SOAH DOCKET NO. 582-22-0585
TCEQ DOCKET NO. 2021-1001-MWD

APPLICATION BY CITY OF GRANBURY, FOR TPDES PERMIT NO. WQ0015821001	**§ § § § §**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

EXHIBIT GF-507

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

ORDER
CONCERNING THE APPLICATION BY
HAYS COUNTY WATER CONTROL & IMPROVEMENT DISTRICT NO. 1
FOR AMENDMENT TO TPDES PERMIT NO. WQ0014293001
TCEQ DOCKET NO. 2007-1426-MWD
SOAH DOCKET NO. 582-08-0202

On February 11, 2009 and February 25, 2009 the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of Hays County Water Control & Improvement District No. 1 (WCID) for a permit to discharge treated wastewater effluent into Bear Creek, a tributary of Onion Creek, in Hays County, Texas. A Proposal for Decision (PFD) was presented by Roy G. Scudday and Cassandra J. Church, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH).

The following are parties to the proceeding: WCID; the Executive Director (ED); City of Austin (Austin), Hays County (County), Joel and Kim Stearns, Alston and Barbara Boyd, Robert O'Boyle and Barbara Stroud, Charles O'Dell, Robert D. Hejl, Radiance Water Supply Corp., Sam Cobb, Tara Weaver, Gregg Brown, Bear Creek Property Owners Association (BCPOA), Hays Community Action Network (HCAN), and Save Our Springs Alliance (SOS) (collectively, Protestants); and the Office of Public Interest Counsel (OPIC).

After considering the Proposal for Decision, the Commission makes the following Findings of Fact and Conclusions of Law.

I. FINDINGS OF FACT

GENERAL FINDINGS

1. On December 13, 2005, WCID applied to the TCEQ for a major amendment to Permit No. WQ0014293001 to authorize a discharge of 500,000 gallons per day (gpd) of treated effluent into Bear Creek, a tributary of Onion Creek in the contributing zone of the Edwards Aquifer (the Application).
2. The wastewater treatment facility serves the Belterra Subdivision and is located approximately 1,100 feet west of County Road 163 (Nutty Brown Road) and approximately 1.16 miles south of the intersection of County Road 163 and U.S. Highway 290 in Hays County, Texas.
3. The Application was deemed administratively complete by the TCEQ on January 19, 2006.
4. The Notice of Receipt and Intent was published on January 31, 2006, in the *Austin American-Statesman,* a newspaper published and generally circulated in Travis and Hays Counties, Texas.
5. The ED issued a Draft Permit for public comment on June 8, 2007.
6. The Notice of Application and Preliminary Decision for TPDES Permit for Municipal Wastewater Amendment was published on July 21, 2007, in the *Austin American-Statesman.*
7. The Notice of Public Meeting was published on August 24, 2007, in the *Austin American-Statesman.*

8. On August 30, 2007, WCID requested that its application be directly referred to SOAH for a contested case hearing.

9. On September 18, 2007, the Commission referred the case to SOAH for a contested case hearing.

10. On October 15, 2007, Notice of Hearing on the Application was published in the *Austin American Statesman.*

11. On November 27, 2007, a preliminary hearing was held in Austin, Texas, at which the following were designated as parties to the proceeding: the ED; Austin; Lower Colorado River Authority (LCRA); Barton Springs/Edwards Aquifer Conservation District (BSEACD); County; City of Dripping Springs (CDS); Hays Trinity Groundwater Conservation District (HTGCD); Joel and Kim Stearns; Alston and Barbara Boyd; Owen Kinney and Darryl Howard; Robert O'Boyle and Barbara Stroud; Davis Family Properties, Ltd.; Charles O'Dell; Robert D. Hejl; Radiance Water Supply Corp.; Sam Cobb; Tara Weaver; Charles Jones; Gregg Brown; BCPOA; HCAN; SOS; and OPIC. The Protestants were subsequently aligned into five groups.

12. Prior to the hearing on the merits the following entered into a Partial Settlement Agreement with WCID and withdrew as parties to the contested case: LCRA; BSEACD; CDS; HTGCD; and Davis Family Properties, Ltd. In addition, during the course of the hearing on the merits, the following Protestants also withdrew as parties to the contested case: Charles Jones, Owen Kinney, and Darryl Howard.

13. The evidentiary hearing was conducted on July 14 - 18, 2008, in Austin, Texas, by ALJs Roy G. Scudday and Cassandra J. Church. The record closed September 22, 2008.

DRAFT PERMIT

14. WCID's current facility is an activated sludge process plant currently disposing of wastewater through subsurface drip irrigation on 35 acres of non-public lands under a Texas Land Application Permit (TLAP Facility).

15. Bear Creek is an unclassified receiving water that is in the contributing zone of the Edwards Aquifer.

16. The treated effluent from the Interim II and Final Phases of Applicant's plant development will discharge into Bear Creek; thence to Onion Creek in Segment No. 1427 of the Colorado River Basin.

17. Segment 1427 is designated for high aquatic life use, public water supply, aquifer protection, and contract recreation.

18. Segment 1427 was listed on the State's inventory of impaired and threatened waters, *i.e.*, the Clean Water Act Section 303(d) list, specifically for the depressed Dissolved Oxygen (DO) concentrations from the end of the segment to U.S. Hwy. 183, but was removed from the list in 2006.

19. The upper portion of Bear Creek that extends from the proposed discharge point to Aspen Drive, approximately 0.94 kilometers (km), is intermittent with perennial pools and has the presumption of a limited aquatic life as the ED typically assigns to such unclassified bodies of water. The minimum DO criteria for such streams is 3.0 milligrams per liter (mg/L).

20. The lower portion of Bear Creek that extends from Aspen Drive to the boundary of the Edwards Aquifer Recharge Zone, approximately 8 miles downstream from the proposed discharge point, is spring-fed and with small flows, contains several man-made ponds, and

has the presumption of high aquatic life. The minimum DO criteria for that portion of the stream is 5.0 milligrams per liter (mg/L).

21. In accordance with 30 TEX. ADMIN. CODE (TAC) §307.5 and the TCEQ implementation procedures for the *Texas Surface Water Quality Standards*, the TCEQ performed an antidegradation review of the receiving waters under the terms of the Draft Permit.

22. WCID will maintain current disposal operations under the TLAP until the treatment plant is built; the treatment plant will come on line in two phases, the Interim II and Final Phases, but there is no timetable set for implementation of either phase.

23. The revised Draft Permit included the following provisions for the two implementation phases of the wastewater treatment plant:

Interim II Effluent Limitations and Monitoring Requirements:

- 0.250 MGD daily average flow
- 5 mg/L BOD
- 5 mg/L TSS
- 2 mg/L Ammonia Nitrogen
- 0.15 mg/L Total Phosphorus
- Chlorine residual of at least 1.0 mg/L after a detention time of at least 20 minutes (based on peak flow)
- Minimum DO of 5.0 mg/L

Final Effluent Limitations and Monitoring Requirements

- 0.500 MGD daily average flow
- 5 mg/L BOD

- 5 mg/L TSS
- 2 mg/L Ammonia Nitrogen
- 0.15 mg/L Total Phosphorus daily average calculated as a median value and based on a long-term average of 0.10 mg/L
- Chlorine residual of at least 1.0 mg/L after a detention time of at least 20 minutes (based on peak flow)
- Minimum DO of 5.0 mg/L.

24. Subsequent to the entering of the Partial Settlement Agreement, the ED further revised the revised Draft Permit to add additional limits on effluent characteristics as follows:

- 6 mg/L Total Nitrogen
- 126 mg/L E. coli Bacteria colonies per 100 ml
- Use of an Ultraviolet Light (UV) system for disinfection purposes.

PARTIAL SETTLEMENT AGREEMENT

25. In addition to the terms of the Partial Settlement Agreement that the ED incorporated into the revisions to the Draft Permit, the Agreement also contained the following terms, which included changes or additions to the wastewater treatment process and plant (Proposed Facility):

- All wastewater will be treated in Interim II and Final Phase using membrane bioreactor technology with denitrification to meet the discharge effluent limits of the Permit.
- The Interim II Phase and Final Phase effluent limitations and monitoring requirements shall be as described in the Draft Permit with the addition of a total nitrogen limit of 6.0 mg/L, daily average. The total nitrogen limit shall only apply when Applicant is discharging to waters of the State. Total Nitrogen will be monitored, at least weekly, when discharging to waters of the State.
- Applicant shall continue to dispose of 150,000 gallons per day of treated effluent via subsurface drip irrigation either under the existing land application authorization or pursuant

to a Chapter 210 Beneficial Reuse Authorization and continue to use the moisture monitoring plan associated with existing drip irrigation field.

- Applicant shall apply for a Chapter 210 Beneficial Reuse Authorization. Applicant will phase in the number of acres irrigated with treated wastewater and, prior to reaching capacity of the Final Phase, as described in the Permit, Applicant shall irrigate at least 201 acres with treated wastewater. Throughout the phase-in of acres irrigated, Applicant shall use sufficient irrigable land to apply effluent that is being generated at all times at a rate no higher than the rate required for applying the 350,000 gallons per day on 201 acres without causing or resulting in runoff from the irrigation acreage. Applicant shall install soil moisture monitors where necessary to determine soil saturation of those irrigation areas immediately adjacent to the creek's buffer zone in order to determine when irrigation areas are unsuitable for effluent irrigation. The amount and location of the soil moisture monitors shall be determined by the Applicant.

- Applicant shall build and maintain a lined effluent storage pond with a capacity of at least 5,250,000 gallons, exclusive of required freeboard.

- The daily discharge shall not exceed 350,000 gallons per day. Applicant shall only discharge treated effluent into Bear Creek if:

  a. the land to be surface irrigated (as described in paragraph III.2.D of the Partial Settlement Agreement) is frozen or saturated and the effluent storage pond is full; or

  b. when Bear Creek is flowing at a rate of at least 14 cfs measured at the USGS gauge on Bear Creek. For purposes of this subparagraph, Bear Creek shall be deemed to be flowing at or above 14 cfs for 24 hours following any point in time when the USGS gauge (08158810) reads 14 cfs or higher.

- During the Interim II Phase and Final Phases, the wastewater treatment plant shall be operated at all times by an operator holding a "Category A" wastewater operator license.

- A study of instream conditions shall be conducted in accordance with the Workplan, attached as Attachment B of the Permit.

- Applicant shall use ultraviolet light disinfection in accordance with TCEQ requirements and in lieu of chlorination, but if a better disinfection technology becomes available and is agreed to by Applicant, by representatives of Protestants, and by TCEQ, the alternate technology can be employed.

- In-Stream Monitoring:

  a. Background conditions: Instream monitoring for determining background conditions will occur on a monthly basis beginning within 60 days of Permit issuance and for at least one year prior to the commencement of the first discharge. This period will be considered the pre-discharge background period. Applicant will be responsible for monitoring during the first eighteen (18) months of the pre-discharge background period. Monitoring may be continued thereafter by representatives of the Protestants during this period. Direct discharge of any effluent terminates the background period.

  b. Post-discharge monitoring: Post-discharge instream monitoring will commence after the first discharge of effluent into the creek by the Applicant. Applicant will be responsible for monitoring during the first eighteen (18) months of the post-discharge background period. Monitoring will be continued thereafter by representatives of the Protestants at their own cost.

  c. Nothing in these monitoring provisions should be construed as limiting the Protestants' ability to monitor at any time at their own cost.

  d. Instream monitoring shall be conducted in accordance with the Workplan, attached as Attachment B of the Permit.

  e. Interpretation of the results from instream monitoring shall be governed by the Workplan, attached as Attachment B of the Permit.

- Remedies:

  If, on the basis of the interpretation of the instream monitoring as provided in the Workplan, Attachment B, significant differences (triggers) are caused by the Applicant's discharge of treated effluent, then the Applicant within 180 days of notification shall:

  a. commence construction of and complete within a reasonable amount of time at least 1,750,000 gallons of additional effluent storage capacity; or

  b. employ other measures to decrease the volume of effluent to be discharged to the creek on a continuing basis with the demonstrably equivalent effect of increasing storage by 1,750,000 gallons of effluent.

- Applicant shall equip all lift stations receiving untreated effluent with automatic-on standby generator power.

- Applicant shall utilize an overflow pond or other equivalent holding device to handle any

untreated or partially treated effluent. No partially treated effluent shall be discharged to Bear Creek.

- The Applicant shall conduct weekly sampling for Total Nitrogen and turbidity in the effluent to determine the effectiveness and performance of the wastewater treatment plant. These monitoring data are to confirm plant performance and shall be provided to designated representatives of the Protestants on a monthly basis.

26. If operated correctly in accordance with the revised Draft Permit and the Partial Settlement Agreement, the Proposed Facility can consistently meet a total phosphorus effluent long-term average limit of 0.1 mg/L, and a total nitrogen limit of 6 mg/L.

27. WCID has included an Emergency Response Plan and Spill Prevention Plan in the Application that will adequately prevent and protect against accidental discharge under the revised Draft Permit.

28. The compliance history at the TLAP Facility is average.

BEAR CREEK

29. There are currently no wastewater discharges directly into Bear Creek.

30. The discharge route begins at the headwaters of Bear Creek, which are dry, except in storm conditions.

31. The discharge route continues from the headwaters to Dry Pond, which is dry.

32. From Dry Pond, the discharge route flows into Pond 6B, which is a stormwater retention pond built as part of the Belterra development.

33. After Pond 6B, the discharge route continues to Aspen Drive, where spring flow begins.

34. The first perennial pool below the Belterra Subdivision property is Davis Pond.

35. Both WCID and the ED conducted DO modeling for a continuous daily flow of 0.500 MGD, at 5 mg/L BOD, 5 mg/L TSS, 2 mg/L ammonia nitrogen, and 0.1 mg/L phosphorus

(5/5/2/0.1) effluent limits.

36. Both WCID and TCEQ's modeling showed that the DO standards in Bear Creek would be met with the discharge permitted under the revised Draft Permit.

37. Limiting nutrients such as phosphorus and nitrogen are needed by algae to build biomass structure cells.

38. Bear Creek is limited by both phosphorus and nitrogen.

39. Limiting nutrients can move through a body of water or stream by several means, as set forth below:

- When a nutrient concentration in a body of water reaches the level at which the nutrient is no longer being biologically taken up by algae in the growth process or bonding to inorganic matter and sinking to the bottom of a stream, the nutrient will flow downstream.
- When the sediments of an impoundment that is initially efficient at reducing nutrient movement downstream become organically rich, nitrogen and phosphorus will move back out of the sediments in dissolved states.
- At high flows, scouring will pick up and transport nutrient-rich sediments and algae and wash them downstream.
- Re-suspension, *i.e.*, the mechanism whereby particles are picked up from bottom sediments, also will move nutrients downstream.

40. If the flow of an effluent stream is increased with the same nutrient concentration, then the nutrient loading will increase.

41. An increased concentration of a limiting nutrient in a stream may, along with other factors, increase the growth of algae; the growth of algae will lower the DO levels of the stream.

42. Once a pond is exposed to enough nutrients, the sediment will become more organic and will tend to be totally devoid of oxygen much of the time due to bacterial metabolism. Nutrients

will then move back into the water column and move downstream and algal growth will move downstream as well.

43. If there are several ponds along the course of a stream, the oxygen depletion and nutrient movement cycle will repeat from pond to pond, resulting in excessive algae growth affecting DO, stream clarity, and aquatic plant life in successive downstream areas of the stream.

44. Streams are classified by the levels of aquatic plants, from least-dense to most-dense concentrations, as set forth below:

- Oligotrophic waters are nutrient limited with corresponding low populations of aquatic plants.
- Mesotrophic waters are the transition zones between oligotrophic and eutrophic waters, and have occurrences of nuisance plant growth, but usually at a lower frequency and in more limited locations than for waters in the eutrophic range.
- Eutrophic waters are nutrient enriched, resulting in dense populations of aquatic plants that are considered nuisance by most persons and that will have an adverse affect on aquatic life and recreational uses.

45. The boundary between oligotrophic and mesotrophic states (trophic boundary) is 0.025 mg/L of total phosphorus concentration and 0.70 mg/L of total nitrogen concentration.

46. The most credible estimate of background total phosphorus concentrations in Bear Creek is 0.030 mg/L (baseline concentration).

47. In Bear Creek, the threshold concentration for stimulation of algal growth is a total phosphorus level of 0.05 to 0.1 mg/L.

48. The assimilative capacity of a stream regarding nutrient loadings is based on the difference between the baseline concentration and the trophic boundary.

49. The assimilative capacity regarding total phosphorus of Bear Creek at Davis Pond is 0.045 mg/L, and the proposed discharge pursuant to the revised Draft Permit will increase the phosphorus concentration at Davis Pond to 0.06 mg/L, or 150 percent of the assimilative capacity.

50. The assimilative capacity regarding total nitrogen of Bear Creek at Davis Pond is 0.06 mg/L, and the proposed discharge pursuant to the revised Draft Permit will increase the nitrogen concentration at Davis Pond to 11.8 mg/L, or 1,863 percent of the assimilative capacity.

51. The proposed effluent discharge will cause an increase of the total phosphorus concentration at Davis Pond from 0.03 mg/L to 0.06 mg/L, or 200 percent, and would have the result of pushing Davis Pond toward the upper end of the mesotrophic classification.

52. A 200 percent increase in the total phosphorus concentration at Davis Pond, together with the effect of the proposed discharge on the assimilative capacity of the creek and the long term effects of the increased phosphorus loading, would cause more than a *de minimis* degradation of Bear Creek.

53. There is no evidence that the lowering of the water quality of Bear Creek by more than a *de minimis* amount is necessary for important economic or social development.

54. Based on the terms of the Partial Settlement Agreement, a discharge would only occur 24 days a year on average, resulting in an annual average discharge of 12,000 gpd.

55. As the operation of the Proposed Facility will result in effluent with a total phosphorus long-term average of 0.1 mg/L, the proposed discharge pursuant to the terms of the Partial Settlement Agreement will not increase the phosphorus concentration at Davis Pond above Bear Creek's assimilative capacity of 0.045 mg/L.

56. As the operation of the Proposed Facility will result in effluent with a 6 mg/L Total Nitrogen, the proposed discharge pursuant to the revised Draft Permit as modified by the Partial Settlement Agreement will not increase the nitrogen concentration at Davis Pond above Bear Creek's assimilative capacity of 0.06 mg/L.

57. The median flow of Bear Creek at the USGS monitoring station is 1.1 cfs. If the stream flow increased to 9 cfs, there would be a 10-to-1 dilution factor of the effluent and the total phosphorus loading would not impact Bear Creek.

58. If the effluent discharge were 0.350 MGD, with a Total Nitrogen limit of 6 mg/L, and the stream flow were 14 cfs, the total nitrogen loading would not impact Bear Creek.

59. The in-stream monitoring provisions in the Partial Settlement Agreement and optional alternate disposal methods are sufficient to assure that the proposed discharge will not have more than a *de minimis* effect on the receiving streams.

TRINITY AQUIFERS

60. The Upper Trinity Aquifer and the Middle Trinity Aquifer are the main sources of water for wells in the area of WCID, and the Upper Aquifer is the source for the springflows in Bear Creek.

61. The Trinity Aquifers underlie Bear Creek to the boundary of the Edwards Aquifer Recharge Zone and, as such, also lie within the contributing zone of the Edwards Aquifer.

62. There is no meaningful amount of recharge from Bear Creek to either level of the Trinity Aquifer.

63. The proposed discharge under the revised Draft Permit and the Partial Settlement Agreement would not degrade the waters of the Trinity Aquifers.

EDWARDS AQUIFER

64. The contributing and recharge zones of the Edwards Aquifer are hydraulically connected by conduits in the limestone subsurface and by conduits between the subsurface and surface waters.

65. Surface water can be rapidly conveyed to the subsurface through surface conduits developed in the limestone that composes the Edwards Aquifer.

66. Bear Creek recharges the Edwards Aquifer approximately 8 miles downstream from the proposed discharge point.

67. The degradation of the surface water in Bear Creek by the proposed discharge pursuant to the revised Draft Permit will also degrade the groundwater going into the Edwards Aquifer.

68. The discharge of effluent authorized by the revised Draft Permit would cause greater than a *de minimis* degradation of the Edwards Aquifer due to the recharge from Bear Creek.

69. An intermittent discharge pursuant to the terms of the revised Draft Permit as modified by the Partial Settlement Agreement would not cause greater than a *de minimis* degradation of the Edwards Aquifer.

BARTON SPRINGS POOL

70. Bear Creek contributes about 10 percent of the total recharge to the Barton Springs segment of the Edwards Aquifer.

71. The Barton Springs segment of the Edwards Aquifer feeds into Barton Springs Pool, which is used for sunbathing, picnicking, and swimming.

72. At low-flow conditions, the phosphorus concentration in Bear Creek would impact the phosphorus concentration in Barton Springs Pool.

73. The effluent discharge authorized by the revised Draft Permit that would cause greater nutrient loadings in Bear Creek would likewise cause an increase in the level of nutrients in Barton Springs Pool at low-flow conditions, resulting in an increase of the growth of algae in the Pool.

74. An intermittent discharge pursuant to the terms of the revised Draft Permit as modified by the Partial Settlement Agreement would not cause an increase in the level of nutrients in Barton Springs Pool at low-flow conditions that would result in an increase of algal growth in the Pool.

BARTON SPRINGS SALAMANDER

75. Barton Springs is the habitat for the Barton Springs Salamander, which is listed by the U.S. Fish and Wildlife Service as an endangered species.

76. The suitability of Barton Springs as a habitat for the Barton Springs Salamander can be reduced by decreasing DO concentrations.

77. A fall of the DO level in Barton Springs below the lethal concentration of 3.9 mg/L for longer than 28 consecutive days would kill five percent of the population of the Barton Creek Salamanders, which would be the kill level considered significant for the salamander population.

78. The DO in Barton Creek with one treatment plant discharging 0.500 MGD would be 8.36 mg/L.

79. The proposed discharge of 0.500 MGD under the revised Draft Permit would not cause any significant impact on the Barton Springs Salamander.

80. An intermittent discharge pursuant to the terms of the Draft Permit as modified by the Partial Settlement Agreement would not cause any significant impact on the Barton Springs Salamander.

EMERGING CONTAMINANTS

81. Components of pharmaceutical and personal care products (PPCPs) can persist in the environment, particularly in water bodies; PPCPs include medicines, industrial chemicals, detergents, disinfectants, and agricultural chemicals.

82. PPCPs, referred to generally as emerging contaminants, are the subject of research and policy discussion in the environmental regulatory community, particularly in regard to those constituents that affect the reproduction of aquatic animals.

83. Texas has not adopted any numerical or narrative criteria for the regulation of PPCPs.

84. There is no evidence concerning which PPCPs, if any, will exist in the effluent proposed for discharge either under the revised Draft Permit or under the Partial Settlement Agreement.

TRANSCRIPTION COSTS

85. Reporting and transcription of the hearing on the merits was warranted as the hearing lasted four days.

86. All parties fully participated in the hearing by presentation of witnesses and cross examination.

87. All parties benefitted from preparation of a transcript.

88. There was no evidence that any party subject to allocation of costs was financially unable to pay a share of the costs.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over permits for the discharge of wastes into or adjacent to waters in the State pursuant to TEX. WATER CODE ANN. ch. 26.

2. SOAH has the authority to conduct evidentiary hearings and prepare proposals for decision on contested matters referred by the Commission pursuant to TEX. GOV'T CODE ANN. § 2003.047.

3. WCID has not shown by a preponderance of the evidence that a continuous discharge pursuant to the terms of the revised Draft Permit would not cause degradation of Bear Creek below Aspen Drive by less than a *de minimis* extent nor that such lowering of the water quality of Bear Creek is necessary for important economic or social development, within the meaning of 30 TAC § 307.5.

4. WCID met its burden of proof to show that a proposed discharge under the terms of the revised Draft Permit will not result in degradation of the waters of the Trinity Aquifers, within the meaning of 30 TAC § 307.5.

5. WCID has not shown by a preponderance of the evidence that a continuous discharge pursuant to the terms of the revised Draft Permit would not cause degradation of the Edwards Aquifer, within the meaning of 30 TAC § 307.5.

6. WCID has not shown by a preponderance of the evidence that a continuous discharge pursuant to the terms of the revised Draft Permit would not cause an increase in the level of nutrients in Barton Springs Pool at low-flow conditions, resulting in an increase of algal growth in the Pool, in violation of 30 TAC § 307.4.

7. WCID met its burden of proof to show that a proposed discharge under the terms of the

revised Draft Permit would not cause any significant impact on the Barton Springs Salamander, pursuant to 30 TAC § 307.4.

8. WCID has shown by a preponderance of the evidence that an intermittent discharge pursuant to the terms of the revised Draft Permit as modified by the Partial Settlement Agreement would not cause degradation of Bear Creek by greater than a *de minimis* extent, within the meaning of 30 TAC § 307.5.

9. WCID has shown by a preponderance of the evidence that an intermittent discharge pursuant to the terms of the revised Draft Permit as modified by the Partial Settlement Agreement would not cause degradation of the Edwards Aquifer, within the meaning of 30 TAC § 307.5.

10. WCID has shown by a preponderance of the evidence that an intermittent discharge pursuant to the terms of the revised Draft Permit as modified by the Partial Settlement Agreement would not cause an increase in the level of nutrients in Barton Springs Pool at low-flow conditions sufficient to cause an increase of algal growth in the Pool, pursuant to 30 TAC § 307.4.

11. Under the facts in this record, WCID has no legal obligation under existing Texas law to monitor or treat its effluent for pharmaceutical and personal care products (PPCPs) that may enter its treatment facility.

12. Allocating 75 percent of reporting and transcription costs for the hearing on the merits to WCID and 25 percent of the costs to the City of Austin, Hays County, and each of the two protesting landowner groups, collectively, is a reasonable allocation of costs under the factors set forth in 30 TAC § 80.23(d).

13. Based on the above Findings of Fact and Conclusions of Law, a major amendment to Permit No. WQ0014293001, pursuant to the terms of the revised Draft Permit as modified by the Partial Settlement Agreement, will comply with the requirements of 30 TAC ch. 332 in regard to environmental impact, specifically the nondegradation of the receiving waters greater than a *de minimis* extent.

14. In accordance with 30 TAC § 50.117, the Commission issues this Order and the attached permit as modified by this Order as its single decision on the permit (amendment/renewal) application. Information in the agency record of this matter, which includes evidence admitted at the hearing and part of the evidentiary record, document the ED's review of the permit amendment application, including that part not subject to a contested case hearing, and establishes that the terms of the attached permit (Exhibit A) as modified by this Order are appropriate and satisfy all applicable federal and state requirements.

III. EXPLANTION OF CHANGES

At its February 11, 2009 agenda, the Commission adopted the ALJs' Proposed Order with direction to the ALJs to revise the Proposed Order to incorporate the ALJs' recommended corrections to Findings of Fact Nos. 18, 21, 41, & 46, Conclusion of Law No. 11, and Ordering Provision No. 2. These changes were agreed to by the ALJs in their January 6, 2009 letter. (These changes are further detailed in the ALJs' February 19, 2009, cover letter to their Revised Proposed Order.) In addition, the ALJs modified Findings of Fact Nos. 23 and 25 to clarify the Settlement Terms incorporated from the Partial Settlement Agreement. Further, the Commission directed the Executive Director to revise his Draft Permit to be consistent with the Commission's decision and continued the matter to the February 25, 2009

agenda.

At its February 25, 2009 agenda, the Commission adopted the ALJs' Revised Proposed Order incorporating the above changes and issuing the Executive Director's Second Revised Draft Permit, consistent with the Commission's decision. The Commission also directed that the ALJs' Revised Proposed Order be further modified to reflect in Finding of Fact No. 25 the Settlement Terms of the Partial Settlement Agreement, as previously included in Finding of Fact No. 25 by the ALJs, verbatim. Finally, the Commission directed the Executive Director to make conforming changes to the Second Revised Draft Permit.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:

1. The application of Hays County Water Control & Improvement District No. 1 for an amendment to Permit No. WQ0014293001 is granted in part; and the attached Second Revised Draft Permit, modified to include the terms of the Partial Settlement Agreement, set out in Finding of Fact No. 25, is issued to Hays County Water Control & Improvement District No. 1.
2. The Commission adopts the Executive Director's Response to Public Comment not in conflict with the Findings of Fact and Conclusions of Law in this Order in accordance with 30 TEX. ADMIN. CODE § 50.117. Also, in accordance with Section 50.117, the Commission issues this Order and the attached permit (Exhibit A) as modified by this Order as its single

decision on the permit amendment application. Information in the agency record of this matter, which includes evidence admitted at the hearing and part of the evidentiary record, document the Executive Director's review of the permit amendment application, including that part not subject to a contested case hearing, and establishes that the terms of the attached permit as modified by this Order are appropriate and satisfy all applicable federal and state requirements.

3. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.

4. The effective date of this Order is the date the Order is final, as provided by TEX. GOV'T CODE ANN. § 2001.144 and 30 TEX. ADMIN. CODE § 80.273 .

5. The Commission's Chief Clerk shall forward a copy of this Order to all parties.

6. If any provision, sentence, clause, or phase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.

ISSUED: MAR 16 2009

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Buddy Garcia

Buddy Garcia, Chairman
For the Commission

TCEQ Docket No. 2007-1426-MWD

TPDES PERMIT NO. WQ0014293001
[For TCEQ Office Use Only:
EPA ID No. TX0128465]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This amendment supersedes and replaces TCEQ Permit No. WQ0014293001 issued November 30, 2004.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

Hays County Water Control & Improvement District No. 1

whose mailing address is

c/o Andrew Barrett, Attorney
816 Congress Avenue, Suite 1280
Austin, Texas 78701

is authorized to treat and discharge wastes from the Hays Co WCID 1 Wastewater Treatment Facility, SIC Code 4952

located approximately 1,100 feet west of County Road 163 (Nutty Brown Road) and approximately 1.16 miles south of the intersection of County Road 163 and U.S. Highway 290 in Hays County, Texas

Outfall 001: The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 0.150 MGD via subsurface drip irrigation of non-public access land of 35 acres. The facility includes a storage tank with a total capacity of 330,000 gallons for storage of treated effluent prior to subsurface drip irrigation. Application rates shall not exceed 0.1 gallon per square foot per day. The disposal site is located in the drainage basin of Onion Creek in Segment No. 1427 of the Colorado River Basin. (See Attachment A.) No discharge of pollutants into water in the State is authorized from Outfall 001 of this permit.

Outfall 002: to Bear Creek; thence to Onion Creek in Segment No. 1427 of the Colorado River Basin

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, September 1, 2011.

ISSUED DATE: MAY 06 2009

Buddy Garcia
For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS* Outfall Number 001

Conditions of this Permit Phase: No discharge of pollutants into water in the State is authorized.

During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

A. Effluent Limitations

Character: Treated Domestic Sewage Effluent

Volume: 30-day Average - 0.150 MGD from the treatment system

Quality: The following effluent limitations shall be required**:

Parameter	Effluent Concentrations (Not to Exceed) Daily Average mg/l	7-Day Average mg/l	Daily Maximum mg/l	Single Grab mg/l
Biochemical Oxygen Demand (5-day)	20	30	45	65
Total Suspended Solids	20	30	45	65

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

The effluent shall be chlorinated in a chlorine contact chamber to a residual of 0.5 mg/l with a minimum detention time of 20 minutes. Upon the completion of construction of the 0.250 MGD and 0.500 MGD membrane bioreactor (MBR) facility, the permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes.

B. Monitoring Requirements:

Parameter	Monitoring Frequency	Sample Type
Flow	Five/week	Instantaneous
Biochemical Oxygen Demand (5-day)	Two/month	Grab
Total Suspended Solids	Two/month	Grab
pH	Two/month	Grab
Chlorine**	Five/week	Grab

The monitoring shall be done after the final treatment unit and prior to subsurface drip irrigation. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

* Refer to Special Provisions for Outfall 001 Section, pages 23 and 24, and Settlement Agreement Requirements, pages 27-29.

** Upon completion of the construction of the MBR facility, the *E. coli* effluent limitations on page 2a shall replace the chlorine effluent limitations. Monitoring frequency and sample type remain the same.

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS[†] Outfall Number 002

1. During the period beginning upon the completion of construction of the 0.250 million gallons per day (MGD) membrane bioreactor (MBR) facility[‡] and lasting through the completion of construction of 0.500 million gallons per day (MGD) MBR facility, the permittee is authorized to discharge subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.100 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 278 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Minimum Self-Monitoring Requirements	
	Daily Avg. mg/l(lbs/day)	7-day Avg. mg/l	Daily Max. mg/l	Single Grab mg/l	Report Daily Avg. & Max. Measurement Frequency	Single Grab Sample Type
Flow, MGD	Report	N/A	Report	N/A	Five/week	Instantaneous
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (4.2)	10	20	30	One/week	Grab
Total Suspended Solids	5 (4.2)	10	20	30	One/week	Grab
Ammonia Nitrogen	2 (1.7)	5	10	15	One/week	Grab
Total Phosphorus*	0.15(**)(***) (0.13)	0.3	0.6	0.9	Daily*	Grab
Total Nitrogen*	6 (5)	N/A	N/A	N/A	One/week*	Grab
E.coli Bacteria, colonies per 100 ml	126****	N/A	N/A	394	Five/week	Grab

* Discharge limitations and monitoring requirements apply only when discharging to waters in the state.
** The daily average is calculated as a median value. For months when discharge occurs on two or less days, the discharge limitation is 0.3 mg/l.
*** The daily average of 0.15 mg/l is based on a long-term average of 0.10 mg/l.
**** Geometric mean.
† Refer to Other Requirements for Outfall 002 Section, pages 25 and 26, and Settlement Agreement Requirements, pages 27-29.

‡ Upon the completion of construction of the 0.250 MGD membrane bioreactor (MBR) facility, a daily average flow not to exceed 0.150 MGD shall be diverted for subsurface drip irrigation via Outfall 001.

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit and before commingling with water in the state.

6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l and shall be monitored once per week by grab sample.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS[†] Outfall Number 002

1. During the period beginning upon the completion of construction of the 0.500 million gallons per day (MGD) membrane bioreactor (MBR) facility[‡] and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.350 MGD; nor shall the average discharge during any two-hour period (2-hour peak) exceed 972 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Minimum Self-Monitoring Requirements	
	Daily Avg. mg/l(lbs/day)	7-day Avg. mg/l	Daily Max. mg/l	Single Grab mg/l	Report Daily Avg. & Max. Measurement Frequency	Single Grab Sample Type
Flow, MGD	Report	N/A	Report	N/A	Five/week	Instantaneous
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (15)	10	20	30	One/week	Grab
Total Suspended Solids	5 (15)	10	20	30	One/week	Grab
Ammonia Nitrogen	2 (5.8)	5	10	15	One/week	Grab
Total Phosphorus*	0.15(**)(***) (0.44)	0.3	0.6	0.9	Daily*	Grab
Total Nitrogen*	6 (17.5)	N/A	N/A	N/A	One/week*	Grab
E.coli Bacteria, colonies per 100 ml	126****	N/A	N/A	394	Five/week	Grab

* Discharge limitations and monitoring requirements apply only when discharging to waters in the state.
** The daily average is calculated as a median value. For months when discharge occurs on two or less days, the discharge limitation is 0.3 mg/l.
*** The daily average of 0.15 mg/l is based on a long-term average of 0.10 mg/l.
**** Geometric mean.
† Refer to Other Requirements for Outfall 002 Section, pages 25 and 26, and Settlement Agreement Requirements, pages 27-29.

1. Upon the completion of construction of the 0.500 MGD membrane bioreactor (MBR) facility, a daily average flow not to exceed 0.150 MGD shall be diverted for subsurface drip irrigation via Outfall 001.

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit and before commingling with water in the state.

6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l and shall be monitored once per week by grab sample.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§ 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code §§ 5.103 and 5.105, and the Texas Health and Safety Code §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

   a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.

   b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

   c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

   d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

   e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.

   f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calender month.

2. Concentration Measurements

   a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

      i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

      ii. For all other wastewater treatment plants - When four samples are not available in a calender month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

   b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

   c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calender month.

   d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

      The "daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

e. Fecal coliform/*E.coli* bacteria concentration - the number of colonies of fecal coliform/*E. coli* bacteria per 100 milliliters effluent. The daily average fecal coliform/*E. coli* bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calender month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calender month. For any measurement of fecal coliform/*E. coli* bacteria equaling zero, a substituted value of one shall be made for input into either computation method. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calender week.

f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calender month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).

g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calender month.

3. Sample Type

a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.

6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved self-report form, that is signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

3. Records of Results

   a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

   b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

   c. Records of monitoring activities shall include the following:

      i. date, time and place of sample or measurement;
      ii. identity of individual who collected the sample or made the measurement.
      iii. date and time of analysis;
      iv. identity of the individual and laboratory who performed the analysis;
      v. the technique or method of analysis; and
      vi. the results of the analysis or measurement and quality assurance/quality control records.

      The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

   If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

   All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

   a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

i. Unauthorized discharges as defined in Permit Condition 2(g).
ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.
iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.

8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. One hundred micrograms per liter (100 µg/L);
ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. Five hundred micrograms per liter (500 µg/L);
ii. One milligram per liter (1 mg/L) for antimony;
iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants;

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and

c. For the purpose of this paragraph, adequate notice shall include information on:

i. The quality and quantity of effluent introduced into the POTW; and
ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

   a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

   b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

      i. Violation of any terms or conditions of this permit;
      ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

   c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

   a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

   b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

   c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

   d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

   e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

   f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

   g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.

   h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.

   i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal Clean Water Act, §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

3. Inspections and Entry

   a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.

   b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or

      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

   e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

   f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit

shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

   a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

   b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

   This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

   Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to Chapter 11 of the Texas Water Code.

8. Property Rights

   A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

   The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

    The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy.

    a. Each permittee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
       i. the permittee;
       ii. an entity (as that term is defined in 11 USC, §101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
       iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.

    b. This notification must indicate:
       i. the name of the permittee and the permit number(s);
       ii. the bankruptcy court in which the petition for bankruptcy was filed; and
       iii. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

   a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

   b. The permittee shall submit a closure plan for review and approval to the Land Application Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).

7. Documentation

   For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

   b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85 percent, unless otherwise authorized by this permit..

11. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:

a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Environmental Cleanup Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

i. Volume of waste and date(s) generated from treatment process;
ii. Volume of waste disposed of on-site or shipped off-site;
iii. Date(s) of disposal;
iv. Identity of hauler or transporter;
v. Location of disposal site; and
vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site or co-disposal landfill. **The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.

3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

B. Testing Requirements

1. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division and the Regional Director (MC Region 11) within 7 days after failing the TCLP Test.

   The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 11) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

Pollutant	Ceiling Concentration (milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC Section 312.82(a)(2)(A) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

b. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 -

i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and

v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;

iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 312.44.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

i. Sewage sludge shall be injected below the surface of the land.

ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

iii. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

ii. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test - once during the term of this permit

PCBs - once during the term of this permit

All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC Section 312.46(a)(1):

Amount of sewage sludge (*) metric tons per 365-day period	Monitoring Frequency
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) The amount of bulk sewage sludge applied to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC Section 312.7.

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (pounds per acre)
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

* Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.

2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.

3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.

4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:

   a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

   b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.

   c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

   a. The location, by street address, and specific latitude and longitude, of each land application site.

   b. The approximate time period bulk sewage sludge will be applied to the site.

   c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

E. Record keeping Requirements

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.

2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).

3. A description of how the vector attraction reduction requirements are met.

4. A description of how the management practices listed above in Section II.C are being met.

5. The following certification statement:

   "I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained.

The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.

2. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.

3. The number of acres in each site on which bulk sludge is applied.

4. The date and time sludge is applied to each site.

5. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.

6. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 1 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.

2. The frequency of monitoring listed in Section I.C. which applies to the permittee.

3. Toxicity Characteristic Leaching Procedure (TCLP) results.

4. Identity of hauler(s) and TCEQ transporter number.

5. PCB concentration in sludge in mg/kg.

6. Date(s) of disposal.

7. Owner of disposal site(s).

8. Texas Commission on Environmental Quality registration number, if applicable.

9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.

10. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.

11. Level of pathogen reduction achieved (Class A or Class B).

12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.

13. Vector attraction reduction alternative used as listed in Section I.B.4.

14. Annual sludge production in dry tons/year.

15. Amount of sludge land applied in dry tons/year.

16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form..

17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.

    a. The location, by street address, and specific latitude and longitude.

    b. The number of acres in each site on which bulk sewage sludge is applied.

    c. The date and time bulk sewage sludge is applied to each site.

    d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.

    e. The amount of sewage sludge (i.e., dry tons) applied to each site.

    The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.

B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a Municipal Solid Waste Landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

D. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division and the Regional Director (MC Region 11) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 11) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.

2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SPECIAL PROVISIONS FOR OUTFALL 001

1. This permit is granted subject to the policy of the Commission to encourage the development of areawide waste collection, treatment and disposal systems. The Commission reserves the right to amend this permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an areawide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such areawide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

2. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

   This Category C facility must be operated by a chief operator or an operator holding a Category C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility

3. The permittee shall maintain and operate the treatment facility in order to achieve optimum efficiency of treatment capability. This shall include required monitoring of effluent flow and quality as well as appropriate grounds and building maintenance.

4. Subsurface drip irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Tailwater control facilities shall be provided as necessary to prevent the discharge of any wastewater from the irrigated land.

5. Wastewater shall not be applied for subsurface drip irrigation when the ground is frozen or saturated.

6. Application rates to the subsurface drainfields shall not exceed 0.1 gallon per square foot per day. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the TCEQ and shall be maintained for at least three years.

7. The permittee shall obtain representative soil samples from the root zones of the disposal site and analyze the samples as outlined in the following paragraph.

   An annual analysis of a representative soil sample taken from the root zone of the irrigated site shall be made. Each soil boring shall be separated into three samples according to the following depth zones: 0 to 6 inches. 6 to 18 inches and 18 to 30 inches below the ground surface. Each zone shall be thoroughly mixed prior to being analyzed. Sampling procedures shall employ accepted techniques of soil science for obtaining representative analytical results. Analysis shall be performed for pH, total nitrogen, potassium, phosphorus and conductivity.

The permittee shall submit the results of the soil sample analyses to the TCEQ Regional Office (MC Region11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division during September of each year.

8. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

9. Adequate signs shall be erected stating that the irrigation water is from a non-potable water supply. Said signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message "DO NOT DRINK THE WATER" in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

10. Subsurface drip irrigation fixtures for the system shall be of such design that they cannot be operated by unauthorized personnel.

11. Permanent transmission lines shall be installed from the treatment facility and holding structure to each tract of land to be irrigated utilizing effluent.

12. The permittee shall comply with the requirements of 30 TAC Section 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC Section 309.13(e).

13. Wastewater shall not be applied to any rock outcrop with the subsurface disposal site, within 150 of all private water wells, and within the tributary setbacks as shown in Attachment A of the permit.

14. Drip lines shall be placed within the top 6 to 12 inches of the surface soils. There should be at least 12 inches of soil suitable for wastewater adsorption and root penetration beneath the drip lines. For areas in which emitters are placed less than 6 inches from the surface soils and do not have 12 inches of soil suitable for wastewater adsorption and root penetration beneath the drip lines, the permittee shall develop and implement a Soil Moisture Monitoring Plan. The Soil Moisture Monitoring Plan shall be submitted to the Groundwater Protection Team of the Water Quality Assessment Section (MC 150) prior to plant startup. Drip lines shall have a minimum of 3 inches suitable soil above the drip lines and 9 inches soil below the drip lines. However, the Executive Director may require additional soil, if warranted, as indicated in the Soil Moisture Monitoring Plan.

OTHER REQUIREMENTS FOR OUTFALL 002

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

   This Category C facility must be operated by a chief operator or an operator holding a Category A license or higher (See Attachment B). The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.

3. The permittee is hereby placed on notice that this permit may be reviewed by the TCEQ after the completion of any new intensive water quality survey on Segment No. 1427 of the Colorado River Basin and any subsequent updating of the water quality model for Segment No. 1427, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Section 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TCEQ Continuing Planning Process.

4. The permittee shall notify the TCEQ Regional Office (MC Region 11) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five (45) days prior to the completion of the new facilities.

5. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.

6. Prior to construction of the Interim and Final Phases of the treatment facility discharging via Outfall 002, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with the requirements in 30 TAC Section 217.6(c). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems. The permittee shall clearly show how the treatment system will meet the permitted effluent limitations required on Pages 2a through 2d of the permit.

7. The permittee shall comply with the requirements of 30 TAC Section 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC Section 309.13(e).

8. The facility is located on the Edwards Aquifer Contributing Zone, as mapped by the TCEQ, and is subject to 30 TAC Chapter 213, Subchapter B.

9. The permittee shall keep daily records of all effluent discharged from the wastewater treatment plant to Bear Creek; and if separately authorized under 30 TAC Chapter 210, the use of all reclaimed water. These records shall include, at a minimum the following information:

a. The volume of the discharge;
b. The weather conditions, i.e., temperature, precipitation or no precipitation.

These records shall be maintained on a monthly basis and shall be reported to the TCEQ Regional Office (MC Region 11) and the TCEQ Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

SETTLEMENT AGREEMENT REQUIREMENTS

The requirements of the *Settlement Agreement* that the Administrative Law Judges' recommended be added into the draft permit in their Revised Proposed Order(SOAH Docket 582-08-0202; TCEQ Docket No. 2007-1426-MWD) are included below. Some requirements have also been incorporated elsewhere in this permit. For consistency with the rest of this permit, the term "Applicant" below is interchangeable with "permittee," "Interim II Phase" below corresponds to Interim Phase of Outfall 002, and "Final Phase" below corresponds to Final Phase of Outfall 002.

1. All wastewater will be treated in Interim II and Final Phase using membrane bioreactor technology with denitrification to meet the discharge effluent limits of the Permit.

2. The Interim II Phase and Final Phase effluent limitations and monitoring requirements shall be as described in the Draft Permit with the addition of a total nitrogen limit of 6.0 mg/L, daily average. The total nitrogen limit shall only apply when Applicant is discharging to waters of the State. Total Nitrogen will be monitored, at least weekly, when discharging to waters of the State.

3. Applicant shall continue to dispose of 150,000 gallons per day of treated effluent via subsurface drip irrigation either under the existing land application authorization or pursuant to a Chapter 210 Beneficial Reuse Authorization and continue to use the moisture monitoring plan associated with existing drip irrigation field[1].

4. Applicant shall apply for a Chapter 210 Beneficial Reuse Authorization. Applicant will phase in the number of acres irrigated with treated wastewater and, prior to reaching capacity of the Final Phase, as described in the Permit, Applicant shall irrigate at least 201 acres with treated wastewater. Throughout the phase-in of acres irrigated, Applicant shall use sufficient irrigable land to apply effluent that is being generated at all times at a rate no higher than the rate required for applying the 350,000 gallons per day on 201 acres without causing or resulting in runoff from the irrigation acreage. Applicant shall install soil moisture monitors where necessary to determine soil saturation of those irrigation areas immediately adjacent to the creek's buffer zone in order to determine when irrigation areas are unsuitable for effluent irrigation. The amount and location of the soil moisture monitors shall be determined by the Applicant.

5. Applicant shall build and maintain a lined effluent storage pond with a capacity of at least 5,250,000 gallons, exclusive of required freeboard[2].

6. The daily discharge shall not exceed 350,000 gallons per day[3]. Applicant shall only discharge treated effluent into Bear Creek if:

    1. the land to be surface irrigated (as described in paragraph 4 above) is frozen or saturated and the effluent storage pond is full[4]; or

    2. when Bear Creek is flowing at a rate of at least 14 cfs measured at the USGS gauge on Bear

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[1] See Outfall 001.

[2] All storage ponds shall be lined in accordance with the requirements in 30 TAC Section 217.203. All storage ponds shall maintain a minimum of freeboard of two feet according to 30 TAC Chapter 217.

[3] See Outfall 002.

[4] The permittee shall maintain at the plant site a weekly record of the field conditions and pond level. These records shall be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

Creek. For purposes of this subparagraph, Bear Creek shall be deemed to be flowing at or above 14 cfs for 24 hours following any point in time when the USGS gauge (08158810) reads 14 cfs or higher.

7. During the Interim II Phase and Final Phases, the wastewater treatment plant shall be operated at all times by an operator holding a "Category A" wastewater operator license.

8. A study of instream conditions shall be conducted in accordance with the Workplan, attached as Attachment B.

9. Applicant shall use ultraviolet light disinfection in accordance with TCEQ requirements and in lieu of chlorination, but if a better disinfection technology becomes available and is agreed to by Applicant, by representatives of Protestants, and by TCEQ, the alternate technology can be employed.

10. In-Stream Monitoring[5]:

a. Background conditions: Instream monitoring for determining background conditions will occur on a monthly basis beginning within 60 days of Permit issuance and for at least one year prior to the commencement of the first discharge. This period will be considered the pre-discharge background period. Applicant will be responsible for monitoring during the first eighteen (18) months of the pre-discharge background period. Monitoring may be continued thereafter by representatives of the Protestants during this period. Direct discharge of any effluent terminates the background period.

b. Post-discharge monitoring: Post-discharge instream monitoring will commence after the first discharge of effluent into the creek by the Applicant. Applicant will be responsible for monitoring during the first eighteen (18) months of the post-discharge background period. Monitoring will be continued thereafter by representatives of the Protestants at their own cost.

c. Nothing in 10.a or 10.b should be construed as limiting the Protestants' ability to monitor at any time at their own cost.

d. Instream monitoring shall be conducted in accordance with the Workplan attached as Attachment B.

e. Interpretation of the results from instream monitoring shall be governed by the Workplan, attached as Attachment B.

11. Remedies:

If, on the basis of the interpretation of the instream monitoring as provided in Attachment B, the Workplan, significant differences (triggers) are caused by the Applicant's discharge of treated effluent, then the Applicant within 180 days of notification shall:

a. commence construction of and complete within a reasonable amount of time at least 1,750,000 gallons of additional effluent storage capacity[6]; or

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[5] See Attachment B.

[6] All storage ponds shall be lined in accordance with the requirements in 30 TAC Section 217.203. All storage ponds shall maintain a minimum of freeboard of two feet according to 30 TAC Chapter 217.

b. employ other measures to decrease the volume of effluent to be discharged to the creek on a continuing basis with the demonstrably equivalent effect of increasing storage by 1,750,000 gallons of effluent.

12. Applicant shall equip all lift stations receiving untreated effluent with automatic-on standby generator power.

13. Applicant shall utilize an overflow pond or other equivalent holding device[7] to handle any untreated or partially treated effluent. No partially treated effluent shall be discharged to Bear Creek.

14. The Applicant shall conduct weekly sampling for Total Nitrogen and turbidity in the effluent to determine the effectiveness and performance of the wastewater treatment plant. These monitoring data are to confirm plant performance and shall be provided to designated representatives of the Protestants on a monthly basis.

[7] All storage ponds shall be lined in accordance with the requirements in 30 TAC Section 217.203. All storage ponds shall maintain a minimum of freeboard of two feet according to 30 TAC Chapter 217.

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS FOR OUTFALL 002

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 (60 degrees Celsius) 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 shall there be discharges with pH lower than 5.0 standard units, 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 shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104 degrees Fahrenheit (40 degrees Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;

   f. Petroleum oil, nonbiodegradable 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 Clean Water Act, including any requirements established under 40 CFR Part 403.

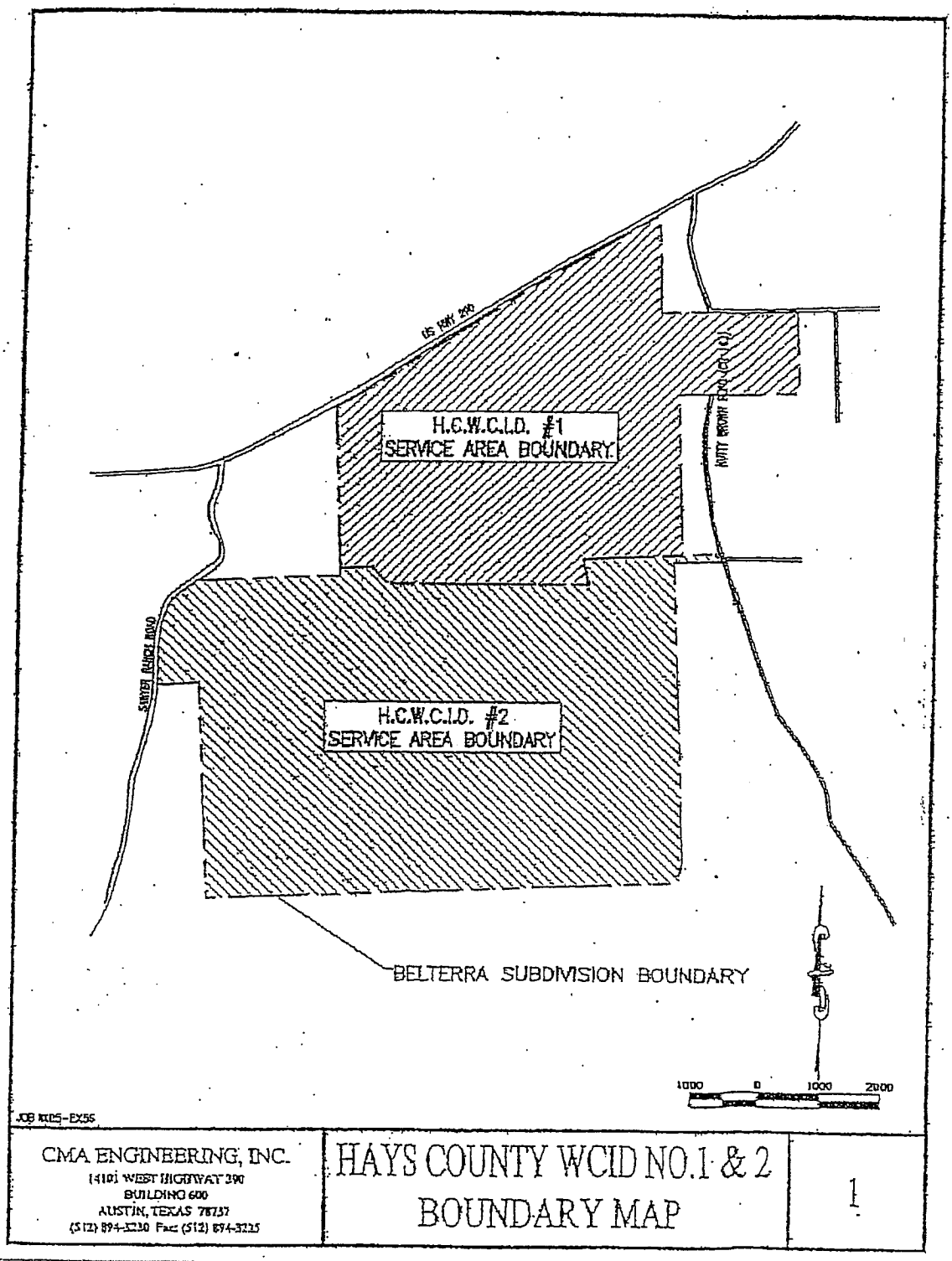
3. The permittee shall provide adequate notification to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division within 30 days subsequent to the permittee's knowledge of either of the following:

   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 Clean Water 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 the quality and quantity of effluent to be introduced into the treatment works, and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Attachment A



Attachment B

WORKPLAN

Purpose:

The purpose of the monitoring study is to determine whether nutrient limitations and management of irrigation storage versus discharge from the HCWCID1 WWTP will prevent the growth of excessive algae and aquatic vegetation in receiving waters as provided by Texas Commission on Environmental Quality (TCEQ) regulations at 30 TAC 307.4(e). The study includes triggers from the monitoring data to determine whether the Settlement Agreement remedies must be instituted.

Procedures:

The permittee and the settling parties or their designated representative shall prepare a Quality Assurance Project Plan (QAPP) including sampling and analysis protocols. Once the QAPP has been approved by the permittee and the settling parties or their designated representatives, the permitee, at permittee's expense, shall conduct the monitoring study according to the QAPP.

Changes in Scope:

Changes may be made to the QAPP upon approval of the permittee and settlement parties to address changes in objectives determined necessary or appropriate as site-specific information becomes available. This includes the elimination of data collection activities if it can be demonstrated that the additional effort will not significantly improve the value of the study. These changes may also include additional parameters if found necessary from TCEQ studies on transport of nutrients in the Barton Springs segment of the Edwards aquifer or changes in triggers or covariates necessary due to changing watershed conditions.

Study Scope:

The monitoring study will evaluate Bear Creek from the Belterra property boundary to a point just upstream of the Barton Springs segment of the Edwards Aquifer recharge zone boundary using two primary locations in addition to the wastewater outfall. The study will include field data collection and laboratory analysis capable of determining if the discharge is degrading Bear Creek by increasing algae growth due to effluent nutrients. Impacts from intermittent discharge are inherently difficult to adequately determine; therefore, the study analysis incorporates statistics to reflect the overall change in distribution of data and the biological significance of such changes.

Field Data Collection:

Field data collection and monitoring activities are to be conducted in accordance with the Guidance for Assessing Texas Surface and Finished Drinking Water Quality Data (TCEQ 2004) and the Surface Water Quality Monitoring Procedures Manual (TCEQ 2005). Monitoring locations will be identified by map in the QAPP. The sampling design and monitoring schedule is indicated in Table 1.

Table 1 – Sampling Design and Monitoring Schedule

	Monitoring Parameter	Location	Frequency	Trigger Locations	Notes
1	Diel dissolved oxygen (Avg, Range)	Davis Pond	Continuous	Davis Pond	Sondes serviced and redeployed monthly
2	Continuous Chl. A (ug/L, Turner probe)	Davis Pond	Continuous	Davis Pond	Sondes serviced and redeployed monthly
3	Benthic Periphyton (mg/m2)	Above Davis riffle	Monthly Grab	Above Davis Riffle	USGS NAWQ protocol
4	Macroalge percent cover (transects)	Above Davis riffle	Monthly Grab	Above Davis Riffle	USGS NAWQ protocol
5	Chlorophyl a (mg/L, water column)	Davis pond	Monthly Grab	N/A	Sampled monthly during baseflow on a priori schedule
6	NH3-N	Both sites	Monthly Grab	N/A	Sampled monthly during baseflow on a priori schedule
7	NO3-N	Both sites	Monthly Grab	Above Davis Riffle	Sampled monthly during baseflow on a priori schedule
8	TKN	Both sites	Monthly Grab	N/A	Sampled monthly during baseflow on a priori schedule
9	OP	Both sites	Monthly Grab	N/A	Sampled monthly during baseflow on a priori schedule
10	TP	All three sites	Monthly Grab	Above Davis Riffle	Sampled monthly during baseflow on a priori schedule
	Shade = Trigger variables required to be monitored by HCWCID 1 as part of this settlement agreement. Other parameters are used for interpretation only.				

Algal Monitoring

Free floating algae in the water column algae (phytoplankton) will be evaluated by non-filtered chlorophyll-a sampled from the water column. Benthic algae density estimates will be obtained at each sampling station in the receiving stream, using two components. The first component will be benthic algae density by measurement of chlorophyll-a from instream rock scrapings and laboratory analysis. This method is a standard procedure used by USGS in NAWQA sampling and will be reported as mg/m^2 . The second component will involve the establishment of a permanent transect at each site, which will be visually examined during each sampling visit to generate an estimate of macroalgae density on the streambed. Using a tape measure, the portion of transect occupied by macroalgae will be divided by the total width of the transect to derive a percent coverage estimate.

Laboratory Analysis:

Standard operating procedures for laboratory analysis are available at the contract laboratory selected for this monitoring. Methods for laboratory analyses shall be consistent with TCEQ acceptable standard methods.

Data Interpretation:

The interpretation will be based on statistical comparison between pre-discharge and post-discharge values and ecologically relevant criteria for algae impacts and nutrient concentrations. Variables for triggers and calculations are specified by site including two sites: Riffle above Davis Pond, and Davis Pond. If any of the triggers by site are met the overall trigger for remediation is assumed to be met on an annual reporting interval. Under these conditions, data verification by technical representatives of parties will be made before submitting the annual report three months after the end of the annual monitoring period. If the data indicating the overall trigger is met is found to be adequate without mitigating circumstances then remedies will be initiated in accordance with the settlement agreement. If the trigger is found to be an anomalous event, monitoring will continue according to the workplan. If the parties' technical representatives disagree on the validity of the trigger, the issue will be submitted to mediation.

Analysis methods include Analysis of Variance with covariates (ANCOVA) and Chi-Square Tests. The significance level will be $\alpha = 0.05$. A minimum of 8 samples is needed for analysis. Reanalysis will occur after 6 months to one year. Reporting is done annually. Baseflow is considered to be flow with three prior days of no rainfall over 0.1 inches.

Trend analysis will be performed on background monitoring period data to determine if non discharge conditions are changing. If regression analyses indicate statistically significant trends are occurring before any discharge, these results will be considered by parameter in the other analysis comparisons evaluated for trigger conditions to be met. All data will be adjusted by the subtracting the size of expected increase for the date of the sample from the sample concentrations. This will partially compensate for any non-point source increases in the watershed that influence the data. Any additional compensation for non-point source discharge increases in data analysis will be considered through mediation. In addition dissolved oxygen levels were included on the basis that they will be impacted by nutrient values in the intermittent discharge and are ecologically relevant in Davis Pond .

Action Trigger Dynamics

For any one of the two sites, a combination of two triggers must be met, with the following specifications:

Riffle above Davis Pond – Total phosphorus OR NO3-N OR chlorophyll a from scrapings OR percent cover of macro algae from transects.
Davis Pond – Both water column Chl. a AND dissolved oxygen criteria.

Riffle above Davis Pond

Trigger variables: TP, NO3-N, Chlorophyll a (benthic scrapings), percent cover of macro algae (transects)

TP/NO3-N
Test for significance: ANCOVA on means before and after. Covariates = flow and water temperature
TP Trigger :
Significant increase in baseflow TP and TP is 3 times higher than background baseflow AND TP > 0.025 mg/L (mesotrophic boundary in streams).
NO3-N Trigger :
Significant increase in baseflow NO3-N and NO3-N is 2 times higher than background baseflow and NO3-N>0.7 mg/L (mesotrophic boundary in streams).

Chlorophyll a (benthic scraping)

Test for significance: ANCOVA on means before and after. Covariates = flow and water temperature.

Chi square test for the percent of the samples which fall in the higher trophic level than background (i.e from Oligotrophic to Mesotrophic > 30 mg/m2, and >90mg/m2 for Mesotrophic to Eutrophic, Dodds et al 1998).

Chlorophyll a Trigger: significant increase and significant change in trophic status.

Percent cover of macro algae (transects).
Test for significance: ANCOVA on means before and after. Covariates = flow and water temperature.

Algae Cover Trigger: significant difference and mean increases by 35%.

Davis Pond

Trigger variables: DO, Chlorophyll a (water column).

Chlorophyll a (water column) (Datasonde).

Test for significance: ANCOVA on means before and after. Covariates = flow and water temperature.

Chi square test for the percent of the samples which fall in the Oligotrophic category before and after (< 4 ug/L is Oligotrophic, 4 – 10 mesotrophic, 10-25 eutrophic, Olem 1990)

Chlorophyll a Trigger: significant increase and significant change in percent which are oligotrophic.

DO (mean, range) – daily (datasonde)
Test for significance: ANCOVA on means before and after. Covariates = flow and water temperature

DO Triggers (either):
mean: The mean DO after discharges begin is less than 5 mg/L and is significantly different from the mean DO before discharges began.

DO events: Significant change in number of episodes when DO is <2 mg/L for more than 8 hours out of a 24-hour day.

Reporting:

Annual written reports will be provided to the parties to the settlement agreement including raw data, statistical analyses, and results of trigger comparisons. Data will be available to parties of the settlement agreement at any time upon request.