



**Region 6**  
**1445 Ross Avenue**  
**Dallas, Texas 75202-2733**

**NPDES Permit No. NM0030503**

## **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 Angel Fire  
P.O. Box 610  
Angel Fire, NM 87710

is authorized to discharge from the Angel Fire Wastewater Treatment Plant located at 67 Services Road, Angel Fire, Colfax County, New Mexico,

to the Cieneguilla Creek in Segment 20.6.4.309 of the Canadian River Basin, from a point located approximately

Outfall 001: Latitude 36° 24' 17" North, Longitude 105° 17' 00" West

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, and IV hereof.

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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William K. Honker  
Director  
Water Division (6WQ)

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Isaac Chen  
Environmental Engineer  
Permitting Section (6WQ-PP)

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## PART I

### SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

#### 1. Final Effluent limits – 0.50 MGD design flow

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from outfall serial number 001. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.		
Flow (1)	N/A	N/A	N/A	N/A	Daily	Instantaneous
Biochemical Oxygen Demand (BOD <sub>5</sub> )	125	188	30	45	2/Month	Grab
Total Suspended Solids (TSS)	125	129	30	45	2/Month	Grab
Total Residual Chlorine (TRC) (2)	N/A	N/A	11 ug/l		1/Day	Grab
E. coli (3)	N/A	N/A	126 (3)	235 (3) (Daily Max)	2/Month	Grab
Total Phosphorus (4) October - April	21.9 lbs per month	N/A	N/A	N/A	2/Month	Grab
Total Phosphorus (5) May - September	Report lbs per month	N/A	N/A	N/A	When Discharge	Grab
Total Phosphorus (4) January - December	153.3 lbs Per year	N/A	N/A	N/A	1/Year	Calculation (6)
Total Nitrogen (4) October - April	651.8 lbs per month	N/A	N/A	N/A	2/Month	Grab
Total Nitrogen (5) May - September	Report lbs per month	N/A	N/A	N/A	When Discharge	Grab
Total Nitrogen (4) January - December	4,562.5 lbs Per year	N/A	N/A	N/A	1/Year	Calculation (6)
Dissolved Oxygen (7)	N/A	N/A	N/A	4.50 (Daily Min)	2/Month	Grab
pH (8)	N/A	N/A	6.6 s.u. Minimum	8.8 s.u. Maximum	2/Month	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING (7-Days. Static Renewal) (9)	30-DAY AVGMINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Ceriodaphnia dubia	Report	Report	1/Year (10)	24-Hr. Composite
Pimephales promelas	Report	Report	1/Year (10)	24-Hr. Composite

## FOOTNOTES:

1. Report monthly average and daily maximum as million gallons per day (MGD) by instantaneous measurement.
2. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. Test is required only when chlorine-contained chemical is used. May report "zero" or "NA" if chlorine-contained chemical is not used.
3. Logarithmic mean. Report cfu/100 ml or #/100 ml.
4. Effluent loading limitations are total load for a month. Effluent limitation effective on the date three years from the effective date of the permit. Monitoring and reporting only prior to the effective of the limitation
5. The operator (1) to conduct daily sampling and calculate total daily loads for TP and TN when a discharge occurs; and (2) to perform visual inspections of stream algae for seven days after a discharge occurs, if a discharge occurs during months of May through September.
6. Sum of twelve (12) months during the calendar year.
7. Effluent limitation effective on the date three years from the effective date of the permit. Monitoring and reporting only prior to the effective of the limitation. Report the lowest DO value for the month.
8. Standard unit.
9. See Part II.E., Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
10. The test shall take place between November 1 and April 30. If no discharge occurs or is expected to occur during this testing period, the test shall take place as soon as possible.

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 bottom or shoreline, 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 discharge into the receiving stream from the following approximate location: Outfall 001.

**SECTION B. SCHEDULE OF COMPLIANCE**

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

The permittee shall submit quarterly Compliance Status Reports to EPA, with a copy to NMED, which highlight actions being taken to comply with effluent limitations for Dissolved Oxygen, Total Phosphorus, and Total Nitrogen. Quarterly Compliance Status Report could be submitted with the Discharge Monitoring Reports quarterly no later than the 28<sup>th</sup> day of the months, April, July, October and January for the preceding reporting quarter. Reporting quarters shall end on the last day of the months March, June, September, and December.

2. The permittee shall develop a Total Phosphorus/Total Nitrogen Reduction Plan which details how the permittee plans to meet the following target Wasteload Allocation as expeditiously as possible but no later than 180 days prior to the expiration date of the final permit.

Total Phosphorus	0.25 lbs/day
Total Nitrogen	2.30 lbs/day

**SECTION C. MONITORING AND REPORTING.**

1. Monitoring and Reporting
  - a. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.
  - b. Monitoring information shall be on Discharge Monitoring Report as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.
  - c. Reporting periods shall end on the last day of the months March, June, September, and December.
  - d. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28<sup>th</sup> day of the month following each reporting period.
  - e. NO DISCHARGE REPORTING

If there is no discharge at Outfall 001 during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

2. If any 7-day average or 30-day average 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.
3. Any 7-day average or 30-day average value reported in the required Discharge Monitoring Report 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.
4. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for the five-day Biochemical Oxygen Demand (BOD<sub>5</sub>), or for the five-day Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>), as applicable, where the permittee can demonstrate long-term correlation of the method with BOD<sub>5</sub> or CBOD<sub>5</sub> 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.
5. 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). Any noncompliance which may endanger health or the environment shall be made to the EPA at the following e-mail address:

R6\_NPDES\_Reporting@epa.gov, as soon as possible, but within 24-hours from the time the permittee becomes aware of the circumstance. This language supersedes that contained in Part III.D.7 of the Permit. Additionally, oral notification shall also be to the New Mexico Environment Department at (505) 827-0187 as soon as possible, but within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment shall be provided to EPA and the New Mexico Environment Department, within 5 days of the time the permittee becomes aware of the circumstance.

6. Copy of Reports and Application to NMED

The permittee shall send a copy of discharge monitoring reports (DMRs), all other reports required in the permit, as well as a copy of application for permit renewal to New Mexico Environment Department at the mailing address listed in Part III of the permit.

## **PART II - OTHER CONDITIONS**

### **A. MINIMUM QUANTIFICATION LEVEL (MQL)**

The permittee shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit in accordance with 40 CFR 122.44(i)(1)(iv)(A).

For pollutants listed on Appendix A of Part II with MQL's, analyses may 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) reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, may be tested to the MQL, permit limit(s) or the state WQS. Results of analyses that are less than the listed MQL, permit limit(s) or the state WQS may be reported as non-detect.

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 reporting requirements until a lower MQL is adopted.

### **B. PERMIT REOPENER CLAUSE**

1. In accordance with 40 CFR 122.62, the permit may be reopened and modified during the life of the permit if relevant portions of State of New Mexico Water Quality Standards and/or State Water Quality Management Plans are revised, new water quality standards are established and/or remanded and any other policy, or if procedures and implementation guidelines are adopted by the State that change applicable water quality standards and permit implementation.
2. In accordance with 40 CFR Part 122.62, 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.
3. If a TMDL is established for the receiving stream, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the permit.

### **C. CONTRIBUTING INDUSTRIES**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less

- than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
- b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.
3. The permittee shall provide adequate notice of the following:
- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

#### D. POLLUTION PREVENTION REQUIREMENTS

The permittee shall continue a program 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.

E. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC 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 (%): 80

EFFLUENT DILUTION SERIES (%): 25, 34, 45, 60 and 80

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136

*Ceriodaphnia dubia* chronic static renewal survival and reproduction test, Method 1002.0, EPA-821-R-02-013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

*Pimephales promelas* (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013, or the most recent 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 herein 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. Chronic lethal 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. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) 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. 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. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. 60% of the surviving control females must produce three broods. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.

- vii. a PMSD range of 13 - 47 for *Ceriodaphnia dubia* reproduction;
- viii. a PMSD range of 12 - 30 for Fathead minnow growth.

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

- i. For the *Ceriodaphnia dubia* survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.
- ii. For the *Ceriodaphnia dubia* reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a 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-02-013 or the most recent update thereof.
- iii. 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 80% 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 a survival NOEC of not less than the critical dilution for the DMR 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;
  - (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., 7 days);
- (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 a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
- ii. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. 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.
- iii. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 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 4 degrees Centigrade during collection, shipping, and/or storage.
- 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 if the discharge occurs over multiple 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 4 of this section.

3. REPORTING

i. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, 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.

ii. 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 lethal and sub-lethal effects 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.

iii. The permittee shall submit the results of each valid toxicity test as follows below. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

i. *Pimephales promelas* (Fathead Minnow)

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. TLP6C

Report the NOEC value for survival, Parameter No. TOP6C

Report the LOEC value for survival, Parameter No. TXP6C

Report the NOEC value for growth, Parameter No. TPP6C

Report the LOEC value for growth, Parameter No. TYP6C

If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP6C

Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C

ii. *Ceriodaphnia dubia*

(A) If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B

(B) Report the NOEC value for survival, Parameter No. TOP3B

- (C) Report the LOEC value for survival, Parameter No. TXP3B
  - (D) Report the NOEC value for reproduction, Parameter No. TPP3B
  - (E) Report the LOEC value for reproduction, Parameter No. TYP3B
  - (F) If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B
  - (G) Report the higher (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B
- d. If retests are required by NMED, enter the following codes:
- 1. For retest number 1, Parameter 22415, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'
  - 2. For retest number 2, Parameter 22416, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'