Williams Arroyo, subject to Section 20.6.4.98 New Mexico Administrative Code (NMAC) (if non-perennial) and Section 20.6.4.99 NMAC (if perennial); then Animas River, from Estes Arroyo upstream to the Southern Ute Indian Tribal boundary, a classified segment described in Section 20.6.4.404 NMAC and from the confluence with the San Juan River upstream to Estes Arroyo, a classified segment described in Section 20.6.4.403 NMAC; then San Juan River, a classified segment described from the Navajo Nation Boundary at Hogback to Animas River in Section 20.6.4.401 NMAC in the San Juan River Basin. The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC, effective as of May 22, 2020 for purposes of State implementation and approved by EPA for Clean Water Act Purposes on July 24, 2020).

The designated uses of all non-perennial surface waters of the state, except those ephemeral waters included under Section 20.6.4.97 NMAC or classified in Sections 20.6.4.101-899 NMAC are livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. The designated uses in all perennial surface waters of the state except those classified in Sections 20.6.4.101-899 NMAC are warmwater aquatic life, livestock watering, wildlife habitat and primary contact. The designated uses of Animas River, in both Section 20.6.4.403 and 404 NMAC, are coolwater aquatic life, irrigation, livestock watering, wildlife habitat, public water supply, industrial water supply and primary contact.

III. EFFLUENT CHARACTERISTICS

The pollutants shown in Table I below was obtained in Section C of the Permit Application Form 2C dated April 13, 2021; Additional permit application information dated August 26, 2021; August 20, 2021; July 29, 2021; July 20, 2021; July 8, 2021; June 30, 2021; June 21, 2021; and May 13, 2021.

TABLE 1: OUTFALL 001 POLLUTANTS

Parameter	Max	Avg
	mg/l unless noted	
Flow, million gallons/day (MGD)	2.917	0.177
TSS	19	4.55
TDS (from DMR)	19	19
pH	8.14 max	7.46 min
Nitrate plus Nitrite Nitrogen	ND	ND
Nitrate as N	ND	ND
Aluminum, D	0.76	0.669695
Antimony, T	ND	ND
Arsenic, T	0.00045	0.00045

Parameter	Max	Avg
	mg/l unless noted	
Beryllium, T	ND	ND
Chromium, T	ND	ND
Copper, T	0.000995	0.000995
Cyanide, T	0.00628	0.002854
Hardness as CaCO3	230	223.2841
Lead, T	0.00017	0.00017
Mercury, T, ug/L	0.000456	0.000456
Nickel, T	ND	ND
Selenium, T	ND	ND
Thallium, T	ND	ND
Zinc, T	0.0019	0.0019
Cyanide, T	6.28	3.048
Phenols	ND	ND
Barium	0.075	0.070252
Boron	0.062	0.05386
Manganese	0.25	0.142
Cobalt	ND	ND
Molybdenum, T	ND	ND
Uranium, T	0.0013	0.0013
Vanadium, T	ND	ND
Methylene Chloride	ND	ND
TRC	0.025	0.021
Bromoform	0.00047	0.00047
Chloroform	0.00033	0.00033
Delta-BHC	0.00245	0.001348

Footnote:
T – Total; D – Dissolved; ND – Non detect

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water," more commonly known as the "swimmable, fishable" goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136

(analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). This is a renewal of an existing permit. An NPDES Application for a Permit to Discharge (Form 1 & 2C) was received on April 13, 2021. Additional Permit application information were received on August 20, 2021; July 29, 2021; July 20, 2021; July 8, 2021; June 30, 2021; June 21, 2021; and May 13, 2021. The application was deemed administratively complete on July 8, 2021.

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW OF TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 require that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS. Water quality-based effluent limitations are established in the proposed draft permit for pH and TRC.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Discharges from similar drinking water facilities (e.g City of Las Vegas, Village of Ruidoso, City of Springer etc) are required to meet effluent limitations for total suspended solids (TSS) at monthly average of 20 mg/l and daily maximum of 30 mg/l. Therefore, based on these similar permitted facilities, using BPJ, effluent limitations for TSS are established in the draft permit identical to the previous permit.

Loading limits are not established since the discharge is not a continuous one and is discharged from a holding lagoon on an as needed basis. This is identical to the previous permit.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained or attained.

The stream mile distance from the WTP to the Confluence of San Juan River then further to the Navajo Nation boundary (West of the Confluence of La Plata River) is over 18 miles (>18 miles). The low flow of the San Juan River after the Animas River comingles, but upstream of the Farmington wastewater treatment plant, is approximately 278.6 MGD, meaning the flow from the Aztec Water treatment plant is less than approximately 0.064% of the flow in the San Juan River as it enters the Navajo Nation waters. 40 CFR §122.4(d) requires NPDES permits also be protective of a downstream state or tribe's water quality standards, due to the nature of the discharge being from a water treatment plant, the low (0.177 MGD) volume of discharges, dilution with first the Animas River and then the San Juan River, and distance prior to entering the Navajo Nation, the water quality standards of the Navajo Nation will not be affected

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC, effective July 24, 2020).
General criteria are applicable as specified in 20.6.4.13 NMAC. The discharge from the facility may enter Lower Animas Ditch / Hampton Arroyo and/or Williams Arroyo in Water body

Segment 20.6.4.98 / 99. The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC, effective as of May 22, 2020 for purposes of State implementation and approved by EPA for Clean Water Act Purposes on July 24, 2020).

The known uses of the receiving water(s) Segment 20.6.4.98 are livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. The known uses of Segment 20.6.4.99 are warmwater aquatic life, livestock watering, wildlife habitat, and primary contact. The designated uses of Animas River, in both Section 20.6.4.403 and 404 NMAC, are coolwater aquatic life, irrigation, livestock watering, wildlife habitat, public water supply, industrial water supply and primary contact.

4. Permit Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. pH

There were no violations of the permit limits for pH in the last permit cycle. The limiting pH numeric criteria in 20.6.4.900 NMAC for primary contact and warmwater, marginal warmwater and coolwater aquatic life designated uses are pH within the range of 6.6 to 9.0 standard units (su). The site-specific pH standard of 6.6 – 9.0 is established at the end-of-pipe. The NMIP requires site-specific pH standard to be applied at end-of-pipe for all dischargers. The limitation and monitoring requirements for pH of 6.6 to 9 are continued in the draft permit.

b. Toxics

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant.

The facility is a minor industrial with the highest monthly average flow over the most recent 24-months as 0.177 MGD (0.274 cfs). For industrial facilities, the highest monthly average flow over the most recent 24-months is used for reasonable potential calculations.

The facility discharges to an irrigation ditch. Water only flows in the ditch when the fields need water. The rest of the year the ditch is dry, 4Q3 is 0. No samples have been taken of the ditch water when flowing and there are no ambient data.

The CD for this facility is evaluated as follows:

Critical Dilution, CD = Qe/(FQa+Qe)

where:

Qe = facility flow (0.177 MGD or 0.274 CFS)
Qa = critical low flow of the receiving waters (Qa = 0)
F = fraction of stream allowed for mixing (1.0)

CD = 0.274 CFS/ [(1.0) (0) +0.274] = 1
CD = 100%

The reasonable potential calculation was performed using test results for those parameters (tested at MQL) that were greater than the MQL. Detection limit values were used for those parameters reported as non-detect whose values are above the MQL. For RP calculation purpose, averaged value of data set is utilized in the RP calculations. See the RP spreadsheet of the fact sheet (attached).

However, effluent data for Total Recoverable Cyanide 6.28 ug/L (Estimated or J, 5/20/2020) and (ND < MDL of 2.96 ug/L, which was below the MQL of 10 ug/L, 5/26/21), and (ND <RDL of 0.005 mg/L), with a geometric mean of 2.854 ug/L The limiting Wildlife Habitat and Chronic Aquatic Criteria is 5.2 ug/L. As a result, the draft permit establishes monitoring requirements for Total Recoverable Cyanide to obtain more data for later RP analysis.

Delta-BHC

The effluent data for delta-BHC were 0.00245 ug/L (5/20/2020), ND <0.002 ug/L (5/26/2021) and ND <0.002 ug/L (6/2/2021) with a geometric mean of 0.0013481 ug/L. NMWQS does not have numeric criteria for delta-BHC. EPA has not published recommended human health criterion for delta-BHC. EPA Integrated Risk Information System (IRIS) indicates that delta-DHC or delta-Hexachlorocyclohexane (delta-HCH) (CAS 319-86-8) has not been assessed.

Information from EPA's ECOTOX database indicates that a geometric mean for delta-BHC Lethal Concentration 50 percent (LC-50) for freshwater species of 0.00175 ug/L. However, there is insufficient information in the ECOTOX database to calculate delta-BHC chronic aquatic life criterion for a particular species, genus or group that is representative of the form of life to be preserved in New Mexico, using the results of toxicological studies published in scientific journals available from EPA's ECOTOX database. ECOTOX data for Rainbow Trout indicate toxic effects at a geometric mean of 0.000063246 ug/L, but LC-50 values were not provided for Rainbow Trout.

EPA proposes additional delta-BHC monitoring in the effluent to be used in the next permit cycle should there be sufficient toxicological studies at that time to calculate limitations. As a result, the permittee is required to submit a detailed plan to test for Delta-BHC at the source water intake within six months after the effective date of the permit to both EPA and NMED for approval. The plan must also include any use of delta-BHC at the facility, if any. Once approved, the permittee must collect and analyze samples for delta-BHC at least once a quarter or more frequent during the 2nd, 3rd, 4th and 5th year of the permit. The results of this study shall be attached to the DMR reports to EPA.

c. Total Residual Chlorine

The current permit has a TRC limit of 0.019 mg/L. The permittee reported TRC as being present in the effluent. However, the permittee uses potable water for filter backwash, which occurs from once per day to once every three to four days depending on the plant and the time of year. According to page 29 of the 2012 NMIP, which states that, "*In instances where a facility uses chlorine for disinfection of the wastewater or is used as an emergency back-up to a system using another bacteria control technology such as ultraviolet light, or is used to remove filamentaceous algae, or when chlorine is used to disinfect process equipment used at the facility and the permit writer must limit TRC in the permit."* Numeric criteria for Total Residual Chlorine are 19 micrograms per Liter (µg/L) at the point of discharge for Acute Aquatic Life designated uses and 11 ug/L for Wildlife Habitat and Chronic Aquatic Life Designated Uses. At a stream critical low flow equal to zero (0), the limiting criteria is numeric criteria, which is 11 µg/L. As a result, TRC limit changed from 0.019 mg/L to 0.011 mg/L.

d. Total Dissolved Solids

Monitoring requirements for the Total Dissolved Solids (TDS) are established in the proposed permit because the discharge enters the Colorado River Basin, in accordance with the current Salinity policy and program outlined in the most current "review, water quality standards for salinity, Colorado river system." The NM WQS citation for adoption of this policy is at 20.6.4.54 NMAC. The objective of the policy is to achieve "no salt return" whenever practicable for industrial discharges and an incremental increase in salinity over the supply water for municipal dischargers. Under the Colorado Salinity Control Program (CSP), the facility is an existing facility where construction commenced on or before October 18, 1975. The Aztec water plant was built in 1954. For existing industrial facilities, permitting authority may permit the salt discharge upon satisfactory demonstration that it meets one of three tests. The applicable test for the Aztec plant is that the existing tonnage of salt is less than one-ton (2000 lbs) per day or 366 tons per year.

TDS data obtained from the DMRs reveals that the discharge does not have a reasonable potential to exceed the 1 ton/day in salinity. The highest monthly average Total Dissolved Solids reported during the last two years is 19 mg/l.

TDS = 19 mg/l * 8.34 lbs/gal * 0.177 MGD * 1 ton / 2000 lbs = 0.0140 tons/day

Since the TDS concentration is less than 500 mg/L, the discharge qualifies for a "fresh water waiver" irrespective of the total daily or annual or annual salt load. Furthermore, the reported TDS is less than 1 ton/day, monitoring shall continue to be performed once every three months, using grab sample.

e. Dissolved Oxygen

The dissolved Oxygen criteria according to 20.6.4.900.H (4) NMAC for warmwater, marginal warmwater and coolwater aquatic criteria are respectively 5 mg/L or more. Since the facility is a water Treatment Plant, DO modeling is not required.

5. Monitoring Frequency for Limited Parameters

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). Sample frequency is based on the March 12, 2012, NMIP and the previous permit.

Flow shall be estimated daily when discharging. Estimated flow measurements are not subject to the accuracy provisions established at Part III.C.6 of the permit. The pollutant TRC shall be monitored daily when discharging by instantaneous grab which according to Part 136 is defined as analysis within 15 minutes of collection. pH shall continue to be monitored weekly when discharging. TDS and Cyanide total recoverable shall be monitored once per quarter by grab sample. TDS monitoring requirements is consistent with previous permit.

D. WHOLE EFFLUENT TOXICITY

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP. In Section V.C.4.b. above; "Critical Conditions", it was shown that the critical dilution, CD, for the facility is 100%. The discharge of the effluent is to Lower Animas Irrigation Ditch, intermittent stream, and for this type of facility the NTIG-WET requires a one-time chronic test. The CD is 100%, with dilution series of 32%, 42%, 56%, 75%, & 100%.

The previous permit had a 48-hour acute WET testing of once per permit term and no failure. Based on the test results, the permit does not require WET limits. EPA concludes that based on the nature of the discharge described in activity section of this document that this effluent will not cause or contribute to an exceedance of the State water quality standards. Therefore, WET limits will not be established in the proposed permit.

OUTFALL 001

During the period beginning on the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge backwash water to the lower Animas Ditch, thence to the Animas River, thence to the San Juan River, Waterbody Segment No. 20.6.4.403 NMAC of the San Juan River Basin from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY (7day Chronic Static Renewal) (*1)	Value	MEASUREMENT FREQUENCY	SAMPLE TYPE
Ceriodaphnia dubia	Report	Once/Term (*2)	24-Hr Composite
Pimephales promelas	Report	Once/Term (*2)	24-Hr Composite

*1 Monitoring and reporting requirements begin on the effective date of this permit. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

*2 Once per permit term. The test is to be performed during the first springtime after the permit effective date, during the irrigation season when irrigation return flows in the lower Animas Ditch likely discharge back to the

Animas River when most sensitive juvenile life forms are likely to be present in the receiving water and colder ambient temperatures might adversely affect treatment processes. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

F. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

VI. FACILITY OPERATIONAL PRACTICES

A. WASTEWATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

B. OPERATION AND REPORTING

The permittee must submit Discharge Monitoring Report's (DMR's) quarterly, beginning on the effective date of the permit, lasting through the expiration date of the permit or termination of the permit, to report on all limitations and monitoring requirements in the permit.

VII. 303(d) LIST

Hampton Arroyo, Williams Arroyo and other arroyos crossed by the Lower Animas Ditch have not been assessed. Animas River into which the facility indirectly discharges in Waterbody Segment 20.6.4.403 and 20.6.4.404 NMAC of the San Juan River Basin is listed on the "2020-2022 Integrated §303(d)/§305(b) List of Impaired Waters." The 303(d) list indicates that designated uses of coolwater aquatic life are not supporting. The probable causes of impairment in Animas River from Estes Arroyo upstream (Assessment Unit NM-2404_00) are turbidity, nutrients, temperature, total phosphorus and dissolved lead; and Estes Arroyo downstream (Assessment Unit NM-2403.A_00) are temperature (Source: EPA-approved 2020-2022 Integrated Report dated January 22, 2021). Total Maximum Daily Loads (TMDLs) exist for E. coli and total phosphorus for 20.6.4.404 NMAC and nutrients, temperature, E. coli. for Section 20.6.4.403 NMAC.

The discharger is not a contributor of nutrient loading/eutrophication, temperature or E. coli. There is no reasonable potential to exceed applicable numeric criteria for dissolved lead. A numeric site-specific total phosphorus criterion of 0.1 milligrams per Liter (mg/L) applies to Section 20.6.4.404 NMAC. City of Aztec's 2021 NPDES Form 2 C application indicates Total Phosphorus is believed absent from the effluent. No additional requirements beyond the previously described technology-based or water quality-based effluent limitations and monitoring requirements, established in the proposed permit appear required at this time.

A permit reopener clause continues in the draft permit stating, "This permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standards in accordance with 40 CFR 122.44(d). Modification of the permit is subject to the provisions of 40 CFR 124.5." Additionally, language has been added stating that the permit may be reopened and modified during the life of the permit if relevant portions of the State WQS are revised or remanded. The permit may be reopened to include conditions of the completed TMDL. Therefore, no additional requirements beyond the previously described technology-based or water quality-based effluent limitations and monitoring requirements, are established in the proposed permit.

VIII. ANTIDEGRADATION

The NMAC, Section 20.6.4.8 "Antidegradation Policy and Implementation Plan" sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. Effluent discharges flows are intermittent and are not directly discharged to Animas River. Facility flows described in the 2016 Statement of Basis were 0.181 MGD and have not increased (now 0.177 MGD as discussed above). The permit requirements and the limits, including mercury, are protective of the receiving waters designated uses of that water consistent with 2020 Water Quality Management Plan and Continuing Planning Process (See Table 2-1. Tier Descriptions and Summary of Antidegradation Protection Requirements).

IX. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit maintains the permit requirements of the previous permit for TSS, TRC and pH.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, http://ecos.fws.gov/ipac ten species in San Juan County are listed as endangered (E) or threatened (T). The two species are avian and include the Southwestern willow flycatcher (Empidonax traillii extimus) and Yellow-billed Cuckoo (Coccyzus americanus). Three of the species are aquatic and include the Colorado pike minnow (*Ptychocheilus lucius*), Razorback sucker (*Xyrauchen texanus*), and the Zuni Blue head Sucker (Catostomus discobolus yarrow). Then two mammals and include Canada Lynx (Lynx Canadensis) and New Mexico Meadow Jumping Mouse (Zapus hudsonius luteus). In the previous permit, a "no effect" determination was made on these species.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. After review, EPA has determined that the reissuance of this permit will have "no effect" on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. The permit limits are consistent with water quality standards and designated uses appropriate for the discharge and receiving waters. Therefore, EPA concludes that reissuance of this permit will have "no effect" on the listed species and/or designated critical habitat.

2. EPA concluded "no effect" during the previous issuance of the permit on July 28, 2016 and has received no additional information since then which would lead to revision of that "no effect" determination.

3. EPA determines that Items 1 and 2 result in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State Water Quality Standards are promulgated or revised. In addition, if the State amends a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. COMPLIANCE HISTORY

A review of the DMR during the last permit cycle revealed that the facility was in violations of its permit for nine quarters (from the first quarter of 2016 to the first quarter of 2021). The facility had TRC violation in March 2019, November 2019, January 2020, October 2020, and December 2020. The permittee cited the reason for the November excursion is due to no flow in the irrigation ditch that the backwash water flows into. The ditch is approximately 15 miles long before it gets to the Animas river. With no flow of irrigation water, the facility believes that its backwash water did reach the receiving stream.

XV. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR §124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers, to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XVI. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XVII. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Form 1 and 2C received on April 13, 2021. Additional Permit application information were received on August 26, 2021; August 20, 2021; July 29, 2021; July 20, 2021; July 8, 2021; June 30, 2021; June 21, 2021; and May 13, 2021. The application was deemed administratively complete on July 8, 2021.

B. 40 CFR CITATIONS

Citations to 40 CFR are as of December 6, 2013.
Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, effective, effective July 24, 2020.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, March 15, 2012.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2014 - 2016.

D. MISCELLANEOUS REFERENCES

https://ecos.fws.gov/ipac/
Letter from Brent Larsen, EPA, to Mr. Paul Eckert, City Manager, dated July 8, 2021 informing the applicant that its NPDES application received on April 13, is administratively complete.

Email from Andrew Galloway, Chief Operator, Aztec Water Treatment Plant to Maria Okpala, EPA, dated August 26, 2021; August 23, 2021; August 9, 2021; July 29, 2021; July 20, 2021;

July 8, 2021, June 30, 2021; June 21, 2021; and May 13, 2021, on additional facility NPDES Application Form and DMRs.

Email from Erin Shea, NMED, to Maria Okpala, EPA, dated August 20, 2021; August 19, 2021; August 17, 2021; August 13, 2021; August 10, 2021; and May 19, 2021, on Permit Application information

Email from Daniel Valenta, NMED, to Maria Okpala, EPA, dated July 20, 2021; and May 25, 2021, on critical conditions information.