



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0029149

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Village of Maxwell
P.O. Box 356 – 316 Maxwell Ave
Maxwell, NM 87728

is authorized to discharge from the Maxwell Wastewater Treatment Plant located ¼ mile north of the Canadian River, in Colfax County, New Mexico. The discharge from the facility is located at the following coordinates:

Outfall 001: Latitude 36° 31' 55" North, Longitude 104° 32' 16" West

to an unnamed dry arroyo, thence to Canadian River in Segment 20.6.4.305 (waterbody ID NM-2305.A_200) of the Canadian River Basin,

Outfall 001 is within accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, Part III, and Part IV as stated below.

This permit supersedes and replaces NPDES Permit No. NM0029149 with an effective date of June 1, 2007, and an expiration date of May 31, 2012.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Prepared by

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DOCUMENT ABBREVIATIONS

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

4Q3	lowest four-day average flow rate expected once every three years
Avg	Average
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology
BPT	best practicable control technology currently available
BOD5	five-day biochemical oxygen demand
CFR	Code of Federal Regulations
cfs	cubic feet per second
cfu	colony forming units
COD	chemical oxygen demand
CWA	Clean Water Act
DMR	discharge monitoring report
EPA	United States Environmental Protection Agency
ft.	feet (measurement of distance)
FWS	United States Fish and Wildlife Service
lbs	pounds
Max	maximum
ug/L	micrograms per liter (one part per billion)
mg/L	milligrams per liter (one part per million)
MGD	million gallons per day
MQL	minimum qualification level
mpn	most probable number
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES permit implementation procedures
NMWQS	New Mexico state standards for interstate and intrastate surface waters
NPDES	national pollutant discharge elimination system
MQL	minimum quantification level
POTW	publically owned treatment works
s.u.	standard units (for parameter pH)
TDS	total dissolved solids
TMDL	total maximum daily load
TRC	total residual chlorine
TSS	total suspended solids
UAA	use attainability analysis
WET	whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	water quality management plan
WWTP	wastewater treatment plant

PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – 0.02 MGD

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated sanitary wastewater to the Canadian River, according to New Mexico surface water quality standard 20.6.4.98 and 20.6.4.305 NMAC for Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below in Table 1, Table 2 and Table 3.

Table 1

PARAMETER	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	Mass (lbs/ day, unless noted)			Concentration (mg/L, unless noted)			Measurement Frequency	Sample Type
	30 Day Avg.	Daily Max	7 Day Avg.	30 Day Avg.	Daily Max	7 Day Avg.		
Flow	Report GPD	Report GPD	Report GPD	N/A	N/A	N/A	Daily	Grab (*1)
BOD5	5.0	***	7.5	30	***	45	2/month (*2)	Grab (*1)
TSS	15	***	23	90	***	135	2/month (*2)	Grab (*1)
Percent Removal (minimum), BOD5	≥ 65%	***	***	***	***	***	1/month (*2)	Calculation (*3)
Percent Removal (minimum), TSS	≥ 65%	***	***	***	***	***	1/month (*2)	Calculation (*3)
E. coli Bacteria (*4)	***	***	***	126	410	***	2 /month (*2)	Grab (*1)
TRC	***	***	***	***	11 ug/l (*5)	***	1/week	Grab (*1)
TN	***	0.076	***	***	***	***	1/month	Grab (*1)
TP	***	0.005	***	***	***	***	1/month	Grab (*1)

Footnotes for Table 1:

(*1) Instantaneous grab a field measurement that is the analysis of a sample less than 15 minutes from the time of collection.

(*2) Sample events for any reporting period shall be taken at least fifteen (15) days from the first sample event of the previous reporting period.

(*3) Percent removal is calculated using the following equation: (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration

(*4) Bacteria reporting units may be either cfu/100mL OR mpn

(*5) The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. See Part II.A for MQL

Table 2

POLLUTANT	DISCHARGE LIMITATIONS		MONITORING REQUIREMENT	
	Minimum	Maximum	Measurement Frequency	Sample Type
pH (su)	6.6	9.0	1/Week	Instantaneous Grab (field measurement)

Table 3

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
Whole Effluent Toxicity Testing (PCS 22414) (48-Hr. Static Renewal) (*1)	30-Day Avg	48-Hr Minimum	Measurement Frequency	Sample Type
Daphnia pulex	Report	Report	Once/Term (*2)	Grab
Pimephales Promeias	Report	Report	Once/Term (*2)	Grab

Footnotes for Table 3:

(*1) See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

(*2) Once per permit-term. The test shall take place between November 1 and April 30 during the first year of the permit term. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple failures. However, upon failure of any WET test, the permittee must report the results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

2. FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the arroyo bottom or stream banks, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

Compliance schedule of no discharge for the permit to comply with the TN and TP TMDL is based on the unlikely ability of the Village of Maxwell WWTP to comply with the TN and TP limits and the ability of the permittee to not discharge since the effective date of the previous permit.

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring results must be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. Until you are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, 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 other agencies as required. (See Part III.D.IV of the permit.)

Monitor reporting periods shall end on the last day of the month.

Monitoring information required shall be submitted on DMR Form EPA 3320-1 as required in Part III, D.4. and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

The first DMR shall represent facility operations from the effective date of the permit through the last day of the month.

Thereafter, the permittee is required to make regular monthly reports as described above and shall submit those reports no later than the 28th day of the month following the months: December, March, June and September.

If any 7-day average, weekly average, or daily maximum value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.

Any 30-day average, monthly average, 7-day average, weekly average, or daily maximum value reported in the required DMR which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.

Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for BOD5 or for CBOD5, as applicable, where the permittee can demonstrate long-term correlation of the method with BOD5 or CBOD5 values, as applicable. Details of the correlation procedures used must be submitted

and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

D. OVERFLOW REPORTING

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary).

Overflows that endanger health or the environment shall be orally reported to EPA at (214) 665-6595, and NMED Surface Water Quality Bureau at (505) 827-0187 within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows that endanger health or the environment shall be provided to EPA and the NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.

The permittee shall submit a copy of an annual summary of the data that results from whole effluent toxicity testing to:

U.S. Fish and Wildlife Service Field Supervisor
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, NM 87113

And

Compliance Assurance and Enforcement Division
EPA Water Enforcement Branch (6EN-W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

And

Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
1190 Saint Francis Drive
Santa Fe, NM 87502-5469

E. POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

- (a) The influent loadings, flow and design capacity;
- (b) The effluent quality and plant performance;
- (c) The age and expected life of the wastewater treatment facility's equipment;

- (d) Bypasses and overflows of the tributary sewerage system and treatment works;
- (e) New developments at the facility;
- (f) Operator certification and training plans and status;
- (g) The financial status of the facility;
- (h) Preventative maintenance programs and equipment conditions and;
- (i) An overall evaluation of conditions at the facility.

The permittee shall certify in writing, within three days of the effective date of the permit, that this information is available. This certification shall be submitted to: Environmental Protection Agency, 6EN-WC, 1445 Ross Ave, Dallas, Texas, 75202-2733.

F. COPY OF DMR REPORTS

The permittee shall send a copy of DMRs, all other reports required in the permit, as well as a copy of application for permit renewal to NMED, FWS and EPA at the corresponding mailing address listed below.

U.S. Fish and Wildlife Service Field Supervisor
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, NM 87113

And

Compliance Assurance and Enforcement Division
EPA Water Enforcement Branch (6EN-W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

And

Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
1190 Saint Francis Drive
Santa Fe, NM 87502-5469

PART II - OTHER CONDITIONS**A. MINIMUM QUANTIFICATION LEVEL (MQL)**

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II below with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II. Results of analyses that are less than the listed MQL may be reported as "non detect" (ND).

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR § 136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific MQL shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 * \text{MDL}$$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future DMR reporting requirements until/or unless changes are required for adoption of a lower MQL.

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

NONE

C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new State of New Mexico water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(s)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit

modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

Applicable to final outfall(s):	001
Reported as final outfall:	001
Critical dilution (%):	3.92%
Effluent dilution series (%):	1.7%, 2.3%, 3.0%, 4.0% and 5.3%
Composite sample type:	Defined in Part I
Test species/methods:	40 CFR Part 136

Daphnia pulex acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.
- d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.
- e. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, in writing, within 5

business days of notification the test failure. NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: Daphnia pulex survival test; and Fathead minnow survival test.
- iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: Daphnia pulex survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the reporting requirements found in Item 3 below.

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

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- (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
- (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
 - (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);
 - (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and
 - (D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.
- d. Samples and Composites
- i. The permittee shall collect two flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
 - ii. The permittee shall collect a second composite sample for use during the 24-hour renewal of each dilution concentration for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
 - iii. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
 - iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on

separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.
- c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.
 - i. Pimephales promelas (Fathead minnow)
 - (A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.
 - (B) Report the NOEC value for survival, Parameter No. TOM6C.
 - (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

- ii. Daphnia pulex
 - (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
 - (B) Report the NOEC value for survival, Parameter No. TOM3D.
 - (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

- d. If retests are required by NMED, enter the following codes:
 - i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."