NPDES PERMIT NO. NM0030341
FACT SHEET

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

APPLICANT:

City of Las Vegas WTP
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Las Vegas, NM 87701

ISSUING OFFICE:

U.S. Environmental Protection Agency
Region 6
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PREPARED BY:

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DATE PREPARED:

April 15, 2022

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued July 27, 2017, with an effective date of September 1, 2017, and an expiration date of August 31, 2022.

RECEIVING WATER – BASIN

Gallinas River – Pecos 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
COD	Chemical oxygen demand
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
E. coli	Escherichia coli
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
ug/l	Micrograms per liter (one part per billion)
mg/l	Milligrams per liter (one part per million)
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
ng/l	Nanograms per liter (one part per trillion)
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	Publically owned treatment works
RP	Reasonable potential
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
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

A. Dissolved oxygen (DO) limit has been proposed in the permit as the receiving water is listed as impaired.
B. Total Recoverable Aluminum monitoring has been included in the permit to be filtered as per NMED SOP.
C. Application effluent characteristic testing requirements including human health requirements added in the permit.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at 385 NM 65 in Montezuma, San Miguel County, New Mexico.

Under the Standard Industrial Classification Code 4941, the applicant operates a Water Treatment Plant. The Plant provides treatment to surface water diverted from the Gallinas River. The drinking water treatment process includes disinfection, coagulation, flocculation, sedimentation, and filtration.

Backwash from the filtration system is sent to the backwash recovery basin to allow solids to settle. The top volume of water is sent back to the inlet feed for recycling with the settled waste pumped to the concrete-lined lagoon. The concrete-lined storage lagoon is aerated to degrade solids and keep the solids in suspension to avoid the system from going septic.

Water and solids from the backwash recovery basin, normally sent to the Las Vegas wastewater treatment plant (NPDES Permit No. NM0028827) can be diverted to Outfall 001 at the Gallinas River, in the event of emergency. The effluent from the water treatment plant would discharge into the Gallinas River in Segment No. 20.6.4.220 of the Pecos River Basin.

Discharges are located on that water at:

Outfall 001: Latitude 35° 39' 07" North; Longitude 105° 16' 31" West

III. EFFLUENT CHARACTERISTICS

The facility has not discharged during the past five years. Hence there are no new discharge pollutant level results for permit renewal The proposed permit authorizes discharges in case the facility cannot discharge the backwash and filter-to-waste water to the City's sewer system.

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). The current permit expires August 31, 2022, and a permit renewal application was received April 13, 2022, in accordance with provisions found at 40 CFR §122.21(d) and (e). The permit application was deemed administratively complete on April 25, 2022.

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 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.

A BPJ-based monitoring requirement for TSS is retained from the current permit. Water quality-based monitoring requirements for dissolved and total aluminum are continued in the proposed permit, while TRC effluent limitation is also continued in the proposed permit.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

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 facilities (e.g City of Santa Fe, Village of Ruidoso, Village of Cuba, City of Bloomfield 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. Because a discharge of filter backwash water and filter-to-waste water occurs only during emergency conditions, monitoring and reporting, but not limitations, are established in this proposed 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.

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 New Mexico State Standards for Interstate and Intrastate Surface Waters are found at 20.6.4 NMAC, amended through July 24, 2020, and can be found at https://www.epa.gov/sites/default/files/2014-12/documents/nmwqs.pdf

The Gallinas River has designated uses of irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life and primary contact. For New Mexico, designated uses of irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life and primary contact need protective limits.

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

Gallinas River stream segment WQS require pH to be between 6.6 and 9.0 su. The State of New Mexico limits are more limiting than the technology-based limits presented earlier. The draft permit shall maintain the limit in the previous permit, 6.6 to 9.0 su's ,for pH based on State of New Mexico stream segment specific WQS.

b. TOXICS

i. General Comments

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 criteria, the permit must contain an effluent limit for that pollutant.

ii. Critical Conditions

Critical conditions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allows a mixing zone for establishing pollutant limits in discharges. The

state establish a critical low flow designated as 4Q3, as the minimum average four consecutive day flow which occurs with a frequency of once in three years. The SWQB of the NMED provided EPA with the 4Q3 of 1.87 cfs (1.20 MGD) and a harmonic mean flow of 5.55 cfs (3.55 MGD).

For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. The critical dilution, CD, is calculated as:

CD = Qe/(FQa + Qe), where:

Qe = facility flow (0.03 MGD)
Qa = critical low flow of the receiving waters (1.20 MGD)
F = fraction of stream allowed for mixing (1.0)

CD = 0.03 MGD/ [(1.0) (1.20) + 0.03]
= 0.024
= 2.4 %

iii. Aluminum

The facility uses aluminum sulfate as the primary coagulant and more data are needed to assess reasonable potential. As a result, monitoring requirements for total and dissolved aluminum are retained in the permit.

iv. TRC

The facility pre-treats raw water with chlorine and final chlorinated water may be used for filter backwash. Total residual chlorine may be present at effluent that would endanger wildlife habitat and aquatic life. As a result, a daily monitoring requirement and an effluent limitation for TRC is maintained in the proposed in the permit. Grab sampling is established due to the nature of the discharge.

The draft permit proposes to limit TRC as follows:

Based on the EPA acute criterion for freshwater toxicity, a limit of 19ug/l of TRC is proposed for compliance with the NMWQS. The maximum TRC shall be monitored by instantaneous grab sample on a daily basis." Due to test methods limitations, the Sufficiently Sensitive Methods conditions in Part II.A of the permit allows a test of "less than 33ug/l" TRC to be reported as "ZERO"

v. DO

The plant design flow is 0.03 MGD; the anticipated CD is 2.4% as mentioned in Section E (WET) below. Since the facility treats water for a public water supply and does not treat wastewater from offsite. EPA believes this discharge will not have a significant effect, in terms of the DO standard (6 mg/l), in the aforementioned segment of the receiving water.

5. 303(d) List Impacts

The Gallinas River (Pecos Arroyo to Las Vegas Diversion), Segment 20.6.4.220 is listed as impaired for dissolved oxygen on the "State of New Mexico Part 303(d) List for Assessed Stream and River Reaches, 2022-2024". Total maximum daily load (TMDL) has not been developed. The waterbody is assessed as Category 1 with irrigation, livestock watering, primary contact and wildlife habitat as fully supporting. Marginal coldwater aquatic life is not supported

due to dissolved oxygen with TMDL estimated for 2024. The proposed permit is limited for TSS, pH and TRC. There are monitoring requirements for flow, dissolved oxygen, dissolved and total aluminum. There are no additional requirements beyond the already proposed technology-based and/or water-quality based requirements are needed in the proposed permit.

The standard reopener language in the permit allows additional permit conditions if warranted by the additional data and/or TMDLs are completed.

D. 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, 2012 NMIP and is consistent with the current permit. Under emergency conditions, flow is proposed to be estimated weekly; TSS shall be sampled once a week, by grab sample. Consistent with the 2012 NMIP, total and dissolved aluminum shall be monitored weekly, using grab sample. TRC shall be monitored daily, using instantaneous grab sample. Regulations at 40 CFR §136 define instantaneous grab as being analyzed within 15-minutes of collection.

E. WHOLE EFFLUENT TOXICITY TESTING

OUTFALL 001

The proposed permit only authorizes discharges due to emergency situations. In the event that a discharge occurs, acute whole effluent toxicity testing is required to assess the impact of the discharge on aquatic life. The permitted discharge is to an unnamed ditch which is about 700 feet from Gallinas River. According to the facility, the daily average flow would be about 0.03 MGD during emergency. The low flow (4Q3) of the Gallinas River is 1.91 cfs (1.23 MGD). The critical dilution at Gallinas River is 2.4%. After applying the 10:1 acute-to-chronic ratio, the applicable critical dilution for an acute WET testing is 24%. An acute WET testing of once per permit term for Dapnia pulex and Pimephales promelas is proposed in the permit.

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 from Outfall 001. Authorized discharges under emergency conditions consist of backwash and filter-to-waste water to Gallinas River. If discharges occur, such discharges shall be limited and monitored by the permittee as specified below:

WHOLE EFFLUENT TOXICITY TESTING (48-Hr Static Non-Renewal) (*1)	30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/permit term, if discharge occurs	Grab
Pimephales promelas	Report	Report	Once/permit term, if discharge occurs	Grab

Footnotes:
*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. This test should be performed once per permit term, if discharge occurs.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

Settled solids (sludge) are transferred to an on-site storage lagoon and then conveyed by force main to the City's wastewater collection and treatment system. The facility does not generate any sewage sludge.

B. OPERATION AND REPORTING

Electronic Reporting Rule

Discharge Monitoring Report (DMR) results shall be electronically reported to EPA per 40 CFR 127.16. To submit electronically, access the NetDMR website at https://netdmr.epa.gov. Until approved for Net DMR, the permittee shall request temporary or emergency waivers from electronic reporting. To obtain the waiver, please contact: U.S. EPA - Region 6, Water Enforcement Branch, New Mexico State Coordinator (6EN-WC), (214) 665-6468. If paper reporting is granted temporarily, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and copies to NMED as required (See Part III.D.IV of the permit).

Sufficiently Sensitive Analytical Methods (SSM)

The permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

VII. 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. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2.

VIII. 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 requirements of the previous permit for flow, pH, TRC, WET, total and dissolved aluminum.

IX. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Information for Planning and Consultation (IPaC), https://ipac.ecosphere.fws.gov/ , San Miguel County has seven candidates, threatened, or endangered species listed. The Rio Grande Cutthroat Trout (*Oncorhynchus clarkii virginalis*) and Monarch Butterfly (*Danaus plexippus*) are listed as candidate species for this county. The Mexican Spotted Owl (*Strix occidentalis lucida*) and Yellow-billed Cuckoo (*Coccyzus americanus*) are listed as threatened species for this county. Lastly, the New Mexico Meadow Jumping Mouse (*Zapus Hudsonius Luteus*), Southwestern Willow Flycatcher (*Empidonax traillii extimus*), and Holy Ghost ipomopsis (*Ipomopsis sancti-spiritus*) are listed as endangered species for this county. The county is also designated as critical habitat for the Mexican Spotted Owl (*Strix occidentalis lucida).*

The EPA made a "*no effect*" determination for federally listed species in the previous permit issued July 27, 2017.

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. There are no critical habitat designations in the area of the facility/discharge.

2. The Rio Grande Cutthroat Trout (*Oncorhynchus clarkii virginalis*) and Monarch Butterfly (*Danaus plexippus*) are the only additional species that was not listed during the previous permit cycle. They are candidate species and therefore not covered under Section 7. The Rio Grande Cutthroat Trout inhabits high-elevation headwater streams and lakes, eating a variety of insects and fish. The Monarch Butterfly feeds on various species of Milkweed, which grow in a variety of environments including streamside. The permitted discharge is not anticipated to affect the species.

3. The limitations established in the draft permit are identical to the previous permit.

4. EPA determines that Items 1, thru 3 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.

X. 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.

XI. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of either States WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the State's Water Quality Standards are either revised or promulgated. Should either State adopt a new WQS, and/or develop or amend a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard and/or water quality management plan, in accordance with 40 CFR §122.44(d). Modification of the permit is subject to the provisions of 40 CFR §124.5.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. COMPLIANCE HISTORY

The last Compliance Evaluation Inspection was conducted on June 4, 2018. During the inspection, the permittee received an unsatisfactory and marginal comment on flow measurement and self-monitoring. The permittee had failed to establish laboratory procedures and make adequate arrangements with contract or other laboratories to conduct analytical testing in the event of a discharge to Outfall 001. Within the past year the permittee has been successful submitting quarterly DMRs, reporting no discharge.

XIV. 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.

XV. FINAL DETERMINATION

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

XVI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Form 2A was received on April 13, 2022. The application was deemed administratively complete on April 25, 2022.Additional Permit application information on Forms 1 and Form 2C were received on June 30, 2022.

B. 40 CFR CITATIONS

Citations to 40 CFR 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, as amended through October 27, 2020

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

State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List of Assessed Surface Waters, 2020-2022

State of New Mexico Game & Fish (https://www.wildlife.state.nm.us/)

D. MISCELLANEOUS REFERENCES

Application for NPDES permit No. NM0028827 renewal was received from Boot Pierce, Glorieta Geoscience, Inc., on April 13, 2022.

Email from Boot Pierce, Glorieta Geoscience, Inc, to Aron Korir, EPA, April 18, 2022, with additional permit information.

Letter from Aron Korir, EPA, to Mr. Boot and Maria Gilvarry City of Las Vegas Water Treatment Plant, dated May 3, 2022, informing the applicant that its' NPDES application received April 13, 2022 was administratively complete.