

GROUND WATER DISCHARGE PERMIT RENEWAL Mesquite Wastewater Treatment System, DP-1036

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal (Discharge Permit), DP-1036, to the Mesquite Mutual Domestic Water Consumers and Mutual Sewage Works Association (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) 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 Mesquite Wastewater Treatment System (facility) into ground and surface water, so as to protect ground and surface water for present and potential future use as domestic and agricultural water supply and other uses and 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.

The activities which 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 88,000 gallons per day (gpd) of wastewater from the Town of Mesquite is discharged to a constructed wetlands treatment system and discharged to four infiltration basins. By December 31, 2010, wastewater from the Town of Mesquite will cease being discharged to the constructed wetland treatment facility and will be discharged to the Doña Ana County sanitary sewer. The discharge contains water contaminants or toxic pollutants which may be elevated above the standards of Section 20.6.2.3103 NMAC. The facility is located west of Santo Tomas Road, in Mesquite, in Section 2, T25S, R02E, Doña Ana County. Ground water most likely to be affected is at a depth of approximately 7 feet and has a total dissolved solids concentration of approximately 590 milligrams per liter.

The original Discharge Permit was issued on November 17, 1995 and subsequently renewed on July 18, 2001. The permittee's application consists of the materials submitted by Robert M. Nieto received March 6, 2006 and other materials as applicable. The discharge shall be managed in accordance with all conditions and requirements of this Discharge Permit.

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 ground water quality, and that more stringent requirements to protect and/or remediate ground water quality may be required by NMED. These requirements may include: lining/relining wetland cells; lining/relining the lagoon; changing waste management practices; expanding monitoring requirements; installing an advanced treatment system; and/or implementing abatement of water pollution.

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 abbreviations may be used in this Discharge Permit:

Abbreviation	Explanation	Abbreviation	Explanation
BOD ₅	biochemical oxygen demand (5-day)	NTU	nephelometric turbidity units
CFR	Code of Federal Regulations	Org	organisms
Cl	chloride	TDS	total dissolved solids
LADS	land application data sheet(s)	TKN	total Kjeldahl nitrogen
mg/L	milligrams per liter	total nitrogen	TKN+NO ₃ -N
mL	milliliters	TRC	Total Residual Chlorine
NMAC	New Mexico Administrative Code	TSS	total suspended solids
NMED	New Mexico Environment Department	WQA	New Mexico Water Quality Act
NMSA	New Mexico Statutes Annotated	WQCC	Water Quality Control Commission
NO ₃ -N	nitrate-nitrogen		

II. FINDINGS

In issuing this Discharge Permit, NMED finds:

1. The permittee is discharging effluent or leachate from the facility so that such effluent or leachate may move directly or indirectly into ground water 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 ground water of the State of New Mexico which has an existing concentration of 10,000 milligrams per liter or less of total dissolved solids within the meaning of Subsection A of 20.6.2.3101 NMAC.
3. The discharge from the facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.

III. CONDITIONS

The following conditions shall be complied with by the permittee and are enforceable by NMED. The permittee is authorized to discharge water contaminants subject to the following conditions:

OPERATIONAL PLAN

#	Terms and Conditions
1.	The permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 1 and 2 NMAC. [20.6.2.3106.C NMAC, 20.6.2.3107 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]
3.	The permittee is authorized to discharge up to 88,000 gallons per day of municipal wastewater to a constructed wetlands treatment system which consists of 2-12,000 gallon pretreatment tanks, in parallel, followed by eight synthetically lined constructed wetland cells operated in parallel. Treated wastewater gravity flows to a synthetically lined storage lagoon followed by vegetated infiltration basins for disposal. By July 31, 2011, municipal wastewater will cease being discharged to the constructed wetland treatment facility and will be discharged to the Doña Ana County sanitary sewer. [20.6.2.3104 NMAC, 20.6.2.3106 NMAC]
4.	Within 180 days of the effective date of this Discharge Permit (by DATE), the permittee shall submit a work plan for the closure of the constructed wetlands treatment system. The work plan shall include: <ul style="list-style-type: none"> • A closure plan for the constructed wetlands treatment system that conforms to the requirements of Condition #21 of this Discharge Permit. • A schedule for closure of the constructed wetlands treatment facility that achieves closure of all structures within 5 years of the effective date of this Discharge Permit (by DATE). [20.6.2.3107.A NMAC, 20.6.2.3109 NMAC]
5.	The permittee shall maintain fences around the wastewater treatment system to control public access. The fences shall be constructed in a manner which prevents access by the general public and animals such as dogs (e.g., chain link or field fencing) and shall be maintained throughout the term of this Discharge Permit. [20.6.2.3109 NMAC]
6.	The permittee shall maintain signs at the wastewater treatment system entrance and other areas where public contact is possible indicating that the water is not potable. All signs shall remain visible and legible for the term of this Discharge Permit. [20.6.2.3109 NMAC]
7.	While the treatment system is still in operation, the permittee shall remove undesirable or excessive vegetation from within the wetland cells as necessary to sustain a healthy population of desirable plant species. While the treatment system is still in operation, the wetland cells and storage lagoon shall be maintained in such a manner as to avoid conditions which could affect the structural integrity of the wetland cells, lagoon and/or lagoon liner. Such conditions include, but are not limited to:

	<ul style="list-style-type: none"> • Erosion damage; • Animal activity/damage; • The presence of vegetation, such as; aquatic plants, weeds, woody shrubs or trees growing within five feet of the wetland cell and/or lagoon edge or within the lagoon itself; • Evidence of seepage; • Evidence of berm subsidence; and/or • The presence of large pieces or large quantities of debris in the lagoon. <p>The permittee shall visually inspect the wetland cells, lagoon and surrounding berms on a monthly basis to ensure proper maintenance. Vegetation growing around the wetland cells and lagoon shall be routinely controlled by mechanical removal in a manner that is protective of each wetland cell's structural integrity and the lagoon liner. Any evidence of damage to any wetland cell/lagoon berm or lagoon liner shall be reported to NMED immediately upon discovery. [20.6.2.3107 NMAC]</p>
8.	The permittee shall maintain a minimum of two feet of freeboard between the liquid level in the storage lagoon and the top elevation of the lagoon liner at all times. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]
9.	The permittee shall utilize operators, certified by the State of New Mexico at the appropriate level, to operate the wastewater collection, treatment and disposal systems. All operations and maintenance of all or any part of the wastewater system shall be performed by, or under the direct supervision of, a certified operator. [20.7.4 NMAC]

MONITORING, REPORTING, AND OTHER REQUIREMENTS

#	Terms and Conditions
10.	The permittee shall conduct the following monitoring, reporting, and other requirements listed below. [20.6.2.3107 NMAC]
11.	<p>METHODOLOGY - Unless otherwise approved in writing by NMED, the permittee shall conduct sampling and analysis in accordance with the most recent edition of the following documents:</p> <ul style="list-style-type: none"> a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater (18th, 19th or current); b) U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Waste; c) U.S. Geological Survey, Techniques for Water Resources Investigations of the U.S. Geological Survey; d) American Society for Testing and Materials, Annual Book of ASTM Standards, Part 31. Water; e) U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition; or f) Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods and Part 2. Chemical and Microbiological Properties, American Society of Agronomy. <p>[20.6.2.3107.B NMAC]</p>

12.	<p>The permittee shall submit quarterly monitoring reports to NMED for the most recently completed quarterly period by the 1st of February, May, August and November of each year.</p> <p>Quarterly monitoring shall be performed during the following periods:</p> <ul style="list-style-type: none"> • January 1st through March 31st (first quarter) – due by May 1st; • April 1st through June 30th (second quarter) – due by August 1st; • July 1st through September 30th (third quarter) – due by November 1st; and • October 1st through December 31st (fourth quarter) – due by February 1st. <p>Monitoring requirements detailed in this Discharge Permit are summarized on the sheet titled <i>Summary of Required Actions, Monitoring and Reporting</i>. [20.6.2.3107 NMAC]</p>
13.	<p>The permittee shall measure the monthly volume of wastewater discharged to the treatment system using a totalizing flow meter. The monthly meter readings and monthly discharge volumes shall be submitted to NMED in the quarterly monitoring reports. The flow meter shall be calibrated to within +/- 10% of actual flow and kept operational at all times. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]</p>
14.	<p>The permittee shall measure and record all discharges to each infiltration basin using a totalizing flow meter on the transfer line prior to the infiltration basins on a monthly basis. The permittee shall maintain a monthly log showing the location of each discharge and the calculated monthly total volume of each discharge. A summary of the log entries and the calculated monthly discharge volumes for each infiltration basin shall be submitted to NMED in the quarterly monitoring reports. The flow meter shall be calibrated to within +/- 10% of actual flow and kept operational at all times. [20.6.2.3107.A(1) NMAC, 20.6.2.3109.C(3) NMAC]</p>
15.	<p>The permittee shall perform quarterly ground water sampling in 5 monitoring wells and analyze the samples for NO₃-N, TKN, Cl, and TDS. The permittee shall sample:</p> <ul style="list-style-type: none"> • MW-1, located hydrologically upgradient of the facility; • MW-2, located hydrologically downgradient of the wetland cells and infiltration basins 2 & 4; • MW-3, located hydrologically upgradient of infiltration basin 4; • MW-4, located hydrologically downgradient of infiltration basin 3; and • MW-5, hydrologically downgradient of the wetland cells and the storage lagoon. <p>Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure:</p> <ol style="list-style-type: none"> a) measure the depth-to-ground water from the top of well casing to the nearest hundredth of a foot; b) purge three well volumes of water from the well prior to sample collection; c) obtain samples from the well for analysis; d) properly prepare, preserve and transport samples; and e) analyze samples in accordance with the methods authorized in this Discharge Permit.

	<p>Depth-to-water measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]</p>
16.	<p>While the treatment system is still in operation, the permittee shall sample treated wastewater discharged from the storage lagoon on a quarterly basis and analyze the samples for NO₃-N, TKN, TDS and Cl. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]</p>

CONTINGENCY PLAN

#	Terms and Conditions
17.	<p>In the event that monitoring indicates ground water standards are violated during the term of this Discharge Permit, upon closure of the facility or during post-closure monitoring, the permittee shall collect a confirmatory sample from the monitoring well within 15 days to confirm the initial sampling results. Within 15 days of confirmation of ground water contamination, the permittee shall submit to NMED a corrective action plan that proposes measures to mitigate damage from the discharge including, at a minimum, source control measures and an implementation schedule. The permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC, if the corrective action plan will not result in compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC within 180 days of confirmation of ground water contamination. [20.6.2.1203 NMAC, 20.6.2.4105.A(8) NMAC]</p>
18.	<p>In the event of a spill or release that is not authorized under this Discharge Permit, the permittee shall initiate the notifications and corrective actions as required in Section 20.6.2.1203 NMAC. The permittee shall take immediate corrective action to contain and remove or mitigate the damage caused by the discharge. Within 24 hours after discovery of the discharge, the permittee shall verbally notify NMED and provide the information required by Paragraph (1) of Subsection A of 20.6.2.1203 NMAC. Within 7 days of discovering the discharge, the permittee shall submit a written report to NMED verifying the oral notification and providing any additional information or changes. The permittee shall submit a corrective action report within 15 days after discovery of the discharge. [20.6.2.1203 NMAC]</p>
19.	<p>In the event NMED or the permittee identifies any other failures of the Discharge Permit or system not specifically noted herein, NMED may require the permittee to develop for NMED approval contingency plans and schedules to cope with the failures. [20.6.2.3107.A(10) NMAC]</p>
20.	<p>In the event that a minimum of two feet of freeboard cannot be maintained in the lagoons at all times, the permittee shall submit a corrective action plan for NMED approval within 30 days of the date when the two feet of freeboard limit was initially exceeded. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]</p>

CLOSURE PLAN

#	Terms and Conditions
21.	<p>Upon closure of the facility, the permittee shall perform the following closure measures:</p> <ul style="list-style-type: none"> a) Remove or plug all lines leading to the two pretreatment tanks, eight wetland cells, storage lagoon and four infiltration beds so that a discharge can no longer occur. b) Drain and/or evaporate all liquids from the pretreatment tanks, wetland cells, storage lagoon and infiltration beds and dispose of all sludge/solids in accordance with all local, state, and federal (40 CFR Part 503) regulations. c) Backfill the pretreatment tanks with clean fill or sand or remove from the site. d) Perforate or remove the wetland cells and storage lagoon liners and regrade the wetland cells and storage lagoon with clean fill to blend with surface topography and prevent ponding. e) Regrade the infiltration beds with clean fill to blend with surface topography and prevent ponding. f) After closure, continue ground water monitoring as required by this Discharge Permit until the absence of ground water contamination have been confirmed for two years. g) Following notification from NMED that post-closure monitoring may cease, the permittee shall plug and abandon the monitoring well(s) in accordance with the attachment titled <i>Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions</i>, Revision 1.0, July 2008. <p>When all post-closure requirements have been met, the permittee may request to terminate the Discharge Permit. [20.6.2.3107.A(11) NMAC]</p>

GENERAL TERMS AND CONDITIONS

#	Terms and Conditions
22.	<p>RECORD KEEPING - The permittee shall maintain at its facility a written record of all data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit. The following information shall be recorded and shall be made available to NMED upon request:</p> <ul style="list-style-type: none"> a) The dates, exact place and times of sampling or field measurements; b) The name and job title of the individuals who performed each sample collection or field measurement; c) The date of the analysis of each sample; d) The name and address of the laboratory and the name and job title of the person that performed the analysis of each sample; e) The analytical technique or method used to analyze each sample or take each field measurement; f) The results of each analysis or field measurement, including raw data; g) The results of any split sampling, spikes or repeat sampling; and h) A description of the quality assurance and quality control procedures used. <p>[20.6.2.3107.A NMAC]</p>

23.	<p>RECORD KEEPING - The permittee shall maintain a written record of any spills, seeps, and/or leaks of effluent, and of leachate and/or process fluids not authorized by this Discharge Permit. [20.6.2.3107.A NMAC]</p>
24.	<p>RECORD KEEPING - The permittee shall maintain a written record of the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater; to measure flow rates, to monitor water quality, or to collect other data required by this Discharge Permit. This record shall include repair, replacement or calibration of any monitoring equipment and repair or replacement of any equipment used in the permittee's waste or wastewater treatment and disposal system. [20.6.2.3107.A NMAC]</p>
25.	<p>RECORD KEEPING - The permittee shall maintain a written record of the amount of wastewater, effluent, leachate or other wastes discharged pursuant to this Discharge Permit. [20.6.2.3107.A NMAC]</p>
26.	<p>RECORD KEEPING - The permittee shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Discharge Permit, and records of all data used to complete the application for this Discharge Permit for a period of at least five years from the date of the sample collection, measurement, report or application. This period may be extended by request of the Secretary at any time. [20.6.2.3107.A NMAC]</p>
27.	<p>INSPECTION and ENTRY - The permittee shall allow the Secretary or an authorized representative, upon the presentation of credentials, to:</p> <ul style="list-style-type: none"> a) Enter at regular business hours or at other reasonable times upon the permittee's premises or other location where records must be kept under the conditions of this Discharge Permit, or under any federal or WQCC regulation. b) Inspect and copy, during regular business hours or at other reasonable times, any records required to be kept under the conditions of this Discharge Permit, or under any federal or WQCC regulation. c) Inspect, at regular business hours or at other reasonable times, any facility, equipment (including monitoring and control equipment or treatment works), practices or operations regulated or required under this Discharge Permit, or under any federal or WQCC regulation. d) Sample or monitor, at reasonable times for the purpose of assuring compliance with this Discharge Permit or as otherwise authorized by the WQA, any effluent, water contaminant, or receiving water at any location before or after discharge. <p>[20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]</p>
28.	<p>INSPECTION and ENTRY - 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 applicable law or regulation. [20.6.2.3107 NMAC, 74-6-9(B) & (E) WQA]</p>
29.	<p>DUTY to PROVIDE INFORMATION - The permittee shall furnish to NMED, within a reasonable time, any documents or other information which it may request to determine whether cause exists for modifying, terminating and/or renewing this Discharge Permit or to determine compliance with this Discharge Permit. The permittee shall also furnish to NMED, upon request, copies of documents required to be kept by this Discharge Permit. [20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]</p>

30.	<p>SPILLS, LEAKS, and OTHER UNAUTHORIZED DISCHARGES - This Discharge Permit authorizes only those discharges specified herein. Any unauthorized discharges violate Section 20.6.2.3104 NMAC and must be reported to NMED and remediated as required by Section 20.6.2.1203 NMAC. [20.6.2.1203 NMAC]</p>
31.	<p>MODIFICATIONS and/or AMENDMENTS - The permittee shall notify NMED of any changes to the permittee's wastewater treatment and disposal system, including any changes in the wastewater flow rate or the volume of wastewater storage, or of any other changes to operations or processes that would result in any significant change in the discharge of water contaminants. The permittee shall obtain NMED's approval, as a modification to this Discharge Permit pursuant to Subsections E, F, or G of 20.6.2.3109 NMAC, prior to any increase in the quantity discharged, or any increase in the concentration of water contaminants discharged, above those levels approved in this Discharge Permit. [20.6.2.3107.C NMAC]</p>
32.	<p>PLANS and SPECIFICATIONS - The permittee shall file plans and specifications with NMED for the construction of a wastewater system and for proposed changes that will change substantially the quantity or quality of the discharge from the system. The permittee shall file plans and specifications prior to the commencement of construction. Changes to the wastewater system having a minor effect on the character of the discharge shall be reported as of January 1 and June 30 of each year to NMED. [20.6.2.1202 NMAC]</p>
33.	<p>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 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. [74-6-10 WQA, 74-6-10.1 WQA]</p>
34.	<p>CRIMINAL PENALTIES – Any person who knowingly violates or knowingly causes or allows another person to:</p> <ol style="list-style-type: none"> 1) 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; 2) falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or 3) fail to monitor, sample or report as required by a permit issued pursuant to a state or

	<p>federal law or regulation, is subject to felony charges and shall be sentenced in accordance with the provisions of Section 31-18-15 NMSA 1978. [74-6-10.2(A-F) WQA]</p>
35.	<p>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 all applicable federal, state, and local laws, regulations, permits or orders. [20.6.2 NMAC]</p>
36.	<p>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 (30) days of the receipt of this Discharge Permit. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review. [74-6-5(O) WQA]</p>
37.	<p>TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this permitted facility or any portion thereof, the permittee shall notify the proposed transferee in writing of the existence of this Discharge Permit and include a copy of this Discharge Permit with the notice. The permittee shall 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. [20.6.2.3111 NMAC]</p>
38.	<p>TERM - Pursuant to WQA 74-6-5(I) and Subsection H of 20.6.2.3109 NMAC, the term of this Discharge Permit is five years from its effective date. To renew this Discharge Permit, the permittee must submit an application for renewal at least 180 days before the termination date. [20.6.2.3109.H NMAC, 74-6-5(I) WQA]</p>
39.	<p>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. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date. [20.6.2.3114.F NMAC, 74-6-5(K) WQA]</p>

EFFECTIVE DATE: effective date

EXPIRATION DATE: expiration date

WILLIAM C. OLSON
 Chief, Ground Water Quality Bureau
 New Mexico Environment Department