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Draft: August 9, 2019

GROUND WATER QUALITY BUREAU
DISCHARGE PERMIT
Issued under 20.6.2 NMAC

Facility Name:	ABCWUA Large-Scale Recharge Project
Discharge Permit Number:	DP-1887
Facility Location:	San Juan-Chama Water Treatment Plant 6000 Alexander Blvd. NE Albuquerque, NM
County:	Bernalillo
Permittee:	Albuquerque Bernalillo County Water Utility Authority
Mailing Address:	P.O. Box 568 Albuquerque, NM 87103
Facility Contact:	Mark Kelly, Compliance Division Manager
Telephone Number/Email:	505-289-3434 / mkelly@abcwua.org
Permitting Action:	New
Permit Effective Date:	DATE
Permit Expiration Date:	DATE or 5 years from commencement of discharge, but no longer than 7 years from effective date [20.6.2.3109.H(4) NMAC]
NMED Permit Contact:	Pamela Homer
Telephone Number/Email:	505-827-0018 / Pamela.Homer2@state.nm.us

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MICHELLE HUNTER
Chief, Ground Water Quality Bureau
New Mexico Environment Department

Date

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Table 1: Applicable Groundwater Standards
Discharge Permit Summary
Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011

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I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit, DP-1887, to the Albuquerque Bernalillo County Water Utility Authority (ABCWUA, permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from the ABCWUA Large Scale Recharge Project (facility) in order to protect ground water and those segments of surface water gaining from ground water inflow for present and potential future use as domestic and agricultural water supply and other uses, and to protect public health. In issuing this Discharge Permit, NMED has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been met. Pursuant to Section 20.6.2.3104 NMAC, it is the responsibility of the permittee to comply with the terms and conditions of this Discharge Permit; failure to do so may result in enforcement action by NMED (20.6.2.1220 NMAC).

The activities that produce the discharge, the location of the discharge, and the quantity, quality and flow characteristics of the discharge are briefly described as follows.

Up to 6.48 million gallons per day (MGD), but no more than 5,000 acre-feet per year, of potable water (surface water treated to drinking water standards at the San Juan-Chama Water Treatment Plant) will be discharged to Class V Underground Injection Control (UIC) wells for the purpose of recharging the Middle Rio Grande Basin aquifer. The potable water will be discharged into one direct injection well (ASR-1) that is screened in the aquifer from approximately 399 to 1201 feet below ground surface and has an injection capacity of 2.88 MGD, and into one vadose zone injection well (VZ-1) that is completed above the water table and has an injection capacity of 360,000 gallons per day. Up to nine additional vadose zone wells may be added to the project, with a combined injection capacity of 3.24 MGD. The project is also regulated pursuant to an Underground Storage and Recovery Permit (USR-4) issued by the Office of the State Engineer (OSE). The San Juan-Chama Water Treatment Plant (WTP) is regulated by the NMED Drinking Water Bureau in accordance with the federal Safe Drinking Water Act and the New Mexico Drinking Water Regulations.

The facility is located at the San Juan-Chama WTP, 6000 Alexander Blvd. NE, Albuquerque, in Section 34, Township 11N, Range 3E, Bernalillo County. Groundwater most likely to be affected is at a depth of approximately 128 to 1,200 feet and has a total dissolved solids concentration of approximately 309 to 1,040 milligrams per liter.

The application (i.e., discharge plan) consists of the materials submitted by the permittee dated March 18, 2019 and materials contained in the administrative record prior to issuance of the Discharge Permit. Temporary permission was granted on March 21, 2019 for an eight-week performance evaluation. The discharge shall be managed in accordance with all conditions and requirements of this Discharge Permit.

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Pursuant to Subsection A(4) of 20.6.2.5004 NMAC, the standards to be protected in groundwater under this Discharge Permit are the standards of 20.6.2.3103 NMAC and the primary state drinking water maximum contaminant levels (MCLs) as specified in the Drinking Water Regulations, 20.7.10 NMAC, whichever is more stringent for each contaminant. These standards are identified on the attached Table 1*: Applicable Groundwater Standards.*

Pursuant to Section 20.6.2.3109 NMAC, NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the requirements of 20.6.2 NMAC are being or may be violated or the standards of Section 20.6.2.3103 NMAC are being or may be violated. This may include a determination that structural controls and/or management practices approved under this Discharge Permit are not protective of groundwater quality, and that more stringent requirements to protect groundwater quality may be required by NMED. The permittee may be required to implement abatement of water pollution and remediate groundwater quality.

Issuance of this Discharge Permit does not relieve the permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

The following acronyms and abbreviations may be used in this Discharge Permit.

Abbreviation	Explanation		Abbreviation	Explanation
mg/L	milligrams per liter		UIC	Underground Injection Control
µg/L	micrograms per liter		WQA	New Mexico Water Quality Act
NMAC	New Mexico Administrative Code		WTP	Water Treatment Plant
NMSA	New Mexico Statutes Annotated			

II. FINDINGS

In issuing this Discharge Permit, NMED finds the following.

1. The permittee is discharging effluent or leachate from the facility so that such effluent or leachate may move directly or indirectly into groundwater within the meaning of Section 20.6.2.3104 NMAC.

2. The permittee is discharging effluent or leachate from the facility so that such effluent or leachate may move into groundwater of the State of New Mexico that has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.

3. Pursuant to 20.6.2.5006 NMAC, the discharge from the facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.

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4. The permittee is operating Class V UIC recharge wells within the meaning of 20.6.2.5002.A(1) and 20.6.2.5002.B(5)(d)(iii) NMAC which are subject to the prohibitions listed under 20.6.2.5004.A(4) NMAC.

III. AUTHORIZATION TO DISCHARGE

Pursuant to 20.6.2.3104 NMAC, it is the responsibility of the permittee to ensure that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein.

The permittee is authorized to discharge up to 6.48 MGD, but no more than 5,000 acre-feet per year, of potable water (surface water treated to drinking water standards at the San Juan-Chama WTP) to Class V UIC wells as part of an aquifer storage and recovery project. The potable water is injected into one direct injection well that is screened in the aquifer from approximately 399 to 1201 feet below ground surface and has an injection capacity of 2.88 MGD, and into one vadose zone injection well that is completed above the water table and has an injection capacity of 360,000 gallons per day. The permittee is also authorized to inject up to 3.24 MGD into nine additional vadose zone wells which may be added to the project.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

IV. CONDITIONS

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions.

A. OPERATIONAL PLAN

#	Terms and Conditions
1.	The permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 2 and 4 NMAC. [Subsection C of 20.6.2.3109 NMAC]
2.	The permittee shall operate in a manner such that standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC are not violated. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]

Operational Actions with Implementation Deadlines

#	Terms and Conditions
3.	Prior to discharging to ASR-1 or VZ-1, the permittee shall submit written notification to NMED stating the date the discharge is to commence.

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#	Terms and Conditions
	[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]
4.	A minimum of 90 days prior to construction of an additional vadose zone injection well, the permittee shall submit final construction plans and specifications and supporting design calculations to NMED for review. The construction plans and specifications shall bear the seal and signature of a licensed New Mexico professional engineer (pursuant to New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority). The submitted documentation shall include the following elements. a) Details of the vadose zone injection well construction and associated components (e.g., lift stations, valves, transfer lines, etc.); b) Flow meter to measure the volume of water discharged to the vadose zone injection well. c) Specifications for all equipment, materials and installation procedures to be used in the construction of the vadose zone injection well and its associated components. d) Access controls to prevent unauthorized access. Prior to beginning construction, the permittee shall obtain written verification from NMED that the plans and specifications meet the requirements of this Discharge Permit. [Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3107 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]
5.	Prior to discharging to an additional vadose zone injection well, the permittee shall complete construction in accordance with the final construction plans and specifications required by this Discharge Permit. The permittee shall notify NMED at least five working days prior to commencement of construction to allow NMED personnel to be onsite for inspection. The permittee shall submit record drawings that bear the seal and signature of a licensed New Mexico professional engineer (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority) for the constructed injection well and associated components to NMED within 30 days of completion. [Subsection C of 20.6.2.3109 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]

Operating Conditions

#	Terms and Conditions
6.	Recharge water to be discharged into an injection well shall not contain a constituent or exhibit a physical parameter (which could include pH, redox condition or temperature) which may cause an exceedance in groundwater of any primary state drinking water maximum contaminant level (MCL) as specified in the Drinking Water Regulations,

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#	Terms and Conditions
	20.7.10 NMAC, or the standard of 20.6.2.3103 NMAC, whichever is more stringent. These standards are summarized on the attached Table 1. [Subsection C of 20.6.2.3109 NMAC, Subsection A(4) of 20.6.2.5004 NMAC]
7.	The permittee shall maintain fences around the WTP and locks on the injection well housing(s) to prevent unauthorized access. [Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]
8.	The permittee shall utilize operators, certified by the State of New Mexico at the appropriate level pursuant to 20.7.4 NMAC, to operate the water treatment and distribution system associated with this recharge project. The operation of this recharge project shall be performed by, or under the direct supervision of, a certified operator. [Subsection C of 20.6.2.3109 NMAC, 20.7.4 NMAC]

B. MONITORING AND REPORTING

#	Terms and Conditions
9.	The permittee shall conduct the monitoring, reporting, and related requirements listed below. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
10.	METHODOLOGY – Unless otherwise specified by this Discharge Permit, or approved in writing by NMED, the permittee shall use sampling and analytical techniques that conform with the references listed in Subsection B of 20.6.2.3107 NMAC. [Subsection B of 20.6.2.3107 NMAC]
11.	The permittee shall conduct the monitoring required by this Discharge Permit and submit an annual report to NMED as follows: • January 1st through December 31st – **due by March 31st.** [Subsection A of 20.6.2.3107 NMAC]
12.	Upon review of the annual monitoring report, NMED reserves the right to revise the monitoring and reporting requirements of this Discharge Permit. Such changes could include requiring the installation of up to two additional monitoring wells for the purpose of evaluating the effects of the project on groundwater quality. [Subsection A of 20.6.2.3107 NMAC]

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Monitoring Actions with Implementation Deadlines

#	Terms and Conditions
13.	Prior to discharging to a new vadose zone injection well, the permittee shall install a totalizing flow meter to measure the volume of water discharged to the well and shall submit confirmation of meter installation, type, calibration/accuracy verification, and location. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

Monitoring Conditions

#	Terms and Conditions
14.	The permittee shall measure the volume of recharge water discharged to each injection well using flow meters equipped with a data loggers and totalizers. Copies of the monthly meter reports provided to the OSE pursuant to the USR-4 Permit and a compilation of daily and total injection volumes to each well shall be submitted to NMED in the annual monitoring report. [Subsection A of 20.6.2.3107 NMAC, Subsections H of 20.6.2.3109 NMAC]
15.	All flow meters shall be capable of having their accuracy verified under actual working (field) conditions. A field verification method shall be developed for each flow meter and that method shall be used to check the accuracy of each respective meter. Field verification shall be performed at a minimum annually and upon repair or replacement of a flow measurement device. Flow meters shall be accurate to within plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations/verifications shall be performed by an individual knowledgeable in flow measurement and in the installation/operation of the particular device in use. A flow meter calibration/verification report shall be prepared for each flow measurement device and shall include the following information. a) The location and meter identification. b) The method of flow meter field calibration/accuracy verification employed. c) The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration/verification method. d) The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter. e) Any flow meter repairs made during the previous year or during field calibration.

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#	**Terms and Conditions**
	The permittee shall maintain records of flow meter calibration/verification at a location accessible for review by NMED during facility inspections. [Subsection A of 20.6.2.3107 NMAC, Subsections H of 20.6.2.3109 NMAC]
16.	The permittee shall visually inspect flow meters on a monthly basis for evidence of malfunction. If a visual inspection indicates a flow meter is not functioning as required by this Discharge Permit, the permittee shall repair or replace the meter within 30 days of discovery. For *repaired* meters, the permittee shall submit a report to NMED with the next annual monitoring report that includes a description of the malfunction; a statement verifying the repair; and a flow meter field calibration/verification report completed in accordance with the requirements of this Discharge Permit. For *replacement* meters, the permittee shall submit a report to NMED with the next annual monitoring report that includes a design schematic for the device and a flow meter field calibration/verification report completed in accordance with the requirements of this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]
17.	The permittee shall collect a sample of recharge water from the San Juan Chama Pump Station Entry Point (EP) sampling port annually when recharge is occurring and analyze the sample for the following constituents: • major cations and anions, dissolved: calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, and fluoride • arsenic, dissolved and total • chromium, dissolved • iron, dissolved and total • manganese, dissolved • nitrate as nitrogen • uranium, dissolved • total organic carbon • *E. coli* bacteria • field parameters: alkalinity, dissolved oxygen, oxidation/reduction potential, pH, temperature, specific conductance, turbidity Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Reporting limits shall not exceed the corresponding groundwater standards identified on the attached Table 1. A summary of the analytical results and a copy of the laboratory reports, shall be submitted to NMED in the annual monitoring report. [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

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#	**Terms and Conditions**
18.	The permittee shall measure static water level of the water table or potentiometric surface as required by the OSE USR-4 Permit and submit a compilation of the data to NMED in the annual monitoring report. [Subsection A of 20.6.2.3107 NMAC]
19.	Prior to discharging to the injection wells and annually thereafter when recharge is occurring, the permittee shall collect groundwater samples from the nested project monitoring wells, MW-01, which are located approximately 125 feet northwest of ASR-1 and completed as follows: • MW-01S, screened from 155 to 175 bgs; • MW-01D, screened from 295 to 315 feet bgs. The permittee shall analyze the samples for the following constituents: • major cations and anions, dissolved: calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, and fluoride • arsenic, dissolved and total • chromium, dissolved • iron, dissolved and total • manganese, dissolved • nitrate-nitrogen • uranium, dissolved • total organic carbon • *E. coli* bacteria • field parameters alkalinity, dissolved oxygen, oxidation/reduction potential, pH, temperature, specific conductance, turbidity During the second year of operation, the permittee shall also analyze the groundwater samples for the contaminants with numerical standards as listed on the attached Table 1. Groundwater sample collection shall be performed in accordance with the sampling protocol submitted by the Water Authority to NMED on March 19, 2019, or as otherwise approved by NMED. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Reporting limits shall not exceed the corresponding groundwater standards identified in the attached Table 1. A summary of the analytical results, a copy of the laboratory reports, and a facility layout map showing the location and number of each injection and monitoring well shall be submitted to NMED in the annual monitoring report.

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#	Terms and Conditions
	[Subsection A of 20.6.2.3107 NMAC]
20.	NMED shall have the option to perform downhole inspections of all monitoring wells identified in this Discharge Permit. NMED shall establish the inspection date and provide at least a 60-day notice to the permittee by certified mail. The permittee shall have any existing dedicated pumps removed at least 48 hours prior to NMED inspection to allow adequate settling time of sediment agitated from pump removal. Should a facility not have existing dedicated pumps, but decide to install pumps in any of the monitoring wells, NMED shall be notified at least 90 days prior to pump installation so that a downhole well inspection(s) can be scheduled prior to pump placement. [Subsections A and D of 20.6.2.3107 NMAC]

C. CONTINGENCY PLAN

#	Terms and Conditions
21.	In the event that groundwater monitoring indicates an exceedance of a standard identified in the attached Table 1, the permittee shall collect a confirmatory sample from the well within 7 days of receipt of the initial sampling results to confirm the results. This requirement does not apply to the pre-discharge sampling event. Within 24 hours of confirmation of the groundwater exceedance, the permittee shall notify NMED of the exceedance and shall cease discharging to the injection wells. The permittee may submit evidence to NMED that the exceedance is not a result of the recharge activities. Upon concurrence from NMED, the permittee may resume discharging. Otherwise, within 90 days of confirmation of the groundwater exceedance, the permittee shall submit to NMED a Corrective Action Plan that proposes measures to prevent further exceedances and mitigate damage from the discharge. The Plan shall be enacted as approved by NMED. Once invoked (whether during the term of this Discharge Permit, or after the term of this Discharge Permit and prior to the completion of the Discharge Permit closure plan requirements), this condition shall apply until the permittee has fulfilled the requirements of this condition and groundwater monitoring confirms for a minimum of eight (8) consecutive quarterly samples that the standard is not exceeded in groundwater. If the groundwater standard continues to be violated 180 days after the confirmation of groundwater contamination, the permittee may be required to abate water pollution consistent with the requirements and provisions of Section 20.6.2.4101, Section 20.6.2.4103, Subsections C and E of 20.6.2.4106, Section 20.6.2.4107, Section 20.6.2.4108 and Section 20.6.2.4112 NMAC.

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#	**Terms and Conditions**
	[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]
22.	In the event that monitoring of the recharge water pursuant to this Discharge Permit, monitoring required by the Drinking Water Regulations, or other monitoring indicates an exceedance of a numerical or narrative standard identified on the attached Table 1 or the presence of *E. coli*, the permittee shall enact the following contingency plan: a) Notify NMED that the contingency plan is being enacted. b) Within 48 hours of receipt of the monitoring results, collect and submit for analysis a confirmatory sample of recharge water from the San Juan Chama Pump Station San Juan Chama Pump Station (EP) sample port. (If recharge is not occurring, collect the confirmation sample prior to resuming recharge.) The confirmatory sample shall be analyzed for all parameters that exceeded the standard in the initial sample. c) Within 24 hours of confirmation of an exceedance, the permittee shall cease discharging to the injection wells. d) Submit a corrective action plan for NMED approval that proposes measures to address the exceedance(s) in order to prevent groundwater contamination. At a minimum, the corrective action plan shall include increased monitoring of recharge water and groundwater obtained from the monitoring wells approved by this Discharge Permit for the parameters that exceeded the contaminant levels. When analytical results of recharge water no longer indicate any exceedances, and upon NMED approval, the permittee may resume discharging recharge water to the injection wells. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
23.	In the event that information available to NMED indicates that a monitoring well is not constructed in a manner consistent with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011; contains insufficient water to effectively monitor groundwater quality; is not completed in a manner that is protective of groundwater quality, or is not located hydrologically downgradient of the discharge location it is intended to monitor, the permittee shall install a replacement well within 120 days following notification from NMED. Replacement well locations shall be approved by NMED prior to installation and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs to NMED within 60 days following well completion.

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#	Terms and Conditions
	Upon completion of the replacement monitoring well, the monitoring well requiring replacement shall be properly plugged and abandoned. Well plugging, abandonment and documentation of the abandonment procedures shall be completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011, and all applicable local, state, and federal regulations. The well abandonment documentation shall be submitted to NMED within 60 days of completion of well plugging activities. [Subsection A of 20.6.2.3107 NMAC]
24.	In the event that a release of a water contaminant (commonly known as a "spill") occurs that is not authorized under this Discharge Permit, the permittee shall take measures to mitigate damage from the unauthorized discharge and initiate the notifications and corrective actions required in Section 20.6.2.1203 NMAC and summarized below. Within <u>24 hours</u> following discovery of the unauthorized discharge, the permittee shall verbally notify NMED and provide the following information. a) The name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility. b) The name and address of the facility. c) The date, time, location, and duration of the unauthorized discharge. d) The source and cause of unauthorized discharge. e) A description of the unauthorized discharge, including its estimated chemical composition. f) The estimated volume of the unauthorized discharge. g) Any actions taken to mitigate immediate damage from the unauthorized discharge. Within <u>one week</u> following discovery of the unauthorized discharge, the permittee shall submit written notification to NMED with the information listed above and any pertinent updates. Within <u>15 days</u> following discovery of the unauthorized discharge, the permittee shall submit a corrective action report/plan to NMED describing any corrective actions taken and/or to be taken relative to the unauthorized discharge that includes the following information. a) A description of proposed actions to mitigate damage from the unauthorized discharge. b) A description of proposed actions to prevent future unauthorized discharges of this nature. c) A schedule for completion of proposed actions. In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is required

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#	Terms and Conditions
	to be given pursuant to Paragraph (1) of Subsection A of 20.6.2.1203 NMAC, the permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC. Nothing in this condition shall be construed as relieving the permittee of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC. [20.6.2.1203 NMAC]
25.	In the event that NMED or the permittee identifies any failures of the discharge plan or this Discharge Permit not specifically noted herein, NMED may require the permittee to submit a Corrective Action Plan and a schedule for completion of corrective actions to address the failure(s). Additionally, NMED may require a Discharge Permit modification to achieve compliance with 20.6.2 NMAC. [Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]

D. CLOSURE PLAN

Permanent Facility Closure Conditions

#	Terms and Conditions

26.	At least 30 days prior to the closure of any Class V UIC well covered by this Discharge Permit, the permit shall provide pre-closure notification to NMED containing the following information as applicable:
	a) Name of facility;
	b) Address of facility;
	c) Name of Owner/Operator;
	d) Address of Owner/Operator;
	e) Contact Person;
	f) Phone Number;
	g) Type of Well(s);
	h) Number of Well(s);
	i) Well Construction;
	j) Type of Discharge;
	k) Average Flow (gallons per day);
	l) Year of Well Construction;
	m) Proposed Well Closure Activities;
	n) Proposed Date of Well Closure;
	o) Name of Preparer;
	p) Date; and

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#	Terms and Conditions
	q) Well plugging plan of operations as submitted to the OSE pursuant to 19.27.4 NMAC. [Subsection A of 20.6.4.5005 NMAC]
27.	In the event the facility, or a component of the facility, is proposed to be permanently closed, the permittee shall perform the following closure measures. a) Within 60 days of ceasing to discharge to a UIC injection well, plug the line leading to the injection well so that a discharge can no longer occur. b) Within 180 days of ceasing to discharge to a UIC injection well, remove all lines leading to the injection well, or permanently plug and abandon them in place. c) Within 180 days of ceasing to discharge to a UIC injection well, plug and abandon the UIC well in accordance with an OSE-approved well plugging plan of operations pursuant to 19.27.4 NMAC If monitoring results show that a standard identified in the attached Table 1 is exceeded in groundwater, the permittee shall implement the contingency plan required by Condition 21 of this Discharge Permit. Following notification from NMED that any post-closure monitoring conducted in accordance with a contingency plan per Condition 21 may cease, the permittee shall plug and abandon the monitoring wells in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. When all closure and post-closure requirements have been met, the permittee may submit a written request for termination of the Discharge Permit to NMED. [Subsection A of 20.6.2.3107 NMAC, Subsection D of 20.6.2.4103 NMAC]

E. GENERAL TERMS AND CONDITIONS

#	Terms and Conditions
28.	RECORD KEEPING - The permittee shall maintain a written record of: • information and data used to complete the application for this Discharge Permit; • any releases (commonly known as "spills") not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC; • the operation, maintenance, and repair of all facilities/equipment used to transfer and inject water for this project;

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#	Terms and Conditions

	• facility record drawings (plans and specifications) showing the actual construction of the facility and bear the seal and signature of a licensed New Mexico professional engineer;
	• copies of monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit;
	• the volume of water discharged pursuant to this Discharge Permit;
	• recharge and groundwater quality data collected pursuant to this Discharge Permit;
	• copies of construction records (well log) for all groundwater monitoring wells required to be sampled pursuant to this Discharge Permit;
	• the maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit; and
	• data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit, including:
	  o the dates, location and times of sampling or field measurements;
	  o the name and job title of the individuals who performed each sample collection or field measurement;
	  o the sample analysis date of each sample
	  o the name and address of the laboratory, and the name of the signatory authority for the laboratory analysis;
	  o the analytical technique or method used to analyze each sample or collect each field measurement;
	  o the results of each analysis or field measurement, including raw data;
	  o the results of any split, spiked, duplicate or repeat sample; and
	  o a copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used.
	
	The written record shall be maintained by the permittee at a location accessible during a facility inspection by NMED for a period of at least five years from the date of application, report, collection or measurement and shall be made available to the department upon request.
	
	[Subsections A and D of 20.6.2.3107 NMAC]

29.	INSPECTION and ENTRY – The permittee shall allow inspection by NMED of the facility and its operations that are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC. The permittee shall allow NMED to have access to and reproduce for their use any copy of the records, and to perform assessments, sampling or monitoring during an inspection

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#	Terms and Conditions
	for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations. Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED under the WQA, the WQCC Regulations, or any other local, state or federal regulations. [Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]
30.	DUTY to PROVIDE INFORMATION - The permittee shall, upon NMED's request, allow for NMED's inspection/duplication of records required by this Discharge Permit and/or furnish to NMED copies of such records. [Subsection D of 20.6.2.3107 NMAC]
31.	MODIFICATIONS and/or AMENDMENTS – In the event the permittee proposes a change to the facility or the facility's discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the facility, the permittee shall notify NMED prior to implementing such changes. The permittee shall obtain approval (which may require modification of this Discharge Permit) by NMED prior to implementing such changes. [Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC]
32.	PLANS and SPECIFICATIONS – In the event the permittee is proposing to construct a new component or change a process unit of the recharge system such that the quantity or quality of the discharge will change substantially from that authorized by this Discharge Permit, the permittee shall submit construction plans and specifications to NMED for the proposed system or process unit prior to the commencement of construction. In the event the permittee implements changes to the recharge system authorized by this Discharge Permit that result in only a minor effect on the character of the discharge, the permittee shall report such changes (including the submission of record drawings, where applicable) as of January 1 and June 30 of each year to NMED. [Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]
33.	CIVIL PENALTIES - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject the permittee to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil

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#	**Terms and Conditions**
	penalties, or both. Pursuant to WQA 74-6-10(C) and 74-6-10.1, civil penalties of up to $15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to $10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit. [20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1]
34.	CRIMINAL PENALTIES – No person shall: • make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the WQA; • falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or • fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation. Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. [20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]
35.	COMPLIANCE with OTHER LAWS - Nothing in this Discharge Permit shall be construed in any way as relieving the permittee of the obligation to comply with any other applicable federal, state, and/or local laws, regulations, zoning requirements, nuisance ordinances, permits or orders. [NMSA 1978, § 74-6-5.L]
36.	RIGHT to APPEAL - The permittee may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC within thirty days

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#	**Terms and Conditions**
	of the receipt of postal notice of this Discharge Permit and shall include a statement of the issues to be raised and the relief sought. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review. [20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]
37.	TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this facility or any portion thereof, the permittee shall: • notify the proposed transferee in writing of the existence of this Discharge Permit; • include a copy of this Discharge Permit with the notice; and • deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee. Until both ownership and possession of the facility have been transferred to the transferee, the permittee shall continue to be responsible for any discharge from the facility. [20.6.2.3111 NMAC]
38.	PERMIT FEES - Payment of permit fees is due at the time of Discharge Permit approval. Permit fees shall be paid in a single payment or shall be paid in equal installments on a yearly basis over the term of the Discharge Permit. Single payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date. Initial installment payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date; subsequent installment payments shall be remitted to NMED no later than the anniversary of the Discharge Permit effective date. Permit fees are associated with <u>issuance</u> of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving the permittee of the obligation to pay all permit fees assessed by NMED. A permittee that ceases discharging or does not commence discharging from the facility during the term of the Discharge Permit shall pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date. [Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]

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Table 1. Applicable Groundwater Standards

ABCWUA Large-Scale Recharge Project, DP-1887

Draft: August 9, 2019

The numerical standards listed here are the more stringent of the MCL or the standard of 20.6.2.3103 NMAC.

Inorganic Chemicals	CAS #	mg/L
Aluminum	7429-90-5	5.0
Antimony	7440-36-0	0.006
Arsenic	7440-38-2	0.01
Barium	7440-39-3	2.0
Beryllium	7440-41-7	0.004
Boron	7440-42-8	0.75
Cadmium	7440-43-9	0.005
Chloride	16887-00-6	250
Chromium	7440-47-3	0.05
Cobalt	7440-48-4	0.05
Copper	7440-50-80	1.0
Cyanide	57-12-5	0.2
Fluoride	16984-48-8	1.6
Iron	7439-89-6	1.0
Lead	7439-92-1	0.015
Manganese	7439-96-5	0.2
Mercury, total	7439-97-6	0.002
Molybdenum	7439-98-7	1.0
Nickel	7440-02-0	0.2
Nitrate as nitrogen	14797-55-8	10.0
Nitrite as nitrogen	10102-44-0	1.0
pH		6 – 9
Selenium	7782-49-2	0.05
Silver	7440-224	0.05
Sulfate	14808-79-8	600
Total Dissolved Solids (TDS)*		1000
Thallium	7440-28-0	0.002
Uranium	7440-61-1	0.03
Zinc	7440-66-6	10

* The "existing concentration" per 20.6.2.3101 NMAC for TDS in MW-01S is 1,040 mg/L based on pre-discharge sampling results from February 2019.

Organic Chemicals	CAS #	mg/L
Alachlor		0.002
Atrazine	1912-24-9	0.003
Benzene	71-43-2	0.005
Benzo(a)pyrene	50-32-8	0.0002
Carbofuran		0.04
Carbon tetrachloride	56-23-5	0.005
Chloroform	67-66-3	0.1
Chlordane	57-74-9	0.002
Chlorobenzene (monochlorobenzene)	108-90-7	0.1
2,4-D		0.07
Dalapon		0.2
1,2-Dibromo-3-chloropropane		0.0002
o-Dichlorobenzene	95-50-1	0.6
p-Dichlorobenzene	106-46-7	0.075
1,1-Dichloroethane	75-34-3	0.025

Organic Chemicals (cont.)	CAS #	mg/L
1,2-Dichloroethane (EDC)	107-06-2	0.005
1-1-Dichlorioethylene	75-35-4	0.007
cis-1,2-Dichlorethylene	156-59-2	0.07
trans-1,2-Dichlorethylene	156-60-5	0.1
Dichloromethane (methylene chloride)	75-09-2	0.005
1-2-Dichloropropane	78-87-5	0.005
Di(2-ethyhexyl) adipate		0.4
Di(2-ethylhexyl) phthalate	117-81-7	0.006
Dinoseb		0.007
Dioxin (2,3,7,8-TCDD)		0.00000003
Diquat		0.02
Endothall		0.1
Endrin	72-20-8	0.002
Ethylbenzene	100-41-4	0.7
Ethelyne dibromide (EDB)	106-93-4	0.00005
Glyphosate		0.7
Heptachlor	76-44-8	0.0004
Heptachlor epoxide		0.0002
Hexachlorobenzene	118-74-1	0.001
Hexachlorocychlo-pentadiene	77-47-4	0.05
Lindane		0.0002
Methoxychlor		0.04
Methyl tertiary-butyl ether (MTBE)	1634-04-4	0.1
Naphthalene plus monomethylnaphthalenes		0.03
Oxamyl (Vydate)		0.2
Polychlorinated biphenyls (PCBs)	1336-36-3	0.0005
Pentachlorophenol	87-86-5	0.001
Picloram		0.5
Phenols		0.005
Simazine		0.004
Styrene	100-42-5	0.1
Tetrachloroethylene (PCE)	127-18-4	0.005
1,1,2,2-tetrachloroethane	79-34-5	0.01
Toluene	108-88-3	1.0
Toxaphene	8001-35-2	0.003
2,4,5-TP (Silvex)		0.05
1,2,4-Trichlorobenzene	120-82-1	0.07
1,1,1-Trichloroethane	71-55-6	0.2
1,1,2-Trichloroethane	79-00-5	0.005
Trichloroethylene	79-01-6	0.005
Vinyl Chloride	75-01-4	0.002
Xylenes, total	1330-20-7	0.62

Disinfection By-products	mg/L
Total Trihalomethanes (TTHMs)	0.08
Haloacetic acids (5) (HAA5)	0.06
Bromate	0.01

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Disinfection Residuals	**mg/L**
Chlorine	4

Radionuclides	
Beta particle and photo emitters	4 millirems per year
Gross alpha particle activity	15 pCi/L
Radium 226 and 228 (combined)	5 pCi/L

Bacteria	
Total coliform/E. coli bacteria	Absent

Toxic Pollutants

Subsection A(2) of 20.6.2.3103 NMAC establishes a narrative standard for "toxic pollutants." The list of toxic pollutants resides in Subsection T of 20.6.2.7 NMAC. NMED generally considers the Tap Water Screening Levels identified Table A-1 of NMED's *Risk Assessment Guidance for Site Assessment and Remediation* to satisfy the narrative definition.

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New Mexico Environment Department Ground Water Quality Bureau
Discharge Permit Summary

Facility Information

Facility Name ABCWUA Large-Scale Recharge Project
Discharge Permit Number DP-1887

Legally Responsible Party John M. Stomp, III, P.E., Chief Operating Officer
Albuquerque Bernalillo County Water Utility Authority (ABCWUA)
P.O. Box 568
Albuquerque, NM 87103
(505) 289-3000

Treatment, Disposal and Site Information

Primary Discharge Type Potable Water
Facility Type Municipal Water Supply

Treatment Methods

Type	Designation	Description & Comments
Water Treatment Plant	San Juan – Chama Water Treatment Plant	Regulated in accordance with the federal Safe Drinking Water Act and the NM Drinking Water Regulations.

Discharge Locations

Type	Designation	Description & Comments
Class V UIC Well	ASR-1	Direct injection well screened in the aquifer from 399 to 1201 feet below ground surface (bgs). Injection capacity: 2.88 MGD.
Class V UIC Well	VZ-1	Vadose zone injection well screened above the water table from 118.5 to 130.5 feet bgs. Injection capacity: 360,000 gpd.
Class V UIC Well		Up to 9 additional vadose zone injection wells, each with an injection capacity of 360,000 gpd. Not yet constructed.

Flow Metering Locations

Type	Designation	Description & Comments
Totalizing Flow Meter	ASR-1 Injection	OPTIFLUX 4300C
Totalizing Flow Meter	VZ-1 Injection	OPTIFLUX 4300C

Ground Water Monitoring Locations

Type	Designation	Description & Comments
Nested Monitoring Well	MW-01S	Screened 155 to 175 feet bgs.
Nested Monitoring Well	MW-01D	Screened 295 to 315 feet bgs.

Depth-to-Ground Water 128 feet
Total Dissolved Solids (TDS) 309 to 1,040 mg/L

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Permit Information

Current Action	**Original Permit Issuance**
Application Received	March 18, 2019
Temporary Permission	March 21, 2019
Public Notice Published	[not yet published]
Permit Issued (Effective Date)	[effective date]
Permitted Discharge Volume	6.48 million gallons per day, not to exceed 5,000 acre-feet per year

NMED Contact Information

Mailing Address	Ground Water Quality Bureau P.O. Box 5469 Santa Fe, New Mexico 87502-5469
GWQB Telephone Number	(505) 827-2900
NMED Lead Staff	Pam Homer
Lead Staff Telephone Number	(505) 827-0018
Lead Staff Email	pamela.homer2@state.nm.us

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