

NPDES PERMIT NO. NM0028487

STATEMENT OF BASIS

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

1. APPLICANT

Gadsden Independent School District #16
PO Box Drawer 70
Anthony, NM 88021

2. ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
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3. PREPARED BY

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4. DATE PREPARED

March 31, 2008

5. PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued February 27, 2003, with an effective date of April 1, 2003, and an expiration date of January 31, 2008.

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed in Title 40, Code of Federal Regulations, revised as of February 15, 2008.

6. DISCHARGE LOCATION

As described in the application, the treatment facilities are owned and operated by Gadsden Independent School District. The applicant operates two facilities, Gadsden High School Wastewater Treatment Plant (HS WWTP) and Gadsden Central Wastewater Treatment Plant (Central WWTP), but uses one outfall for both plants. The site is located at 1325 West Washington Street, Anthony, in Dona Ana County, New Mexico. The facility discharge is to Rio Grande at the Water Quality Segment number 20.6.4.101 of the Rio Grande Basin. The single outfall of the facility is located in the Rio Grande at:

Latitude 31° 59' 56.03" North, Longitude 106° 38' 06.52" West

7. RECEIVING STREAM STANDARDS

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (NM WQS), 20.6.4 NMAC, as amended through December 29, 2006.

The designated uses of the receiving waters are marginal warmwater aquatic life, secondary contact, irrigation, livestock watering, and wildlife habitat.

8. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Code 8211, the applicant currently operates a public school district.

The facility has a combined design flow capacity of 0.09 million gallons per day (MGD).

9. EFFLUENT CHARACTERISTICS

The facility submitted information in its application that describes the nature of the permitted discharge. The following is a summarization of effluent characteristics.

| <u>Parameter</u> | <u>Avg. Monthly (mg/l unless noted)</u> | <u>Max. Daily</u> |
|--|---|-------------------|
| Flow, million gallons/day (MGD) | 0.01 | 0.07 |
| pH, minimum, standard units (su) | N/A | 6.91 su |
| pH, maximum, standard units (SU) | N/A | 7.96 su |
| Biochemical Oxygen Demand, 5-day (BOD ₍₅₎) | 4.95 | 12.50 |
| Fecal Coliform (FCB) (bacteria/100 ml) | 0.00 | 0.00 |
| Total Suspended Solids (TSS) | 2.77 | 54.00 |

10. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

The proposed effluent limitations for those pollutants proposed to be limited are based on regulations promulgated at 40 CFR 122.44. The draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR 122.44(a), on BPJ in the absence of guidelines, NM WQS and/or requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

a. Reason For Permit Issuance

It is proposed that the permit be issued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). The initial permit renewal application was received on January 23, 2008.

b. Operation and Reporting

(1) Regulatory Basis

At a minimum, the facility will be required to meet “secondary treatment” for domestic sewage, found at 40 CFR 133.102.

(2) 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.

(3) Sewage Sludge Practices

Sludge produced at the treatment plant is hauled to a septage disposal site near Mesquite, New Mexico.

(4) Waste Water Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The facility shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility.

(5) Industrial Wastewater Contributions

Based on information provided by the applicant, the facility does not receive significant industrial wastewater. EPA has determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been included in the permit.

c. Technology Based Effluent Limitations/Conditions

Regulations promulgated at 40 CFR 122.44(a) require that technology-based effluent limitations be placed in NPDES permits based on effluent limitations guidelines where applicable, on best professional judgment (BPJ) in the absence of guidelines, or on a combination of the two.

Limitations on 5-day biochemical oxygen demand, (BOD₅), or 5-day carbonaceous biochemical oxygen demand, (CBOD₅), and total suspended solids, (TSS), are in accordance with "secondary treatment requirements" established at 40 CFR 133.102 (a) and 133.102 (b). Limitations on maximum and minimum pH are in accordance with 40 CFR 133.102(c). The above effluent guideline limits are the minimum level of effluent quality attainable by secondary treatment, therefore they apply to every domestic treatment works. Because the facility has two separate treatment lines, the proposed permit renewal establishes technology-based effluent limitations to both effluents to ensure that both treatment lines meet the minimum requirements. Two internal outfalls, 01A and 01B, are used to distinguish the monitoring points of discharges from Central WWTP and HS WWTP, respectively.

d. Water Quality Based Limitations

The NM WQCC adopted new WQS for the State of New Mexico. The revised WQS as amended through December 29, 2006, are available on the NMED's website at <http://www.nmenv.state.nm.us/swq/b/Standards/20.6.4NMAC.pdf>. The WQS have been approved by EPA in accordance with Section 303 of the CWA.

e. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants (49 FR 9016-9019, 3/9/84)." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992, and the EPA Region 6 WET Permitting Strategy on May 1, 2005. The Regional policy and strategies are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in nonconformance with the provisions of 40 CFR 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

f. Implementation

The Region is currently implementing its post third round policy in conformance with the Regional strategies. 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.

g. Reasonable Potential

All applicable facilities are required to fill out appropriate sections of the Form 2A, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to Publicly Owned Treatment Works (POTW's), but also to facilities that are similar to POTW's, but which do not meet the regulatory definition of "publicly owned treatment works" (like private domestics, 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.

The amount of information required for minor facilities was limited to specific sections of these forms, because they are unlikely to discharge toxic pollutants in amounts that would impact state water quality standards. Supporting information for this decision was published as "Evaluation of the Presence of Priority Pollutants in the Discharges of Minor POTW's", June 1996, and was sent to all state NPDES coordinators by EPA Headquarters. In this study, EPA collected and evaluated data on the types and quantities of toxic pollutants discharged by minor POTW's of varying sizes from less than 0.1 MGD to just under 1 MGD. The Study consisted of a query of the EPA Permit Compliance System (PCS) database from 1990 to present, an evaluation of minor POTW data provided by the State agencies, and on-site monitoring for selected toxics at 86 minor facilities across the nation.

Due to the limited information required by the application, the Agency has determined that no reasonable potential exists for this discharge to violate applicable NM WQS for the protection of marginal warmwater aquatic life, secondary contact, irrigation, livestock watering, and wildlife habitat, beyond pH, bacteria, and the use of chlorine for disinfection or clean purpose.

h. Final Effluent Limitations

Technology-based effluent limitations and loading limits are established in the proposed permit for BOD₅, and TSS at two internal outfalls. Water quality-based effluent limitations are established at the main Outfall 001 in the proposed permit for the following pollutants: E. coli, pH, and total residual chlorine (TRC). The more stringent water segment specific pH range of 6.6 – 9.0 is established to replace the existing technology-based pH limitations. Effluent limitations for E. coli are 126 cfu/100 ml as a geometric mean and 410 cfu/100 ml in single sample in accordance with updated State WQS to replace fecal coliform.

i. Monitoring Frequency

Regulations require that permits 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)). The monitoring frequencies are based on BPJ,

taking into account the nature of the facility and its design flow and the previous permit. Monitoring frequencies in the current permit are retained and a frequency of 1/month is established for E. coli.

j. Whole Effluent Toxicity (WET) Testing

In a letter from Marcy Leavitt, NMED, to Claudia Hosch, EPA, December 16, 2005, NMED provided “Narrative Toxics Implementation Guidance – Whole Effluent Toxicity” (WET Guidance), an update to the 1995 Implementation Guidance. The discharge is to Rio Grande and the critical low flow (4Q3) in that segment is estimated to be 29.7 cubic feet per second (cfs) which is 19.16 mgd. The total design flow of the two plants is 0.09 mgd. Therefore, the critical dilution of the discharge to the receiving stream is about 0.46%. The facility has reported three WET tests in the application and those testing results have demonstrated that the discharge has no reasonable potential to create a toxic condition in the receiving water. Therefore, in accordance with 2005 WET Guidance, a WET testing is not required for this discharge.

k. Significant Changes from the Existing Permit

There are significant changes of permit conditions from the existing permit issued February 27, 2003, and expired January 31, 2008:

- (i) Add effluent limitations and monitoring requirements for E. coli;
- (ii) Delete effluent limitations and monitoring requirements for fecal coliform;
- (iii) Change effluent limitation range of pH from 6.0 – 9.0 to 6.6 – 9.0;
- (iv) Delete Whole Effluent Toxicity testing requirement; and
- (v) Add two internal outfalls and establish BOD and TSS effluent limitations at internal outfalls instead of at Outfall 001.

11. 303(d) LIST

The water segment of 20.6.4.101 has been listed as impaired by E. coli. Monitoring for waste load allocation is scheduled for 2010. Effluent limitations for E. coli are established based on stream standard for E. coli. A reopener clause is established to implement total maximum daily load (TMDL) when such information is developed and approved in the future.

12. ANTIDegradation AND ANTIBACKSLIDING

The NMAC, Section 20.6.4.8 “Antidegradation Policy and Implementation Plan” sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use.

Existing effluent limitations for fecal coliform are deleted and replaced by E. coli in accordance with State Water Quality Standards, therefore, this change is in compliance with EPA's antibacksliding policy.

11. ENDANGERED SPECIES CONSIDERATIONS

Six species in Dona Ana County are listed as Endangered or Threatened, according to the U.S. Fish & Wildlife Service's (USFWS) website, http://www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm. The lone aquatic species is the Rio Grande silvery minnow and was extirpated in this County. Four of the species are avian and include the Least Tern, Northern aplomado falcon, Mexican spotted owl, and the southwestern willow flycatcher. Additionally, the Sneed pincushion cactus is listed as endangered. Based on the evaluations made by EPA in 2002 when EPA reissued the permit, EPA has determined that the environmental baseline has not been changed and, based on the information available to EPA, that the reissuance of this permit will have no effect on these federally listed threatened or endangered species.

12. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites because no construction activities are planned in the reissuance.

13. 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.

14. FINAL DETERMINATION

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

15. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

- r. Application(s)
EPA Application Form 2A signed and received January 29, 2008.
- b. State of New Mexico References
New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through December 29, 2006.

Narrative Toxics Implementation Guidance- Whole Effluent Toxicity, State of New Mexico, December 16, 2005.

Region 6 Implementation Guidance for State of New Mexico Standards for Interstate and Intrastate Stream, May 5, 1995.