

NPDES PERMIT NO. NM0031038

FACT SHEET

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

APPLICANT

Village of Cimarron Wastewater Treatment Plant
P.O. Box 654
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ISSUING OFFICE

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DATE PREPARED

November 1, 2014

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued August 28, 2009, with an effective date of October 1, 2009, and an expiration date of September 30, 2014.

RECEIVING WATER

French Lake

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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
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
BPJ	best professional judgment
CD	critical dilution
CFR	Code of Federal Regulations
cfs	cubic feet per second
cfu	colony forming units
CWA	Clean Water Act
DMR	discharge monitoring report
ELG	effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
ft.	feet (measurement of distance)
FWS	United States Fish and Wildlife Service
lbs	pounds
LA	Load Allocation (a.k.a. waterbody total assimilative capacity)
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 quantification level
NAICS	North American Industry Classification System
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
O&G	oil and grease
POTW	publically owned treatment works
s.u.	standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TMDL	total maximum daily load
TN	total nitrogen
TP	total phosphorus
TRC	total residual chlorine
TSS	total suspended solids
WET	whole effluent toxicity
WLA	Waste Load Allocations
WQMP	water quality management plan
WQS	water quality standards
WWTP	wastewater treatment plant

A. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit with expiration date of May 31, 2012, are:

1. The mass (lbs/day) loading limits for BOD and TSS have been calculated
2. A 30-day Average Percent Removal for total suspended solids and 5-day biological oxygen demand has been added as a discharge effluent limitation.
3. Bacteria reporting units MUST be reported either as cfu/100 mL or as mpn.
4. pH monitoring frequency has changed from one (1) time per week to five (5) per week.
5. BOD5, monitoring frequency has changed from one (1) per week to one (1) per month.

B. APPLICANT LOCATION and ACTIVITY

The Village of Cimarron Wastewater Treatment Plant (WWTP) is off Highway 58 approximately one-mile southeast of the Village of Cimarron in Colfax County, NM.

Under the NAICS code 221320 and SIC code 4952, the applicant operates a sewage treatment plant or facility, here after referred to as a POTW. The facility has a design flow capacity of 0.0083 MGD serving a residential population of 1,200.

According to Village representatives, 540 hook-ups are served by the drinking water distribution system. Raw sewage flows by gravity through the collection system. One lift station is located on the south side of town. The raw sewage enters the WWTP through a 4" to 6" flume where a wooden stick is used as the staff gauge to measure influent flow. The staff gauge affixed to the wall is coated with debris and is unreadable. The raw sewage is split between two lagoons. One lagoon has a small mixing unit anchored in the center. Each lagoon is roughly 2 acres in size followed by two small sand filters designated for each lagoon then through a 6 inch flume that has no staff gauge to the outfall at French Lake. NMED inspection conducted on 8/23/2011 did not observe a disinfection system within the wastewater system.

Extremely high levels of solids are present in both lagoons. Around the edges, solids are so thick that plants have taken root and are growing in the lagoons. It appears that solids have never been wasted. There are no sludge drying beds at the site. According to facility representatives, with the current treatment units, solids would have to be hauled to an offsite location for processing and disposal. According to Cimarron representatives, the nearest location for solids disposal is in Colorado.

The discharge is to French Lake, a tributary of the Cimarron River, at Latitude 36° 30' 27" N and Longitude 104° 53' 45" W, in Colfax County, New Mexico.

C. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA DMR data from the October and November 2013 discharge:

Table 1

Parameter	Max	Avg
Flow, MGD	0.05	0.03
Temperature, winter	7 °C	---
Temperature, summer	21 °C	---
pH, minimum, s.u.	7.7 su	---
pH, maximum, s.u.	8.5 su	---

BOD (mg/L)	200	73.6
E.Coli	9208	4604
TSS (mg/L)	200	99.3

D. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water”; more commonly known as the “swimmable, fishable” goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered the NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The previous permit expired May 31, 2012. EPA received the NPDES application on April 5, 2011. The existing permit is administratively continued until this permit is issued.

E. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

1. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 require NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS and BOD5. Water quality-based effluent limitations are established in the proposed draft permit for *E. coli* bacteria, pH and TRC.

2. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD5, TSS, *E. coli* bacteria, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Some biological treatment technologies, such as waste stabilization ponds, are capable of achieving significant reductions in BOD5 and TSS but might not consistently achieve the secondary treatment standards for these parameters. Congress recognized that unless alternate limitations were set for facilities with waste stabilization ponds, which often are in small communities, such facilities could be required to construct costly new treatment systems to meet the secondary treatment standards even though their existing treatment technologies could achieve significant biological treatment. To prevent requiring upgrades where facilities were achieving their original design performance levels, Congress included provisions in the 1981 amendments to the Clean Water Act Construction Grants program (*Public Law 97-117, Section 23*) that required EPA to make allowances for alternative biological treatment technologies, such as waste stabilization ponds. In response to that requirement, in 1984, EPA promulgated regulations at § 133.105 that include alternative standards that apply to facilities using “equivalent to secondary treatment.” A facility must meet the criteria in § 133.101(g) to qualify for application of those alternative standards.

The facility is a privately owned facility that treats sanitary wastewater that has technology-based ELG’s established at 40 CFR Part 133, Secondary Treatment Regulation for BOD5, TSS and pH. The BOD5 limits of 30 mg/l for the 30-day average and 45 mg/l for the 7-day average with a 65% percent (minimum) removal are found at 40 CFR §133. The regulations at §133.105(f) require a permitting authority to include more stringent limitations when it determines that the 30-day average and 7-day average BOD5 and TSS concentrations are achievable through proper operation and maintenance of the treatment works would enable the treatment works to achieve more stringent limitations than the least stringent effluent quality allowed by the equivalent to secondary standards. In the previous permit, the BOD5 mass loading concentrations of secondary treatment will remain at the previous, more restrictive limit due to ability to achieve the ELG.

In addition to providing secondary treatment standards, the federal regulations allow states to make adjustments to the standards and to apply those adjusted standards on a case-by-case basis. In accordance with regulations adopted by EPA in 1977 and revised in 1984, states can adjust the maximum allowable TSS concentration for waste stabilization ponds upward from those specified in the equivalent to secondary treatment standards to conform to TSS concentrations achievable with waste stabilization ponds. The regulation, found at § 133.103(c), defines “[TSS] concentrations achievable with waste stabilization ponds” as the effluent concentration achieved 90 percent of the time within a state or appropriate contiguous geographical area by waste stabilization ponds that are achieving the levels of effluent quality for BOD5 specified in § 133.105(a)(1) (45 milligrams per liter [mg/L] as a 30-day average). To qualify for an adjustment up to as high as the maximum concentration allowed, a facility must use a waste stabilization pond as its principal process for secondary treatment and its operations and maintenance data must indicate that it cannot achieve the secondary treatment standards or an equivalent to secondary standards. EPA published approved alternate 30-day average TSS requirements in 49 *Federal Register* (FR) 37005, September 20, 1984. To determine the 7-day average, the 30-day average is multiplied by 1.5.

ELG’s for pH are between 6.0 – 9.0 s.u. and are found at 40 CFR §133.102(c). The pH limits in this permit comply with the NMAC 20.6.4.98 and 20.6.4.306 for the Canadian River Basin designated uses and contain requirements for a pH of 6.6 - 9.0 s.u.

Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day.

When determining mass limits for POTW's, the plant's design flow used to establish the mass load. Mass limits are determined by the following mathematical relationship:

Loading in lbs/day = pollutant concentration in mg/l * 8.34 conversion factor * design flow in MGD

30-day average BOD5 loading = 30 mg/l * 8.34 conversion factor * 0.0083 MGD

30-day average BOD5 loading = 2.077 lbs/day

Calculated to two significant figures is 2.1 lbs/day

7-day average BOD loading = 45 mg/l * 8.34 conversion factor * 0.0083 MGD

7-day average BOD loading = 3.115 lbs/day

Calculated to two significant figures is 3.1 lbs/day

30-day average TSS loading = 90 mg/l * 8.34 conversion factor * 0.0083 MGD

30-day average TSS loading = 6.22998 lbs/day

Calculated to two significant figures is 6.2 lbs/day

7-day average TSS loading = 135 mg/l * 8.34 conversion factor * 0.0083 MGD

7-day average TSS loading = 9.34497 lbs/day

Calculated to two significant figures is 9.3 lbs/day

A summary of the technology-based limits for the facility is:

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 (1)	0.0083	0.0083	0.0083	N/A	N/A	N/A	1/week	Grab (3)
BOD5	2.1	***	Report	30	***	45	1/month (2)	Grab (3)
TSS	6.2	***	Report	90	***	135	1/month (2)	Grab (3)
Percent Removal (minimum), BOD5	≥85%	***	***	***	***	***	1/month (2)	Calculation (4)
Percent Removal (minimum), TSS	≥65%	***	***	***	***	***	1/month (2)	Calculation (4)
E. coli Bacteria (5)	***	***	***	126	410	***	1/month (2)	Grab (3)
TRC (6)	***	***	***	***	11 ug/l	***	1/week	Grab (3)

Footnotes for Factsheet Table 1:

1. MGD
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. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
4. Percent removal is calculated using the following equation: (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration.
5. Bacteria reporting units MUST be either cfu/100mL OR MPN
6. 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 (*1)

Footnotes for Table 2:

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

Table 3

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-Day Avg Min	48-Hr Minimum	Measurement Frequency	Sample Type
Whole Effluent Toxicity Testing (48-Hr. Static Renewal) (*1)				
<i>Daphnia pulex</i>	Report	Report	Once/6 months (*2)	24-Hr Composite
<i>Pimephales promelas</i>	Report	Report	Once/6 months (*2)	24-Hr Composite

Footnotes for Table 3:

(*1) Monitoring and reporting requirements begin on the effective date of this permit.

7. WATER QUALITY BASED LIMITATIONS

a. General Comments

Water quality based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained.

b. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

c. State Water Quality Standards

The general and specific stream standard is provided in 20.6.4.306 NMAC for Outfall 001, amended June 5, 2013. The discharge is to receiving waters French Lake, a tributary of the Cimarron River of the Canadian River Basin. The designated uses of the receiving water(s) are irrigation, warmwater aquatic life, livestock watering, wildlife habitat and primary contact.

d. Permit Action - Water Quality-Based Limits

The Clean Water Act in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at [40 CFR 122.44 (d)] state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant. Regulations promulgated at [40 CFR 122.44(d)] require limits in addition to or more stringent than effluent limitation guidelines (technology based).

In accordance with NMAC 20.6.4.98 and 20.6.4.306, the permit must be developed to allow for the maintenance and attainment of acute numerical criteria at the point of discharge to the receiving stream and for the maintenance and attainment of chronic numerical criteria at the edge of the mixing zone.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity will be documented in a full report, according to the appropriate test method publication. The full reports required by each test section do not need to be submitted unless requested. However, the full report is to be retained following the provisions of [40 CFR Part 122.41 (j) (2)]. The permit requires the submission of the toxicity testing information to be included on the DMR.

1) pH

The draft permit will propose a stream segment specific pH limit, specified in 20.6.4.900.D. NMAC, 6.6 to 9.0 s.u., and is continued from the previous permit.

2) Bacteria

Stream segment specific NMWQS for *E. coli* bacteria are 126 cfu/100 ml monthly geometric mean and 410 cfu/100 ml single sample maximum as found in 20.6.4.900 D, and is continued from the previous permit. Bacteria reporting units MUST be either cfu/100mL OR MPN.

3) Dissolved Oxygen

An evaluation of the permittee's impact on the receiving water dissolved oxygen was completed as part of the permitting process. A steady state model (LA-QUAL) was used to evaluate the biochemical oxygen demand of the discharge and associated constituents including ammonia. A complete characterization of the receiving water was not available. Certain parameters, including flow, were available and were utilized. However, the receiving water model also used default values to estimate the various unavailable hydrodynamic and water quality parameters. The discharge was modeled using data obtained from the application, permits limits and defaults were used for unavailable discharge characterization data.

The evaluation demonstrated that the discharge would not cause an excursion of the in-stream standard of 5 mg/L. The output file is attached as Fact Sheet Appendix 1.

4) Toxics

i. General Comments

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to POTWs and to facilities that are similar to POTWs, but those facilities, which do not meet the regulatory definition of POTW (like privately owned sanitary wastewater treatment facility, or similar facilities on Federal property). The forms were designed and promulgated to "make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities," per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

This facility is designated by EPA NPDES as a minor and does not need to fill out the expanded pollutant testing section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for TRC described below.

ii. TRC

The previous permit established water quality-based effluent limitations for TRC of 11 ug/L. This requirement will be maintained in the draft permit.

iii. Critical Conditions

Critical dilutions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allows a mixing zone for establishing pollutant limits in discharges. The mixing zones established by the State of New Mexico do not overlap with tribal/pueblo boarders.

Both the NMWQS and NMIP establish a critical low flow designated as 4Q3, as the minimum average four consecutive day flow which occurs with a frequency of once in three years. NMED provided EPA with a low stream flow for the Village of Cimarron of 0.55 cfs, and a zero (0) for mixing zone, because it is a lake.

For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. The receiving waterbody is a lake, and the critical dilution, CD, is determined, according to the NMIP, to be 100%.

The critical dilution (C_D) series (percentage): 32%, 42%, 56%, 75%, 100%

8. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). Changes to sample frequencies have been made based on the NMIP in order to ensure consistency with similar sized facilities.

In the 2009 permit, the facility was given a monitoring frequency of one (1) time per month for BOD, TSS, E. coli, and TRC. According to the Procedures for Implementing NPDES Permits in New Mexico NMIP, based on treatment technology and design flow. TSS concentration and mass limit averages for 7-day and 30-day are continued from the previous permit to reflect the regulation limit for treatment equivalent to secondary standard (40 CFR 133). Sample type for BOD and TSS are grab which is consistent with the previous permit. Monitoring must be conducted according to test procedures approved in 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

Influent BOD5 & TSS (for use in calculating percent removal shall be monitored once per year during April. This frequency avoids effectively doubling the BOD and TSS analytical costs for a small discharger whose discharge influent would not be subject to the variability of a larger system with more varied system users.

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

In Section E.3.d.3) iii above; "Critical Conditions", it was shown that the C_D for the facility is 100%. Based on the nature of the discharge; POTW, the design flow; less than 0.1 MGD, the nature of the receiving water; intermittent, and the critical dilution; the NMIP directs the WET test to be a 48-hour

acute test using Daphnia pulex and Pimephales promelas (fathead minnow) a once per 6 months frequency.

The EPA Reasonable Potential Analyzer for outfall 001 (Appendix A) indicates that RP exists for Daphnia pulex and Pimephales promelas but since reasonable potential for an excursion of the narrative criterion to protect the aquatic life against toxicity does not actually exist because toxic events were not demonstrated, WET limits will not be established in the proposed permit for the invertebrate or vertebrate species for outfall 001. EPA concludes that this effluent does not cause or contribute to an exceedance of the state water quality standards. Therefore, WET limits will not be established in the proposed permit.

During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 - the discharge to French Lake of the treatment system lagoon basin. The aeration basin receives process area wastewater, process area stormwater, and treated sanitary wastewater. Discharges shall be limited and monitored by the permittee as specified below:

Final Effluent Limits - 0.0083 MGD design flow.

Table 4

Effluent Characteristic	Discharge Monitoring	
	30-day Avg Min	48 Hr. Minimum
WET Testing (48 Hr. NOEC) (*1)		
<u>Daphnia pulex</u>	Report	Report
<u>Pimephales promelas</u>	Report	Report

Table 5

Effluent Characteristic	Monitoring Requirements	
	Frequency	Type
WET Testing (48 Hr. NOEC) (*1)		
<u>Daphnia pulex</u>	Once/6 months (*2)	24-Hr. Composite
<u>Pimephales promelas</u>	Once/6 months (*2)	24-Hr. Composite

Footnotes for Table 4 & 5:

- (*1) Monitoring and reporting requirements begin on the effective date of this permit.
- (*2) If all pass, reduce for years 2-5 to *Daphnia pulex* once/ 6 months and *Pimephales promelas* to once/ year. If any test fails, the frequency of testing returns to once/ quarter for both species for the remainder of the permit.

F. FACILITY OPERATIONAL PRACTICES

1. SEWAGE SLUDGE

The permittee shall use only sewage sludge disposal or reuse practices that comply with the federal regulations established in 40 CFR Part 503 "Standards for the Use or Disposal of Sewage Sludge". EPA may at a later date issue a sludge-only permit. Until such future issuance of a sludge-only permit, sludge management and disposal at the facility will be subject to Part 503 sewage sludge requirements. Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a sludge-only permit has been issued. Part IV of the draft permit contains sewage sludge permit requirements.

2. WASTEWATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

3. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant has no non-categorical Significant Industrial User's (SIU) and no Categorical Industrial User's (CIU). The EPA has tentatively determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been required. The facility is required to report to EPA, in terms of character and volume of pollutants any significant indirect dischargers into the privately owned treatment works subject to pretreatment standards under §307(b) of the CWA and 40 CFR Part 403.

4. OPERATION AND REPORTING

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

G. 303(d) LIST

Section 303(d) of the Federal Clean Water Act requires states to develop a TMDL management plan for water bodies determined to be water quality limited. A TMDL documents the amount of a pollutant a water body can assimilate without violating a state's water quality standards. It also allocates a load capacity to known point sources and nonpoint sources at a given flow. EPA defines TMDLs in 40 CFR Part 130 as the sum of the individual WLAs for point sources and background conditions, and includes a margin of safety.

The NPDES regulations at 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL.

H. ANTIDegradation

The State of New Mexico has antidegradation requirements to protect existing uses through implementation of NMWQS. The limitations and monitoring requirements set forth in the proposed draft are developed from the appropriate State WQS and are protective of those designated uses. Furthermore, the policy's set forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The design flow rate of the facility has not changed. The proposed draft permit does not authorize a new or increased discharge. Therefore, the need for an Antidegradation Tier 2 Review was determined not necessary (was not conducted) by the State of New Mexico Environment Department. The draft permit is consistent with the NM WQMP. The Village of Cimarron's renewal application is for a permit to discharge into an impaired waterbody that has an approved TMDL and does contain a WLA. The proposed draft permit contains E. coli effluent limitations at or less than the in-stream TMDL target concentrations that are protective of designated uses.

I. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit maintains the mass loading requirements of the previous permit for BOD5 and more stringent mass loading requirements for TSS.

J. ENDANGERED SPECIES CONSIDERATIONS

Section 7 of the Endangered Species Act (Act) of 1973, [16 U.S. C. 1531 et seq.], outlines procedures for Federal interagency cooperation for the conservation of federally listed species and designated critical habitats. EPA will fulfill its consultation obligation, under the Act and its implementing regulations, relevant to the issuance of this NPDES permit.

According to FWS Consultation Tracking Number 02ENNM00-2015-SLI-0033 Official Species List for Project Number NM0031038 Village of Cimarron WWTP (Factsheet Appendix 3), three (3) species in Colfax County are listed as endangered: Southwestern willow flycatcher (*Empidonax traillii extimus*), Black-Footed ferret (*Mustela nigripes*) and the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*); and two (2) species listed as threatened: the Mexican spotted owl (*Strix occidentalis lucida*) and the piping plover (*Charadrius melodus*).

When EPA issued the permit for the Village of Cimarron WWTP in 2009, EPA cited that according to the county listing available in 2009 at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>, five species in Colfax County are listed as endangered (E) or threatened (T). The lone aquatic species is the Arkansas River shiner (*Notropis girardi*) (T). The black-footed ferret (*Mustela nigripes*) (E) is the lone mammal. The remainder are birds and include Mexican spotted owl (*Strix occidentalis lucida*) (T), the Southwestern willow flycatcher (*Empidonax traillii extimus*) (E) and the piping plover (*Charadrius melodus*) (T). The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in Colfax County, however, in the Federal Register, July 9, 2007, (Volume 72, Number 130), the U.S. Fish and Wildlife Service, removed the American bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife.

In 2014 the species listed that were not previously assessed for is the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) and the critical habitat for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*), the piping plover (*Charadrius melodus*), and the Southwestern willow flycatcher (*Empidonax traillii extimus*). The reissuance of Village of Cimarron WWTP NM0031038 should have no effect on the species or the critical habitat listed above and is explained below.

Table 6

Threatened and Endangered Species Determination	
Species	Determination
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	No affect
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	No affect
Piping Plover (<i>Charadrius melodus</i>)	No affect
Black-Footed ferret (<i>Mustela nigripes</i>)	No affect

New Mexico meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	No affect
Mexican spotted owl (<i>Strix occidentalis lucida</i>) Critical Habitat	No affect
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>) Critical Habitat	No affect
Piping Plover (<i>Charadrius melodus</i>) Critical Habitat	No affect

Effects of the Action – New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)

The New Mexico jumping mouse (*Zapus hudsonius luteus*) nests in dry soils, but uses moist, streamside, dense riparian/wetland vegetation. The jumping mouse appears to only utilize two riparian community types: 1) persistent emergent herbaceous wetlands (i.e., beaked sedge and reed canary grass alliances); and 2) scrub-shrub wetlands (i.e., riparian areas along perennial streams that are composed of willows and alders). It especially uses microhabitats of patches or stringers of tall dense sedges on moist soil along the edge of permanent water. The jumping mouse is generally nocturnal, but occasionally diurnal. It is active only during the growing season of the grasses and forbs on which it depends.

The New Mexico meadow jumping mouse has seen a significant population decline. This decline is mainly due to habitat loss and fragmentation across its range. Given that a majority of the remaining mouse habitat is on federal land, the USFWS has been working closely with the USDA Forest Service Southwestern Region (USFS).

The reissuance of the Village of Cimarron WWTP permit NM0031038 with a discharge that is constant with the previous permit, with added monitoring frequency, and with permit limits designed to maintain or improve water quality in the downstream waterbodies, the EPA Region 6 determines that the reissuance of the above permit will not negatively impact the New Mexico jumping mouse (*Zapus hudsonius luteus*) or the proposed critical habitat.

Effects of the Action – Mexican spotted owl (*Strix occidentalis lucida*) Critical Habitat

The Mexican spotted owl (*Strix occidentalis lucida*) critical habitat includes canyon and montane forest habitats across a range that extends from southern Utah and Colorado, through Arizona, New Mexico, and west Texas, to the mountains of central Mexico. U.S. Fish & Wildlife Service has now designated approximately 4.6 million acres of critical habitat for the owl in Arizona, Colorado, New Mexico, and Utah, on Federal Lands.

Critical habitat refers to specific geographic areas that are essential for the conservation of a threatened or endangered species and that may require special management considerations. A critical habitat designation does not set up a preserve or refuge and only applies to situations where Federal funding, authorization or permits are involved. Since no private, state or tribal lands are being designated, the designation will only affect activities on Federal lands. Since there are no Federal or Tribal lands downstream of the discharge point, there will be no affect to the Mexican spotted owl (*Strix occidentalis lucida*).

Effects of the Action – Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

The Southwestern Willow flycatcher (*Empidonax traillii extimus*) requires dense riparian habitats (cottonwood/willow and tamarisk vegetation) with microclimatic conditions dictated by the local surroundings. Saturated soils, standing water, or nearby streams, pools, or cienegas are a component of nesting habitat that also influences the microclimate and density vegetation component. Habitat not suitable for nesting may be used for migration and foraging. Recurrent flooding and a natural hydrograph are important to withstand invading exotic species (tamarisk). Loss and degradation of dense riparian habitats are the primary habitat threat to the flycatcher. Historically, water developments that

altered flows in the rivers and streams were the primary threat. Now, with riparian areas limited and re-growth difficult due to changes in flows, fire is a significant risk to remaining habitats. Human disturbances at nesting sites may result in nest abandonment

The reissuance of the Village of Cimarron WWTP permit NM0031038 with a discharge that is constant with the previous permit, with added monitoring frequency, and permit limits designed to maintain or improve water quality in the downstream waterbodies the EPA Region 6 determines that the reissuance of the above will not negatively affect the Southwestern Willow flycatcher (*Empidonax traillii extimus*).

Effects of the Action – Piping Plover (*Charadrius melodus*) Critical Habitat

The habitat of the Piping Plover (*Charadrius melodus*) nest on rivers on the bare areas of islands or sandbars rivers, piping plovers use the. They also nest on the pebbly mud of interior alkali lakes and ponds. Birds nesting on gravel have higher reproductive success than those nesting on alkali. According to the FWS Critical Habitat Mapper, there is no critical habitat for the piping plover located at or downstream of the discharge. Therefore, EPA Region 6 finds that at the existing discharge of treated effluent of 0.0083 MGD, the Village of Cimarron WWTP “no affect” on the Piping Plover (*Charadrius melodus*) critical habitat.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. EPA has consulted with the FWS IPaC (<http://ecos.fws.gov/ipac/>) and the FWS Critical Habitat Mapper (<http://ecos.fws.gov/crithab/>) and has determined that the issuance of this permit will have no effect on the federally listed threatened or endangered species, nor their critical habitat based on the above determinations.

K. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should not have an impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

L. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State water quality standards are promulgated or revised. In addition, if the State develops a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

M. VARIANCE REQUESTS

No variance requests have been received.

N. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

O. FINAL DETERMINATION

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

P. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

1. APPLICATION(s)

EPA Application Form 2A received October 21, 2013.

2. 40 CFR CITATIONS

Citations to 40 CFR are as of July 17, 2013
Sections 122, 124, 125, 130, 133, 136, 261, 403

3. STATE OF NEW MEXICO REFERENCES

2012-2014 State of New Mexico Clean Water Act 303(d)/305(6) Integrated Report – Appendix A – List of Assessed Surface Waters USEPA – Approved May 8, 2012,
<http://www.nmenv.state.nm.us/swqb/303d-305b/2012-2014/index.html>

2008-2010 State of New Mexico Clean Water Act §303(d)/305(b) Integrated List.
<http://www.nmenv.state.nm.us/swqb/303d-305b/2008-2010/documents/AppendixA.pdf>

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, NMIP. March 15, 2012.

Statewide Water Quality Management Plan, June 5, 2013.

State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4.306, 20.6.4.98 and 20.6.4.900 NMAC, as amended through June 5, 2013.

4. MISCELLANEOUS

Handbook for Sampling and Sample Preservation of Water & Wastewater. September 1982. EPA Report Number EPA-600/4-82-029.

Part 503 Implementation Guidance – 1995, EPA 833-R-95-001 – Office of Water, October 1995.
www.epa.gov/npdes/pubs/owm0237.pdf

POTW Sludge Sampling and Analysis Guidance Document – 1989, EPA 833-B-89-100 – Office of Water, August 1989. <http://www.epa.gov/npdes/pubs/owm012.pdf>

Technical Support Document for Water Quality based Toxics Control (EPA/505/2 90 001), page 47.