State Office of Administrative Hearings

Kristofer S. Monson
Chief Administrative Law Judge

November 24, 2022

Mary Smith
General Counsel
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 4225
Austin Texas 78753

VIA E-FILE TEXAS

Re: **SOAH Docket No. 582-22-1222; TCEQ Docket No. 2021-0999-MWD; Application by City of Liberty Hill for Renewal of Texas Pollutant Discharge Elimination System Permit No. WQ0014477001**

Dear Ms. Smith:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Attached are copies of the Proposal for Decision and Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than Monday, November 14, 2022. Any replies to exceptions or briefs must be filed in the same manner no later than Monday, November 28, 2022.

This matter has been designated **TCEQ Docket No. 2021-0999-MWD; SOAH Docket No. 582-22-1222**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ

electronically at http://www14.tceq.texas.gov/epic/eFiling/ or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Meitra Farhadi
Administrative Law Judge

Rachelle Nicolette Robles
Administrative Law Judge

Attachments

cc: Mailing List

SOAH Docket No. 582-22-1222 **Suffix: TCEQ**

BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPLICATION BY CITY OF LIBERTY HILL FOR RENEWAL OF TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. WQ0014477001

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BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPLICATION BY CITY OF LIBERTY HILL FOR RENEWAL OF TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. WQ0014477001

PROPOSAL FOR DECISION

On September 5, 2018, the City of Liberty Hill (City or Applicant) filed an application (Application) with the Texas Commission on Environmental Quality (TCEQ or Commission) for renewal of its Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0014477001 authorizing the discharge of treated domestic wastewater at an annual average flow not to exceed 4,000,000 gallons per day from the treatment plant located approximately 8,800 feet southeast of the intersection of U.S. Highway 29 and U.S. Highway 183, in Williamson County, Texas 78641 (Facility) into the South Fork San Gabriel River in Segment No. 1250 of the Brazos River Basin. The designated uses for Segment No. 1250 are primary

contact recreation 1, public water supply, aquifer protection, and high aquatic life use.

On March 12, 2020, the Executive Director (ED) of the TCEQ declared the Application technically complete and issued a draft permit (Draft Permit). On October 6, 2021, the Commission considered the hearing requests and requests for reconsideration, and the matter was then referred to the State Office Administrative Hearings (SOAH) to conduct a contested case hearing on ten issues.

Having considered the evidence relating to these ten issues in the context of the governing law, the Administrative Law Judges (ALJs) recommend approval of the Draft Permit, with the following modifications:

- An effluent limit of 0.05 milligrams per liter (mg/L) for total phosphorous (TP) for all phases;
- A requirement for both the operator and third-party operator to have a Class A license;
- Requiring a nutrient sampling plan mirroring language in the 2004 permit, which would conduct a study of nutrients and algal growth in the receiving stream;[1] and
- Public posting and notification of Monitoring and Reporting Requirements Nos. 1 and 7a on a public website dedicated to providing information about the wastewater treatment plant and discharge.

[1] *See* Ex. SM-24 at 26 (Other Requirement No. 10).

I. INTRODUCTION

A. Procedural History

Because this Application is for a renewal of an existing permit with a minor amendment, the permit history is useful. In 2003, the Lower Colorado River Authority and the Brazos River Authority applied for the original wastewater permit that is at issue in this case.[2] The TCEQ recognized that the South Fork San Gabriel River, the waterbody into which the wastewater plant would discharge, was naturally low in nutrients and sensitive to nutrient enrichment.[3] At that time, Staff noted that there appeared to be the potential for degradation with the proposed effluent set, and recommended an effluent limit of 0.5 mg/L TP.[4] In addition, the TCEQ included a requirement that the permittee conduct a study of nutrients and algal growth in the receiving stream prior to discharge, and for at least two years after discharge had commenced.[5] Results of the study were to be used in evaluating the effectiveness of the discharge limitations and, if warranted, could lead to more stringent permit controls in future permit actions.[6]

TCEQ received the Application on September 5, 2018, and declared it administratively complete on November 9, 2018. The ED completed technical review of the Application on March 12, 2020, and prepared the Draft Permit that, if

[2] Exs. SM-24 (Original TPDES Permit No. WQ0014477001); SM-7 (Standards Team Permit Review checklist).

[3] Ex. SM-7.

[4] Exs. SM-7, SM-9a (May 2004 Standards Memo); Tr. at 645-46, 650.

[5] Ex. SM-24 at 26 ("Other Requirements" item #10).

[6] Ex. SM-9a at 2.

approved, would establish the conditions under which the Facility must operate. A Notice of Receipt of Application and Intent to Obtain a Water Quality Permit was published on December 2, 2018. The combined Notice of Application and Preliminary Decision and Notice of Public Meeting, was published on July 15, 2020, in the *Williamson County Sun*. A public meeting was held via videoconferencing on August 17, 2020, and the public comment period closed on the same date.

The ED filed its Response to Comments with the Chief Clerk on June 15, 2021. Following an open meeting held on October 6, 2021, the Commission by Interim Order granted requests for a contested-case hearing, referred ten issues to SOAH, and established a 180-day deadline from the date of the preliminary hearing for SOAH to issue the proposal for decision (PFD). The preliminary hearing convened via Zoom videoconference on March 28, 2022. At the preliminary hearing, ALJ Meitra Farhadi admitted Exhibits AR-1 through AR-7 as the administrative record, which had previously been filed with SOAH; determined that SOAH had jurisdiction; named parties; and set the procedural schedule. The following parties, represented by counsel, appeared and were admitted as parties: Applicant; the ED; Office of Public Interest Counsel (OPIC); and Stephanie Morris. Self-represented individuals admitted as parties were: Daniel Morris, Jeff Wiles, Jon and Carolyn Ahrens, David and Louise Bunnell, Gerald and Susan Harkins, Frank and LaWann Tull, Andrew and Elizabeth Engelke, Pamela Sylvest, Joanne and John Swanson, Tom and Valerie Erikson, Carolyn and Donnie Dixon, and Sharon, Terry Ira, and Jackson Cassady. Subsequently, all of the self-represented individuals except for

Daniel Morris and Jeff Wiles hired counsel and were represented collectively as the "Bunnell Protestants." Daniel Morris withdrew as a party in advance of the hearing on the merits, and Jeff Wiles did not participate in the hearing on the merits. By agreement, the 180-day deadline for the PFD was extended to October 24, 2022, to accommodate the parties' desired procedural schedule.

On May 20, 2022, Protestant Stephanie Morris filed a motion to certify to the Commissioners a question, pursuant to 30 Texas Administrative Code section 80.131, as to whether an antidegradation analysis under 30 Texas Administrative Code section 307.5 was required for the Applicant's permit renewal that is the subject of this docket. After briefing by all interested parties, the ALJ denied the motion by order dated June 15, 2022.

A prehearing conference was convened by ALJs Farhadi and Rachelle Robles via Zoom videoconference on July 13, 2022, where pending motions and objections were ruled upon. The hearing on the merits was convened via Zoom videoconference on July 20, 2022, and concluded on July 22, 2022. The record ultimately closed on August 23, 2022, the date on which the last post-hearing written arguments were filed.

B. Proposed Facility and Draft Permit Conditions

The Application is for the renewal of an existing permit with a minor amendment to add an interim flow phase of 2.0 million gallons per day (MGD).[7]

[7] Administrative Record (AR)-5, Tab-C (Draft Permit); Ex. APP-3 (Aaron Laughlin direct) at 8.

The Draft Permit would authorize the discharge of treated domestic wastewater effluent from Applicant's Facility, which is located approximately 8,800 feet southeast of the intersection of U.S. Highway 29 and U.S. Highway 183, in Williamson County, Texas 78641.[8] The treated effluent will be discharged into the South Fork San Gabriel River (the River) in Segment No. 1250 of the Brazos River Basin.[9] The designated uses for Segment No. 1250 are primary contact recreation 1, high aquatic life use, public water supply, and aquifer protection.[10]

The existing 1.2 MGD wastewater treatment plant consists of a 0.4 MGD sequencing batch reactor (SBR) plant, and a 0.8 MGD membrane bio-reactor (MBR) plant. The 0.4 MGD SBR plant includes a mechanical bar screen, two SBR basins and one digester basin, an alum feed system for phosphorus removal, a post-equalization tank, cloth media filtration, UV disinfection, and step-aeration prior to discharge. The 0.8 MGD MBR plant includes a package headworks unit with screening, grit, and grease removal, an anaerobic tank, an anoxic tank, a pre-aeration tank, and two MBR tanks. The MBR plant uses the same alum feed system, UV disinfection, and step-aeration treatment units as the SBR plant. The plant also has a sludge storage tank and a belt press sludge processing unit.[11]

For the proposed interim 2.0 MGD phase, the 0.4 MGD SBR plant will be decommissioned. A 1.2 MGD MBR plant identical to the Phase I 0.8 MGD MBR plant will be built to reach the Phase II capacity of 2.0 MGD total, consisting of a

[8] AR-5, Tab-C.

[9] AR-5, Tab-C; Ex. ED-JL-1 (Jenna Lueg direct) at 4.

[10] 30 Tex. Admin. Code § 307.10(1); Ex. ED-JL-1 at 4.

[11] AR-6, Tab-D (Application) at 00018.

total of two anaerobic tanks, two anoxic tanks, two pre-aeration tanks, and five MBR tanks.[12]

The proposed final 4.0 MGD phase will consist of a new 0.8 MGD MBR facility similar to, and in addition to, the existing 0.8 MGD MBR facility constructed for Phase I. There will also be a new 1.2 MGD MBR facility in addition to, and similar to, the 1.2 MGD MBR facility added for Phase II. In sum, there will be a total of two 0.8 MGD treatment trains and two 1.2 MGD treatment trains.[13] The effluent set proposed for the Draft Permit in all phases is 5/5/2/0.15, meaning 5 mg/L five-day carbonaceous biochemical oxygen demand (CBOD5), 5 mg/L total suspended solids (TSS), 2 mg/L ammonia-nitrogen (NH3-N), and 0.15 mg/L TP respectively.[14]

C. Referred Issues

As set forth in the Interim Order, the ten issues referred by TCEQ to SOAH are:

A. Whether the draft permit is protective of water quality, groundwater, and uses of the receiving waters of the South Fork San Gabriel River in accordance with the Texas Surface Water Quality Standards, including recreational use and with consideration of the maximum volume of the proposed discharge;

[12] AR-6, Tab-D at 00160.

[13] AR-6, Tab-D at 00148.

[14] AR-5, Tab-C at 2, 2a, 2b, 2c. The Application was first submitted with a final phase TP limit of 0.5 mg/L. Tr. at 473.

B. Whether the draft permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife;

C. Whether the draft permit adequately addresses nuisance conditions, including odor, in accordance with 30 TAC § 309.13(e);

D. Whether the draft permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 TAC § 307.4, including aquatic nutrient limitations;

E. Whether the draft permit should be denied or altered based on the Applicant's compliance history;

F. Whether the draft permit should be denied or altered in consideration of the need for the facility in accordance with Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options;

G. Whether the draft permit complies with applicable antidegradation requirements;

H. Whether the draft permit requires adequate licensing requirements for the operator of the facility and adequate requirements regarding operator supervision;

I. Whether the draft permit includes adequate provisions to protect the requesters' use and enjoyment of their property; and

J. Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.[15]

[15] Administrative Record (AR) Tab A.

Each of these issues will be analyzed in Part III of this PFD.

D. Burdens of Proof and Production

Applicant, as the moving party, bears the burden of proof by a preponderance of the evidence.[16] The Application was filed after September 1, 2015, and the TCEQ referred it under Texas Water Code section 5.556, which governs referral of environmental permitting cases to SOAH based on a request for a contested case hearing.[17] Therefore, this case is subject to Texas Government Code section 2003.047(i-1)-(i-3),[18] which provides:

> (i-1) In a contested case regarding a permit application referred under Section 5.556 . . . [of the] Water Code, the filing with [SOAH] of the application, the draft permit prepared by the executive director of the commission, the preliminary decision issued by the executive director, and other sufficient supporting documentation in the administrative record of the permit application establishes a prima facie demonstration that:
>
> (1) the draft permit meets all state and federal legal and technical requirements; and
>
> (2) a permit, if issued consistent with the draft permit, would protect human health and safety, the environment, and physical property.
>
> (i-2) A party may rebut a demonstration under Subsection (i-1) by presenting evidence that:

[16] 30 Tex. Admin. Code § 80.17(a); 1 Tex. Admin. Code § 155.427.

[17] Tex. Water Code §§ 5.551(a), .556.

[18] Acts 2015, 84th Leg., R.S., ch. 116 (S.B. 709), §§ 1 and 5, eff. Sept. 1, 2015.

> (1) relates to . . . an issue included in a list submitted under Subsection (e) in connection with a matter referred under Section 5.556, Water Code; and
>
> (2) demonstrates that one or more provisions in the draft permit violate a specifically applicable state or federal requirement.
>
> (i-3) If in accordance with Subsection (i-2) a party rebuts a presumption established under Subsection (i-1), the applicant and the executive director may present additional evidence to support the draft permit.[19]

Although this law creates a presumption, sets up a method for rebutting that presumption, and shifts the burden of production on the rebuttal, it does not change the underlying burden of proof. The burden of proof remains with the Applicant to establish by a preponderance of the evidence that the Application would satisfy applicable requirements and that a permit, if issued consistent with the Draft Permit, would protect human health and safety, the environment, and physical property.[20]

In this case, the Application, the Draft Permit, and the other materials listed in Texas Government Code section 2003.047(i-1), which are collectively referred to as the "Prima Facie Demonstration," were offered and admitted into the record at the preliminary hearing.[21] As discussed below, the prima facie demonstration has been rebutted on the majority of issues referred to hearing and the Applicant

[19] The Commission has implemented Texas Government Code section 2003.047 by adopting 30 Texas Administrative Code section 80.17.

[20] 30 Tex. Admin. Code § 80.17(a), (c).

[21] *See* AR-1 – AR-7.

maintains the burden of proof by a preponderance of the evidence on those issues as discussed herein.

II. APPLICABLE LAW

Chapter 26 of the Texas Water Code requires a person who seeks to discharge wastewater into water in the State to file an application with the TCEQ.[22] Application filing requirements are contained in 30 Texas Administrative Code, chapter 305, subchapter C. Once an application is filed, staff of the TCEQ (Staff) reviews the application in accordance with 30 Texas Administrative Code chapter 281.[23] Based on a technical review, Staff prepares a draft permit that is to be consistent with rules promulgated by the federal Environmental Protection Agency (EPA) and TCEQ, along with a technical summary that discusses the application facts and significant factual, legal, methodological, and policy questions considered while preparing the draft permit.[24]

A domestic wastewater treatment facility in Texas is subject to wastewater discharge permit requirements.[25] The TCEQ's standard permit requirements are contained in 30 Texas Administrative Code, chapter 305, subchapter F, which the ED has adapted specifically for use in wastewater discharge permits.

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[22] Tex. Water Code §§ 26.027, 121.

[23] 30 Tex. Admin. Code § 281.2(2).

[24] 30 Tex. Admin. Code § 281.21(b)-(c).

[25] Tex. Water Code ch. 26; *see, e.g.*, 30 Tex. Admin. Code chs. 217 (applying to domestic wastewater systems), 305, 307 (applying to all wastewater-discharge permits), 319.

All wastewater discharge permits are also subject to regulations found in 30 Texas Administrative Code, chapter 319, which require the permittee to monitor its effluent and report the results as required in the permit.

Further, TCEQ has adopted water-quality standards applicable to wastewater discharges in accordance with section 303 of the Clean Water Act and section 26.023 of the Texas Water Code. The latter provision directs TCEQ "by rule [to] set water quality standards for the water in this state" and provides that it "has the sole and exclusive authority" to do so.[26] These standards, known as the Texas Surface Water Quality Standards (TSWQS), are found in 30 Texas Administrative Code, chapter 307.

Deference to an agency's interpretation of a rule that addresses a matter peculiar to the agency's expertise is appropriate, but deference should not be made to an administrative interpretation that is "plainly erroneous or inconsistent with the regulation."[27] In construing an agency's rule, a court's primary objective is to give effect to the agency's intent.[28]

The TSWQS and other law specifically applicable to the ten issues referred by the Commission will be discussed below.

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[26] Tex. Water Code § 26.023.

[27] *Public Util. Comm'n of Tex. v. Gulf States Utils. Co.*, 809 S.W.2d 201, 207 (Tex. 1991).

[28] *Lewis v. Jacksonville Bldg. & Loan Ass'n,* 540 S.W.2d 307, 310 (Tex. 1976).

III. ANALYSIS OF REFERRED ISSUES

A. WATER QUALITY STANDARDS (ISSUES A, D, AND G)

1. Whether the draft permit is protective of water quality, groundwater, and uses of the receiving waters of the South Fork San Gabriel River in accordance with the Texas Surface Water Quality Standards, including recreational use and with consideration of the maximum volume of the proposed discharge (Referred Issue A)

a) Background

The Facility's proposed discharge is subject to the TSWQS. The purpose of the TSWQS is "to maintain the quality of water in the state consistent with public health and enjoyment, propagation and protection of terrestrial and aquatic life."[29] The TSWQS identify appropriate uses for the state's surface waters (e.g., aquatic life, recreation, and public water supply) and establish narrative and numerical water quality standards to protect those uses.

The TCEQ has standard procedures for implementing the TSWQS, referred to as the Implementation Procedures (IPs), which are approved by the EPA.[30] The TSWQS and IPs are used to set permit limits for wastewater discharges and other activities that may have an effect on water quality.

[29] 30 Tex. Admin. Code § 307.1.

[30] 30 Tex. Admin. Code § 307.2(e); Ex. ED-JL-3 ("Procedures to Implement the Texas Surface Water Quality Standards (RG-194)"(IPs)).

The TSWQS also require that proposed wastewater discharges undergo an antidegradation review, which is designed to ensure that standards for protecting existing uses and water quality are met.[31] The antidegradation review process for TPDES permits is described in the IPs.[32] Though the antidegradation policy is among the TSWQS, it is addressed later in the PFD (Section III. A. 3.).

(i) Segment 1250

As previously described, the Draft Permit would authorize discharge into the River, which is designated by TCEQ as Segment 1250 of the Brazos River Basin.[33] The designated uses for Segment No. 1250 are primary contact recreation 1, public water supply, aquifer protection, and high aquatic life use.[34] The River is an oligotrophic stream, characteristic of the Texas Hill Country.[35] It is naturally low in nutrients, such as nitrogen and phosphorus, and because of this, has limited aquatic vegetation.[36]

Upstream of the outfall where the river is not impacted by the City's effluent, there is very little filamentous algae.[37] In its natural state, it has clear water

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[31] 30 Tex. Admin. Code § 307.5.

[32] 30 Tex. Admin. Code § 307.5(c)(1)(A); Ex. ED-JL-3 at 55-69.

[33] AR-5, Tab-C.

[34] AR-5, Tab-C; Ex. ED-JL-1 at 4; Tr. at 388. "Primary contact recreation 1" means "[a]ctivities that are presumed to involve a significant risk of ingestion of water (e.g., wading by children, swimming . . . .)" 30 Tex. Admin. Code § 307.3(51).

[35] Ex. SM-Ross at 11-12 (An oligotrophic stream has high quality, clear water, high dissolved oxygen, and excellent aquatic animal habitat, while eutrophic streams are high in nutrients and algae and are generally murky and have lower dissolved oxygen. Mesotrophic streams have water quality between the two.).

[36] Ex. SM-King at 29.

[37] Tr. at 178-79; Exs. SM-King at 18; SM-Morris-2 at 33, 36, 43, 45, and 48; and SM-Morris at 13.

flowing over a white limestone bottom.[38] Its flow is often low, and it has almost no flow during the hottest, driest parts of the year.[39] There is a thin layer of chalky-white sediment on the riverbed, composed of calcium carbonate precipitates that are common in low nutrient Hill Country streams.[40] There are also "golden-brown diatoms and other native, microscopic algae and microbes that form a thin layer on the stream bottom."[41]

(ii) Standards

The numerical criteria for Segment 1250 require dissolved oxygen (DO) concentration to be maintained with a mean of 5.0 mg/L and a minimum of 3.0 mg/L.[42] During spring spawning months, a higher dissolved oxygen standard of 5.5 mg/L on average and 4.5 mg/L minimum must be maintained.[43] DO is "the amount of free molecular oxygen dissolved in water, which typically enters a water body from the atmosphere and aquatic plant photosynthesis."[44] It is "a primary indicator of the general biologic health of a water body and is essential to the survival of many forms of aquatic life."[45]

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[38] Ex. SM-King at 29.

[39] Ex. SM-King at 29.

[40] Ex. SM-King at 25.

[41] Ex. SM-King at 29.

[42] 30 Tex. Admin. Code § 307.10, Appendix A; Tr. at 635.

[43] 30 Tex. Admin. Code § 307.10, Appendix A; Tr. at 635.

[44] Ex. ED-JM-1 (James Michalk prefiled) at 4.

[45] Ex. ED-JM-1 at 4.

Numerical stream standards for Segment 1250 are codified in 30 Texas Administrative Code section 307.10(1) and include total dissolved solids (TDS), chloride (Cl), and sulfate standards of 350 mg/L, 50 mg/L, and 50 mg/L.[46]

Water quality standards are incorporated into permits via the effluent limitations.[47] The proposed Draft Permit effluent concentration limitations for both the Interim and Final Phases are 5.0 mg/L CBOD5, 5.0 mg/L TSS, 2.0 mg/L NH3-N, 16.6 mg/L nitrate as nitrogen, 0.15 mg/L TP, and 5.0 mg/L (minimum) DO.[48] Other Requirement no. 9 in the Draft Permit requires the City to conduct a TDS, Cl, and sulfate source identification and reduction study.[49] The Draft Permit includes an interim phase during which the annual average flow of effluent must not exceed 2.0 MGD and a final phase where the annual average flow of effluent must not exceed 4.0 MGD.[50]

The IPs tie the effluent limit for TP to reasonably achievable technology-based (RAT) limits. When screening indicates that a reduction of effluent TP is needed, an effluent limit should be recommended based on the sensitivity of the site and RAT limits.[51]

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[46] 30 Tex. Admin. Code § 307.10, Appendix A.

[47] Ex. APP-1 at 16.

[48] AR-5, Tab-C; Ex. ED-AM-1 (Alfonso Martinez prefiled) at 6.

[49] AR-5, Tab-C at 38.

[50] AR-5, Tab-C.

[51] Ex. ED-JL-3 at 29.

The IPs further provide that considerations for nutrient impacts should focus on TP rather than nitrogen for a number of reasons, including that less data on total nitrogen (TN) has been collected in Texas reservoirs, streams, and rivers; and available waste treatment technologies make reducing phosphorus more effective than reducing nitrogen as a means of limiting algal production.[52] However, the IPs go on to state that effluent limits for TN can be considered in situations when existing or projected nitrogen levels would result in the growth of nuisance aquatic vegetation.[53]

(iii) Modeling

A DO model is a mathematical representation of a surface water aquatic environment that typically includes the major processes that consume and contribute to DO in a water body. It is used to predict water quality conditions that would occur under a given set of discharge effluent limits and the background, ambient environmental conditions.[54] TCEQ uses the QUAL-TX model to determine whether or not the stream segment will meet the DO criteria.[55] QUAL-TX is a steady-state model that does not take into account any fluctuations in DO throughout the day.[56] It is not used for modeling nutrients or evaluating the potential impacts of nutrients on a water body.[57]

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[52] Ex. ED-JL-3 at 29-30.

[53] Ex. ED-JL-3 at 30.

[54] Ex. ED-JM-1 at 4-5; Tr. at 656.

[55] Ex. ED-JM-1 at 8.

[56] Tr. at 664.

[57] Ex. ED-JM-1 at 8-9.

The primary constituents of concern in a DO modeling analysis are those that would have a direct impact on DO levels in a water body—biochemical oxygen demand (BOD), carbonaceous biochemical oxygen demand (CBOD), NH3-N, and the DO concentration in the discharge itself.[58] CBOD5 measures how much DO decreases over a 5-day period under specific defined conditions.[59] Levels of the oxygen-demanding constituents (BOD, CBOD, and NH3-N) typically have a more significant and prolonged downstream impact than the effluent's DO concentration, which tends to have a more immediate and localized impact.[60] Concentrations of nutrients, specifically phosphorus and nitrogen other than NH3-N, may represent precursors of NH3-N or potential indirect impacts on DO if they have the potential to increase downstream algae levels to a degree that could lead to large diurnal swings in DO concentrations.[61]

Water Quality Analysis Simulation Program (WASP) is a water quality model that has been developed by the EPA. It is specifically designed to predict, among other things, algae responses to nutrient loads.[62] The City of Austin implemented a calibrated WASP model for about 2.75 miles of the River, including downstream of the outfall.[63]

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[58] Ex. ED-JM-1 at 13.

[59] Ex. ED-JM-1 at 14.

[60] Ex. ED-JM-1 at 14.

[61] Ex. ED-JM-1 at 14.

[62] Tr. at 259; Ex. SM-Ross-15 at 2.

[63] Ex. SM-Ross at 25.

b) Applicant's and the ED's Evidence and Argument

The ED takes the position that if the Applicant operates the Facility in accordance with the Draft Permit's terms, the Draft Permit would be protective of water quality and the existing uses of the receiving waters, including protection of aquatic and terrestrial wildlife.[64]

ED witness Jenna Lueg, an Aquatic Scientist, evaluated the water quality criteria associated with the uses of the River to ensure the proposed discharge will not violate surface water quality standards.[65] Ms. Lueg added the effluent limits to the Draft Permit for it to meet both the numerical and narrative water quality standards. She testified that there are no numeric criteria for TP for the River; and while she reviewed several guidance documents and the IPs, none of them say what the TP limit should be.[66] She did not review any of the photographs or video that were submitted during the public comment period, nor did she review any of the written complaints filed with the TCEQ against the City, or review any of the TCEQ's investigation reports or any other enforcement documents regarding the City or Facility.[67]

Similarly, Ms. Lueg was not made aware that a WASP model had been done for the River in 2012; nor did she review the results of any other nutrient modeling for the River, or any scientific literature on phosphorus impacts on Texas Hill

[64] Ex. ED-JL-1 at 11.

[65] Ex. ED-JL-1 at 2, 4.

[66] Tr. at 599-600.

[67] Tr. at 600-01.

Country streams.[68] Ms. Lueg did not collect any water quality data for the River or determine what the phosphorus levels for the River are above the outfall; however, she agreed that the River is a phosphorus-limited stream.[69] Ms. Lueg agreed that she could have reviewed the above information, but she testified that she could not have set a lower TP limit because 0.15 mg/L was recommended by her supervisor and he would not have approved a lower limit.[70]

Ms. Lueg further testified that when setting nutrient limits, she does not typically ask an applicant if certain nutrient limits are achievable; and in this case, she did not ask the City if a limit of 0.15 mg/L TP, nor if any lower TP limit, would be achievable. She explained that whether or not the Applicant considered the recommended TP limit to be achievable did not factor into her recommendation.[71] Ms. Lueg agreed that if the City was discharging at or below 0.15 mg/L for a couple of years and there was still nuisance algae in the River, it would indicate that the 0.15 mg/L TP limit is not stringent enough.[72]

ED witness James Michalk, a water quality modeler, performed the DO modeling analysis for the Application. His modeling results were conveyed in the DO Modeling Memo, in which he states that an effluent set at 5.0 mg/L CBOD5, 2.0 mg/L NH3-N, and 5.0 mg/L minimum effluent DO, is predicted to be adequate for all three flow phases to ensure that DO levels are maintained above

[68] Tr. at 601-02.

[69] Tr. at 602-03.

[70] Tr. at 603.

[71] Tr. at 618.

[72] Tr. at 609.

the DO criteria established by Ms. Lueg's review of the Application.[73] The values Mr. Michalk used for the background levels of CBOD and ammonia-nitrogen were based on TCEQ default values—not samples from the River.[74] However, when asked, Mr. Michalk agreed that in this case, where there is a concern about TP and the resultant algae, you need to look beyond the DO Modeling Memo to really know whether DO criteria are going to be met.[75]

In discussing the QUAL-TX DO modeling he performed, Mr. Michalk explained that the model predicts the direct DO impacts—indirect impacts, such as from algae or TP, are not predicted under the QUAL-TX model.[76] Mr. Michalk agreed that nutrients, such as TP and the resultant effect of algae, do affect the DO in a stream; however, he was not aware of any nutrient modeling performed by Staff for the Draft Permit or this water body[77] Mr. Michalk did not offer an opinion as to whether any of the TSWQS, other than that 5.0 mg/L DO standard, are being met.[78]

Mr. Michalk explained that the QUAL-TX model is intended to evaluate the 24-hr average DO criteria; and that the model does not provide any information as to whether the DO minimum standard will be met.[79] Mr. Michalk agreed in theory that his modeling could show that the 24-hour average DO criteria will be met, but

[73] Ex. ED-JM-1 at 2-3, 5, 9.

[74] Tr. at 656.

[75] Tr. at 672-73.

[76] Tr. at 652-53.

[77] Tr. at 653, 655, 666.

[78] Tr. at 654-55.

[79] Tr. at 664-66.

the standards team could set a TP limit that leads to extensive algae growth in a stream. This could result in a violation of one or both of the DO criteria for that stream.[80]

Mr. Michalk testified that using the same effluent parameters for both phases, there will be a greater impact on the lowering of DO at 4.0 MGD than at 2.0 MGD.[81] However, he explained that DO modeling analyses for TPDES discharge permits evaluates the potential DO impacts of those permits at their full-permitted flow limits.[82]

Applicant takes the position that the effluent set proposed in the Draft Permit is appropriate to be protective of the receiving stream according to the TCEQ DO modeling data.[83] Applicant witness James Machin, a professional engineer with 40 years of experience as a water quality and water resources expert, was hired by the City to review the Application, Draft Permit, and the DO water quality modeling.[84] He explained that he focused his review of the Draft Permit on the proposed discharge flow and the quality of effluent, as they are "the key factors" used to evaluate the water quality effects on the receiving stream and on human health.[85]

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[80] Tr. at 668.

[81] Tr. at 663.

[82] Ex. ED-JM-1 at 14.

[83] Ex. APP-1 (James Machin direct) at 16.

[84] Exs. APP-1 at 3-4; APP-2; Tr. at 500-01.

[85] Ex. APP-1 at 7-8.

Mr. Machin explained that typically in Hill Country streams phosphorus is very low, and that the phosphorus levels upstream of the City's outfall are probably below detection limits.[86] While the terms "oligotrophic, mesotrophic, and eutrophic" are not numerically defined (they are subjective terms based on evaluation), in his opinion, the River upstream of the City's outfall is likely oligotrophic.[87] He testified that the IPs mention eutrophication, but do not delve into the differences between trophic states.[88] Applicant notes that the TCEQ has not adopted any water-quality criterion that is framed in terms of the oligotrophic/mesotrophic/eutrophic continuum.[89]

With regard to the QUAL-TX model the TCEQ used for the DO modeling, Mr. Machin testified that he checked the TCEQ's values for reasonableness and reran the model.[90] He acknowledged that the QUAL-TX model has a nutrient module that can be added, but that he did not change any of the values that the TCEQ used, and he did not add the nutrient module to the DO modeling.[91] Likewise, Mr. Machin did not review any data to know if the upstream DO number used in the modeling was correct.[92] Based on this review, Mr. Machin stated that the DO modeling performed by the TCEQ shows that the TSWQS for DO will be met in the River.[93]

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[86] Tr. at 512.

[87] Tr. at 511.

[88] Tr. at 499.

[89] Applicant Closing Brief at 9.

[90] Tr. at 501.

[91] Tr. at 501-02.

[92] Tr. at 502-04.

[93] Ex. APP-1 at 16; Tr. at 523-26, 528 (clarifying his answer is limited to DO).

Regarding the numerical standards for TDS, Cl, and sulfate, Mr. Machin testified that the TCEQ screening determined that the discharge would exceed the instream standards. Because of this, the TCEQ is requiring the City to conduct a study to determine the sources of TDS in the influent to see if something can be done to reduce it that way, as opposed to imposing a limit on TDS in the Draft Permit.[94]

Mr. Machin also testified that the Draft Permit and the existing permit are essentially the same. There are no significant changes in final phase maximum flow or effluent limitations. However, he opined that the Draft Permit is more protective of water quality because it proposes to lower TP from 0.5 mg/L to 0.15 mg/L for all phases with a flow greater than 1.2 MGD.[95] Further, Applicant notes that ED witness Ms. Lueg testified that the nutrient limit of 0.15 mg/L TP was chosen to "help prevent the excessive growth of algae and improve aesthetic parameters."[96]

Applicant stresses that the standard adopted by the TCEQ are the IPs, and that the limit proposed by Protestants is not RAT.[97] In that regard, Mr. Machin testified that RAT is not a well-defined term, but he interprets it as "a technology that is available, widely used, that would achieve whatever the goals are and that can be implemented as a reasonable cost."[98] For example, in his opinion, an

[94] Tr. at 525-28.

[95] Ex. APP-1 at 17.

[96] Applicant Reply Brief at 11; Ex. ED-JL-1 at 13.

[97] Applicant Closing Brief at 10.

[98] Tr. at 497.

extraordinarily expensive technology such as reverse osmosis would be overkill, not RAT.[99]

Aaron Laughlin, an expert in wastewater treatment plant design and permitting, prepared the Application for the City. He testified that in late 2021 through early 2022 the City conducted a pilot study with CLEARAS Water Recovery (CLEARAS).[100] Mr. Laughlin testified that he first learned about the CLEARAS technology in 2021, after the City had submitted the Application.[101] Mr. Laughlin recalled conversations with CLEARAS staff where he learned that they had installed facilities across the country.[102] He testified that he did not know what the pilot study was designed to show; however, the study was unable to demonstrate that it could produce effluent that met the Draft Permit limit of 2.0 mg/L for NH3-N.[103] The study did show that the technology was extremely successful at reducing TP effluent to less than 0.01 mg/L on average.[104] He also testified that he had concerns regarding the need to redesign the existing plant to accommodate the CLEARAS system, the cost of the system, and that CLEARAS could only guarantee a effluent concentration of 0.05 mg/L TP.[105] For these reasons, Mr. Laughlin opined that CLEARAS is not RAT for the City.[106]

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[99] Tr. at 497-98.

[100] CLEARAS is a company that provides a technology that helps remove the phosphorus in wastewater to very low levels.

[101] Tr. at 488.

[102] Tr. at 477.

[103] Tr. at 462, 477; Ex. APP-3 at 20-21.

[104] Ex. SM-Ross-9 at 9.

[105] Ex. APP-3 at 20-21.

[106] Ex. APP-3 at 21.

He confirmed that the City did not discuss CLEARAS with Staff during the permit renewal application process, nor did the City provide any information about the CLEARAS technology to Staff.[107] Likewise, Staff did not ask for, and the City did not offer any justification as to why CLEARAS would not be RAT.[108] The City did not submit information to Staff regarding any other technology that could achieve an effluent limit lower than 0.15 mg/L TP.[109]

Mr. Laughlin explained that the City did not provide Staff with information about any other types of technology that could achieve 0.15 mg/L TP because the MBR system in the Application can meet that limit.[110] Mr. Laughlin noted that the current MBR plant is capable of achieving 0.06 mg/L TP, as was demonstrated in January 2022; however, this was not conveyed to TCEQ Staff during the permitting process.[111]

For four consecutive months of December 2021 through March 2022, the City's TP discharge was all below 0.15 mg/L (0.075 mg/L in December, 0.06 mg/L in January, 0.075 mg/L in February, and 0.081 mg/L in April).[112] Mr. Laughlin testified that he last visited the outfall in late March 2022 when there were cleanup crews hired by the City removing algae from the River at and below the outfall.[113]

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[107] Tr. at 474-75.

[108] Tr. at 475.

[109] Tr. at 476.

[110] Tr. at 476.

[111] Tr. at 478-79, 481; Ex. APP-3 at 15.

[112] Tr. at 481-83; Ex. SM-Morris 21.

[113] Tr. at 483-85.

Concerning groundwater, Applicant points to the testimony of ED witness Alfonso Martinez, a Permit Coordinator for the Municipal Permits Team in the Wastewater Permitting section or the Water Quality Division. Mr. Martinez stated that the Water Quality Division had determined that "if surface water quality will be protected by a draft permit, then groundwater in the vicinity will not be impacted by the discharge." In addition, Applicant asserts that Protestants failed to introduce evidence disputing that the effluent limits in the Draft Permit are protective of groundwater. Despite this, Applicant filed testimony supporting the conclusion that groundwater will be protected; specifically, Mr. Machin testified that the effluent limits proposed in the Draft Permit exceed the effluent limits required under the Edwards Aquifer rules for the contributing zone—where the discharge is located.[114]

c) Protestants' Evidence and Argument

Protestants contend that the City has failed to demonstrate that the Draft Permit will comply with the TSWQS or that it will protect groundwater and that Staff failed to follow TCEQ procedures in setting the 0.15 mg/L TP limit. They note that while nutrient screening is generally done as part of an antidegradation review, the IPs state that permit renewals may be evaluated for potentially significant concentrations of TP (and if appropriate, TN) on a case-by-case basis.[115]

[114] Ex. APP-1 at 18, referencing 30 Tex. Admin. Code ch. 213.

[115] Ex. ED-JL-3 at 26.

Protestants point to the evidence that upstream of the City's outfall, there is very little filamentous algae—the River has clear water flowing over a white limestone bottom.[116]

(Photo taken May 26, 2022, upstream of outfall)[117]

Yet, at the City's outfall and downstream, there is heavy growth of filamentous algae, duckweed, and a dark, sludge-like sediment that extends as the dominant feature of the River for at least 2.5 miles from the outfall.[118]

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[116] Tr. at 178-79; Exs. SM-King (Ryan King prefiled) 18, 29; SM-Morris (Stephanie Morris prefiled) at 13; SM-Morris-2 (photos) at pgs. 33, 36, 43, 45, 48.

[117] Ex. SM-Morris-2 at 48.

[118] Ex. SM-King at 13; SM-King-4.

(Photo taken April 4, 2022, approximately 1 kilometer (.62 miles) downstream of the Outfall)[119]

Dr. Ryan King, biology expert for Protestant Morris, is one of the preeminent authorities in this field. He has dedicated a large portion of his career to studying sensitive Hill Country streams and how low levels of phosphorus input affect those streams.[120] Dr. King visited the River four times between August 31, 2020, and April 4, 2022, in conjunction with this case.[121] He described the conditions upstream of the City's outfall as clear water, limestone riverbed, and minimal filamentous algal growth, all reflected in pictures he took during his visits.[122]

[119] Ex. SM-King-4 at 12.

[120] See Exs. SM-King at 3-5; SM-King-1.

[121] Ex. SM-King at 8.

[122] Ex. SM-King at 13, 17, and 18; SM-King-4.

Dr. King also took water samples 150 meters upstream of the outfall during his August 31, 2020 and April 4, 2022 visits to the River, which demonstrated low levels of phosphorus, measured at 0.008 mg/L and 0.01 mg/L, depending on the lab conducting the analysis.[123] Protestants stress that Dr. King's opinion and data demonstrate that the background levels of phosphorus in the River upstream of the outfall are at or below 0.01 mg/L TP. Additionally, Dr. King explained that his research shows that phosphorus levels at 0.02 mg/L cause algal blooms in Central Texas rivers.[124] Based on these factors, Dr. King opined that at most, a concentration of 0.01mg/L to no more than 0.015 mg/L TP can exist in the stream while still maintaining the natural condition of the River.[125]

Dr. Lauren Ross, an expert witness for Protestant Morris, has over 40 years of experience including water resources engineering, water quality protection and engineering design, groundwater transport, wastewater management and disposal, statistical methods, and environmental monitoring.[126] She reviewed the data from the TCEQ's Surface Water Quality Web Reporting Tool regarding baseline water quality conditions for the River at a monitoring station approximately 4,700 feet upstream from the City's outfall.[127] The baseline data indicates high water quality above the outfall, with average measured DO at 9.4 mg/L. Average TDS, sulfate, and Cl were all below the numerical standards at 273 mg/L, 22 mg/L, and

[123] Exs. SM-King at 15, 18; SM-King-5 at 1-2, and 4-5.

[124] Ex. SM-King at 35.

[125] Ex. SM-King at 35

[126] Ex. SM-Morris at 5; SM-Morris-1.

[127] Ex. SM-Ross at 10.

22 mg/L, respectively.[128] Additionally, she noted that out of 113 phosphorus measurements in samples from the same upstream monitoring station, 73% were less than the 0.05 mg/L detection limit.[129]

Dr. Ross also testified concerning the nutrient modeling of effluent and its predicted impact on the River. She testified that the City of Austin implemented a WASP model for the River specifically to characterize the predicted occurrence of algae in response to Applicant's effluent discharge.[130] Based on a maximum effluent discharge of 1.2 MGD at 0.1 mg/L TP, the WASP model concluded that the River will be eutrophic below the outfall, and that nuisance benthic algae levels are predicted to occur most of the time.[131]

Dr. Ross testified that the best available information indicates that a TP limit of no more than 0.02 mg/L would be necessary to maintain oligotrophic conditions.[132] She explained that 0.02 mg/L is RAT based on an EPA report describing other plants that have achieved this level, and also based on the results of the CLEARAS pilot project with the City and the level of phosphorus removal achieved by CLEARAS in its other projects.[133] However, at the hearing, Dr. Ross clarified that 0.05 mg/L TP has been demonstrated as RAT in this case and that if she were the permit writer in this case, she would impose an effluent limit of

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[128] Ex. SM-Ross at 10-11.

[129] "A reading less than the detection limit indicates that the amount of a chemical present in the sample was too small to reliably register on the testing instrument." Ex. SM-Ross at 11-12.

[130] Tr. at 242.

[131] Exs. SM-Ross at 26; SM-Ross-15 at 26.

[132] Ex. SM-Ross at 28-29.

[133] Exs. ED-Ross at 19, 29, 37; SM-Ross-18.

0.05 mg/L TP.[134] She explained that while the CLEARAS pilot project for the City demonstrated that it was able to achieve TP limits of 0.01 to 0.02 mg/L, CLEARAS guaranteed their process to the City to meet a TP standard of 0.05 mg/L.[135]

Regarding the City's concern over CLEARAS not being able to meet the ammonia limits in the Draft Permit, Dr. Ross pointed to the CLEARAS report itself which discusses options that could be undertaken to meet the limit.[136] Dr. Ross made it clear in her testimony at the hearing that she is not specifically championing CLEARAS—rather that CLEARAS is one example of a RAT that can achieve the standard of 0.05 mg/L TP.[137]

While the majority of the testimony and briefing in this case centers around phosphorus, Protestants also note that nitrogen (and its various forms) are also nutrients of importance within the City's wastewater effluent. Dr. Ross explained that both "nitrogen and phosphorus contribute to eutrophication and stream degradation from excessive algae blooms. These algae blooms cause cyclically low [DO] concentrations. They affect habitat and recreational enjoyment. They also promote harmful cyanobacterial blooms that can release dangerous levels of cyanotoxins into affected water bodies."[138] Similarly, Dr. King stated that without

[134] Tr. at 257, 289.

[135] Exs. SM-Ross at 20; SM-Ross-9 (CLEARAS Report).

[136] Tr. at 289; Ex. SM-Ross-9 at 9.

[137] Tr. at 266.

[138] Ex. SM-Ross at 21-22.

at least some ammonia or nitrate-nitrogen,[139] algae would not grow. And adding more nitrogen to a stream will add "fuel to the fire" in terms of algal growth if any surplus phosphorus is available.[140]

Similar to phosphorus, the River is naturally very low in ammonia and nitrate-nitrogen. Dr. King measured ammonia-nitrogen levels at .014 mg/L and nitrate-nitrogen levels at .061 mg/L in 2022 upstream of the outfall.[141] Currently, the ammonia limit for the Draft Permit is 2.0 mg/L and the nitrate-nitrogen limit is 16.6 mg/L, with no limit on TN. Dr. Ross provided evidence that 4.0 mg/L is RAT for total nitrogen.[142] To help maintain water quality and to ensure that a RAT-based limit is included in the permit, with consideration of the sensitivity of the River, Protestants assert that the daily average concentration for nitrate-nitrogen should be set at 4.0 mg/L.[143]

d) OPIC's Position

OPIC is not persuaded that the proposed TP limit in the Draft Permit is adequately protective and expressed concern that algae blooms would continue to thrive, particularly during the final phase when the Applicant would be authorized to discharge up to four million gallons of effluent per day. Because of the serious concerns regarding existing excessive algae blooms and because Staff testified that there is no assurance that the minimum DO criteria will be met, OPIC is not

[139] Both ammonia and nitrate are used by algae and plants as sources of nitrogen. Ex. SM-King at 31.

[140] Ex. SM-King at 31.

[141] Ex. SM-King-5.

[142] Ex. SM-Ross at 20-21.

[143] Protestant Morris Closing at 25.

persuaded that the QUAL-TX model is sufficient to demonstrate compliance with protective DO standards.

OPIC agrees with Protestants that a permit limit for TP lower than 0.15 mg/L needs to be in the permit to ensure that the Facility's TP concentration is protective of the River and the recreational uses of the River. In sum, OPIC does not find the Draft Permit to be protective of water quality, groundwater, and uses of the receiving waters under the TSWQS.

e) ALJs' Analysis

The purpose of the TSWQS is "to maintain the quality of water in the state consistent with public health and enjoyment, propagation and protection of terrestrial and aquatic life."[144] The River has primary contact recreation 1 use. This designated use means activities are presumed to occur that involve a significant risk of the ingestion of water, such as wading by children, swimming, tubing, hand fishing, and canoeing. Protestants have provided an abundance of evidence concerning the detrimental impact the City's wastewater effluent has had on the River.

Because phosphorus concentrations and loading were at issue in this permit renewal, an evaluation of nutrients needed to be performed. The phosphorus limit must be based on RAT, with consideration of the sensitivity of the site.[145] The evidence shows that there is and was a large amount of scientific information

[144] 30 Tex. Admin. Code § 307.1.

[145] See Ex. ED-JL-3 at 29.

available to Staff demonstrating that 0.15 mg/L is not a sufficiently protective limit for the River.

In this case, Staff reviewed no outside data, studies, or modelling in recommending this limit; and in fact, the standards reviewer testified that even if she had reviewed such information and determined that 0.15 mg/L TP was not sufficiently protective of the water quality in the River, she had no discretion to recommend a lower limit because her supervisor would not have approved it. Although Ms. Lueg initially stated that the 0.15 mg/L TP was set based on the IPs, she agreed that there is no numeric limit in the IPs for TP, and that the 0.15 mg/L TP limit is based on her supervisor telling her to set it at that limit.[146] This limit does not take into account the sensitivity of the River, nor does it properly consider RAT. In fact, nutrient assessment under the IPs "can be improved and reconsidered in light of additional site-specific data, more extensive models, and evaluations."[147]

While the IPs provide that considerations for nutrient impacts should focus on TP rather than nitrogen for a number of reasons, the IPs go on to state that effluent limits for TN can be considered in situations when existing or projected nitrogen levels would result in the growth of nuisance aquatic vegetation. The record evidence includes expert testimony that adding more nitrogen to a stream will result in more algal growth if any surplus phosphorus is available. Protestants

[146] Tr. at 603-04.

[147] Ex. ED-JL-3 at 52.

contend that the daily average concentration for nitrate-nitrogen should be set at 4.0 mg/L to prevent excessive algal growth in response to the excess phosphorus.

TCEQ uses the QUAL-TX model to determine whether or not the stream segment will meet the DO criteria. However, the model does not take into account DO fluctuations or DO minimum and the impact of phosphorus, nitrate-nitrogen, or any resulting algae growth, nor does it provide any information as to whether the minimum DO criteria will be met. A failure to meet DO criteria would negatively impact aquatic life use.

The preponderance of the evidence indicates that the Draft Permit will not be protective of water quality and will not protect uses of the receiving waters under the TSWQS because it would allow significant increases in nutrient pollutants to be discharged into River, leading to reduced DO, algae blooms, and an impairment of the designated uses.

After considering the evidence and arguments, the ALJs conclude that Protestants rebutted the prima facie demonstration, and the greater weight of evidence does not support that the proposed discharge is protective of water quality and uses of the receiving waters of the South Fork San Gabriel River in accordance with the TSWQS, including recreational use and with consideration of the maximum volume of the proposed discharge. However, as to groundwater, the ALJs conclude that Protestants failed to rebut the prima facie case that the proposed discharge would not have adverse impacts.

The preponderant evidence established that reduction of effluent TP is needed, and that 0.05 mg/L is RAT. By reducing TP, the limits on nitrate-nitrogen may suffice, which would also assist Applicant in meeting the minimum DO requirements. However, it underscores the need for Applicant to undertake the nutrient study (sampling for nitrogen and phosphorus) that was required under the initial permit for this Facility in 2004.[148]

A discussion of algae and the aesthetic requirements is addressed later in the PFD (Section III.A.2.).

2. Whether the draft permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 TAC § 307.4, including aquatic nutrient limitations (Referred Issue D)

a) Background

The water quality standard under 30 Texas Administrative Code section 307.4(e) provides that nutrients from permitted discharges or other controllable sources must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use.

[148] *See* Ex. SM-24 at 26 (Other Requirement No. 10).

The rules regarding aesthetic parameters are listed under 30 Texas Administrative Code section 307.4(b), which states that "[s]urface waters must be maintained in an aesthetically attractive condition."[149]

b) Applicant's and the ED's Evidence and Argument

Both the Applicant and the ED take the position that the Draft Permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code section 307.4, and does not violate any nutrient limits.

ED witness Jenna Lueg explained that the TCEQ evaluates applications for new or expanding domestic discharges to reservoirs, streams, and rivers to determine if an effluent limit is needed for TP to prevent violation of numerical nutrient criteria and/or preclude excessive growth of aquatic vegetation.[150] Permit renewals and industrial discharges may be evaluated for potentially significant concentrations of TP (and if appropriate, TN) on a case-by-case basis.[151] She explained that "[t]he nutrient screening procedures constitute the basis for the antidegradation review(s) for nutrients. Additional factors for the antidegradation review(s) can be considered as appropriate to further address potential nutrient impacts of concern to sensitive water bodies."[152] Ms. Lueg testified that for this

[149] 30 Tex. Admin. Code § 307.4(b)(4).

[150] Ex. ED-JL-1 at 9.

[151] Ex. ED-JL-1 at 9.

[152] Ex. ED-JL-1 at 9.

application she did not perform a nutrient screening—instead she implemented the final phase limit to all of the permit phases.[153]

Ms. Lueg stated that she recommended a TP limit of 0.15 mg/L for all phases "to help protect the receiving waters against algae."[154] She stated that it "should help prevent the excess accumulation of algae in the receiving waters" and "help ensure compliance with the aesthetic parameters . . . as long as the facility is meeting the draft permit limits."[155] Ms. Lueg acknowledged that the cause of the excessive growth of algae downstream of the outfall is because the City is in non-compliance with their current permit limits for long periods of time.[156] That is why she believes a third-party operator is necessary—to ensure compliance with permit conditions.[157] In consideration of the TP limit combined with the third-party operator requirement, the ED requests a finding that the Draft Permit includes appropriate provisions to protect against excessive growth of algae and comply with aesthetic parameters and requirements.[158]

When asked, Ms. Lueg testified that in her opinion, "in some places" below the outfall the River is aesthetically attractive and in other places it is not.[159] Ms. Lueg also expressed her opinion that there is no amount of algae that could

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[153] Ex. ED-JL-1 at 9.

[154] Ex. ED-JL-1 at 10.

[155] Ex. ED-JL-1 at 10.

[156] Tr. at 598.

[157] Tr. at 598-99; *See* AR-5, Tab-C (Draft Permit at Other Requirement no. 2 – requiring the City to contract with a third-party operator).

[158] ED Closing Brief at 4.

[159] Tr. at 607-08.

grow in a water body that would make it unswimmable to her; she stated, "I would swim in anything. Most people probably wouldn't, but I would."[160]

The City takes issue with a study cited by Protestants that states there may be excessive algal blooms if the River passes the oligatrophic/mesotrophic/eutrophic boundary.[161] The City argues that there is no evidence that algae will rise to a nuisance level of growth due to changes in trophic boundaries. In addition, the City notes that trophic changes are not the standard for determining aesthetics in the river—the TCEQ applies a subjective standard to whether aesthetic parameters will be maintained under 30 Texas Administrative Code section 307.4(b), which includes a condition that water be aesthetically attractive.[162]

City witness Mr. Machin testified that in his opinion the algae in the River is most likely the result of the wastewater outfall from the City, and that 0.15 mg/L TP at 2 MGD will not maintain the same aesthetic conditions that are present upstream of the outfall.[163] His opinion, however, is that the 0.15 mg/L TP will maintain the water quality in the River, and that large amounts of algae in the River (as shown below in Ex. SM-Morris-2 at photos 63, 66, and 67) are aesthetically attractive to him.[164]

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[160] Tr. at 617.

[161] Applicant Closing Brief at 12.

[162] Applicant Closing Brief at 12.

[163] Tr. at 529, 533.

[164] Tr. at 529, 534, 535; Ex. SM-Morris-2 at 47, 49.

(Photo 63: Taken ~ 3.5 miles downstream of outfall on February 9, 2022)[165]

(Photo 66: Taken facing upstream while positioned just downstream of the City's outfall, which is pictured on the right, May 26, 2022)[166]

[165] Ex. SM-Morris-2 at 47.

[166] Ex. SM-Morris-2 at 49.

(Photo 67: Taken from Morris property facing downstream, May 26, 2022)[167]

Mr. Machin testified that he did not review any water quality data for the River, he did not perform any nutrient modeling on whether 0.15 mg/L TP is appropriate, he did not review any of the TCEQ or EPA scientific studies referenced by Dr. King, and he did not review any scientific studies about phosphorus levels in Texas Hill Country streams.[168] He explained that his opinion that the 0.15 mg/L TP permit limit will maintain the water quality in the River is based on the existing permit having a limit of 0.5 mg/L TP, so a requirement that the City reduce the TP in their discharge to 0.15 mg/L should result in some improvement.[169]

[167] Ex. SM-Morris-2 at 49.

[168] Tr. at 530-31.

[169] Tr. at 529.

City witness David Buzan is an aquatic biologist who was hired to evaluate the Draft Permit in terms of its effect on aquatic life and provisions to protect against excessive growth of algae.[170] He opined that the City's discharge is the predominant contributor, but not the only contributor, to algal growth in the River.[171] He testified that there is "a lot of algae"—more than should be there naturally—around the outfall.[172] Mr. Buzan did not have an opinion as to whether the aesthetics rule in the water quality standards is being violated by the amount of algae he observed approximately 300 feet downstream of the outfall in the River.[173] Similarly, Mr. Buzan testified that he did not have an opinion as to whether the currently permitted DO standard was negatively affecting the aquatic life, but that it is his opinion that the effect on aquatic life will not be more negative under the Draft Permit than it is now.[174]

c) Protestants' Evidence and Argument

Protestant Stephanie Morris is a registered nurse, who raises bees and lives on her property approximately a quarter of a mile downstream from the City's outfall. Ms. Morris testified that in 2014, algae began growing in the River downstream of the outfall and that the algal growth has gradually, but steadily,

[170] Ex. APP-12 at 2.

[171] Ex. APP-12 at 14.

[172] Tr. at 384.

[173] Tr. at 385.

[174] Tr. 405-07.

increased since that time.[175] Numerous photographs of the River that she took throughout the years documented this trend.[176]

Protestants stress that 0.15 mg/L TP is not a low enough effluent limit to prevent extensive growth of algae in the river. Pointing to the observations made by the Protestants, as well as the City witness Mr. Laughlin, Protestants note that from December 2021 through March 2022, when the City discharged a daily average of 0.07 mg/L TP, the River's conditions did not improve.[177] Additionally, Dr. King visited the River on April 4, 2022, and observed the heavy growth of filamentous green algae, consistent with what he had seen in the river during the previous two years.[178] Additionally, in April and May 2022, the City spent weeks cleaning the algae from the area immediately around and downstream of the outfall; however, this algae grew back within days and weeks, faster near the outfall.[179]

Based on his research of Hill Country streams, Dr. King explained that very little phosphorus will cause algal blooms in central Texas rivers. Specifically, he stated that research has shown that levels above 0.010-0.015 mg/L are consistently associated with degraded biological conditions—particularly nuisance algal growth, loss of native species, and low dissolved oxygen.[180] In Dr. King's opinion, the

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[175] Ex. SM-Morris at 7-8.

[176] Ex. SM-Morris-2.

[177] *See* Ex. SM-Morris-2, photos 12-13 (p. 11-12), 59-67 (p. 45-49), and 71-74 (p. 52-53) showing river downstream of outfall still full of algae during or shortly after December 2021-March 2022; Ex. SM-Morris-8 (video taken at outfall, showing upstream, at, and downstream of outfall on June 2, 2022).

[178] Ex. SM-King 18-19.

[179] Exs. SM-Morris 18-20; SM-Morris-2, photos 69-70; SM-Morris-7 (video of workers in river); SM-17 (video of workers speaking with Dr. King); Ex. SM-Morris 20; Tr. at 51-53, 95-97.

[180] Ex. SM-King at 31.

0.15 mg/L TP limit in the Draft Permit is too high to protect the water quality in the River.[181] Dr. King explained that his work studying Hill Country streams and how low levels of phosphorus input affect those streams, demonstrates that at concentrations of around 0.02 mg/L TP, algal blooms occur in Central Texas rivers.[182]

Concerning the "aesthetically attractive" parameter, Dr. King opined that an "aesthetically attractive condition would mean one that maintains the naturally occurring aesthetic of the river, so it would be context sensitive depending on which water body the rule was being applied to."[183] In this case, an aesthetically attractive condition would be the previously-described natural conditions of the River—very clear water during normal flows, visible limestone riverbed, and free of filamentous algae, algae mats, duckweed, or black sludge-like sediment.[184]

In addition to the studies performed by Dr. King, Dr. Ross reviewed a wide-reaching EPA analysis of the streams in the same sub-ecoregion as the River, which suggested that the boundary between oligotrophic and mesotrophic streams in this region is around 0.025 mg/L TP.[185]

[181] Ex. SM-King at 44, 50.

[182] Ex. SM-King at 32, 35.

[183] Ex. SM-King at 38.

[184] Ex. SM-King at 38.

[185] Exs. SM-Ross at 23; SM-Ross-4.

Dr. Ross testified that the wastewater effluent is the cause of the algae in the River at and below the outfall, and that this algae is excessive.[186] She explained that she looked at aerial photographs of the watershed and examined other potential sources of TP or TN and where that discharge could enter the River, and compared that to the locations where she and other experts either took water quality samples or made observations of algae growth. It was clear that the algae bloom downstream of the outfall is related to the outfall and not the other potential sources.[187]

d) OPIC's Position

OPIC's position is that the provisions in the Draft Permit are inadequate to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code section 307.4, including aquatic nutrient limitations.[188] OPIC points to the overwhelming evidence of algae blooms at and around the outfall. In addition, OPIC notes that the evidence offered by Protestants at the hearing demonstrates that other potential sources of phosphorus were considered by the experts in their analysis; however, they determined that those sources are not causing the increased algae growth downstream of the City's outfall.[189]

Considering the River's designated uses of primary contact recreation and high aquatic life use, OPIC finds that the evidence demonstrates that the area

[186] Tr. at 240.

[187] Tr. at 240-41.

[188] OPIC Closing Brief at 9-10.

[189] OPIC Closing Brief at 8; Tr. at 146, 240.

around the outfall is not swimmable and fishable because of the massive amount of algae floating on the surface.[190] In addition, OPIC points to the testimony about significant and persistent changes and decreases in the varieties and types of fish and different aquatic and wildlife below the outfall.[191] Specifically, OPIC notes Dr. King's testimony that algae in the river is already causing major imbalances in the River as he observed invasive species like snails in the River.[192] OPIC points to the record evidence that the River at the outfall and downstream of the outfall is not aesthetically attractive and that the proposed discharge under the Draft Permit will not maintain an aesthetically attractive condition.[193]

e) ALJs' Analysis

The designated uses for Segment 1250, or the River, are primary contact recreation 1, high aquatic life use, public water supply, and aquifer protection.[194] Therefore the evidence must show that the nutrients discharged under the Draft Permit will not cause or contribute to excessive growth of aquatic vegetation that impairs any of these designated uses, or any existing or attainable uses.

The overwhelming evidence demonstrates that there is an excessive amount of algae in the River at and below the City's outfall and that the cause is the City's discharge. Expert opinion in the record states that the nutrients from the proposed discharge would increase the occurrence of algae blooms and shift the algae species

[190] OPIC Closing Brief at 9; Tr. at 220.

[191] OPIC Closing Brief at 9; Tr. at 75-77.

[192] Tr. at 217.

[193] OPIC Closing Brief at 9; Tr. at 222; Ex. SM-King at 39.

[194] 30 Tex. Admin. Code § 307.10(1), Appendix A.

present in the waters. The science presented in this case is clear: 0.15 mg/L TP is not a low enough effluent limit to prevent extensive growth of algae in the River.

The IPs suggest that effluent limits for TP are recommended based on RAT-based limits, with consideration of the sensitivity of the site. Dr. Ross testified that 0.05 mg/L TP has been demonstrated as RAT for the City's wastewater. Dr. Ross further testified that CLEARAS data and the CLEARAS process is one demonstration of reasonably achievable total phosphorous effluent limitation concentration and there may be other ways the City can meet the reasonably achievable total phosphorus standard.

The argument that this Draft Permit will be better than the current permit, and therefore be protective against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code section 307.4, including aquatic nutrient limitations, is flawed. First, the current permit is limited to 1.2 MGD—increasing the flow to 4.0 MGD will necessarily have a greater impact due to the higher volume of effluent entering the River. Second, the evidence demonstrated that for a period of four months (Dec. 2021 – March 2022) the City discharged a daily average of 0.07 mg/L TP, yet the algae continued to overtake the River enough that the City hired a team to physically remove the algae from the River at the beginning of April 2022. Third, the evidence clearly demonstrated that the Draft Permit will not maintain the River in an aesthetically attractive condition. The numerous photographs and video of the River below the outfall—including from the time period the City discharged below

0.15 mg/L TP—leave no doubt that a 0.15 mg/L TP limit at 2.0 MGD and at 4.0 MGD will continue to create an unattractive eyesore.

The City has failed to demonstrate that the Draft Permit will ensure that the effluent discharged into the River will not lead to a violation of water quality standards due to the growth of algae. The evidence establishes that nutrients from the proposed discharge will cause excessive growth of aquatic vegetation that impairs the existing and designated uses of the River. The ALJs find that Draft Permit does not include appropriate provisions to protect against excessive growth of algae, and it does not comply with the aesthetic parameters and requirements of 30 Texas Administrative Code section 307.4, including aquatic nutrient limitations. As discussed in Section III.A.1 of this PFD, the ALJs recommend that the effluent limit for TP for all phases be reduced to 0.05 mg/L.

3. Whether the draft permit complies with applicable antidegradation requirements (Referred Issue G)

a) Background

The Commission's antidegradation rule at 30 Texas Administrative Code section 307.5 establishes a multi-tiered policy to ensure that existing water quality uses, including aquatic life uses, will be maintained and not impaired by increases in waste loading. The rules require a comparison of the baseline water-quality conditions with the conditions that will exist once the permitted activity begins.

A Tier 1 review provides that existing uses and water quality sufficient to protect those uses will be maintained.[195] A Tier 2 review applies to water bodies that have fishable/swimmable waters.[196] According to the TSWQS:

No activities subject to regulatory action which would cause degradation of waters which exceed fishable/swimmable quality will be allowed unless it can be shown to the [C]ommission's satisfaction that the lowering of water quality is necessary for important economic or social development. Degradation is defined as a lowering of water quality by more than a *de minimis* extent, but not to the extent that an existing use is impaired. Water quality sufficient to protect existing uses will be maintained.[197]

The TCEQ has not adopted any further definition of "degradation" or "de minimis," but the Third Court of Appeals has summarized the Tier 2 inquiry as follows:

> [S]tated generally, to determine whether the proposed regulated activity will result in degradation of water quality, TCEQ rules require a comparison of the baseline water-quality conditions with the conditions that will exist once the permitted activity begins. If the comparison shows no change in water quality, a water-quality improvement, or a de minimis—*i.e.*, "trifling" or "negligible"—lowering of water quality, the antidegradation policy is not implicated. If, however, the comparison shows a loss in water quality that is more

[195] 30 Tex. Admin. Code § 307.5(b)(1).

[196] 30 Tex. Admin. Code § 307.5(b)(2).

[197] 30 Tex. Admin. Code § 307.5(b)(2).

> than de minimis, the activity will not be allowed absent a showing that the loss is necessary for important economic or social development.[198]

"Fishable/swimmable waters are defined as waters that have quality sufficient to support propagation of indigenous fish, shellfish, terrestrial life, and recreation in and on the water."[199] Determinations about whether water bodies exceed fishable and swimmable quality, and about whether a proposed activity will impair existing uses or degrade water quality, are to be made in accordance with procedures set out in the TSWQS and the IPs.[200]

The IPs state:

> The antidegradation policy applies to actions regulated under state and federal authority that would increase pollution of water in the state. The antidegradation implementation procedures in this document apply to any increase in pollution authorized by TPDES wastewater discharge permits or by other state and federal permitting and regulatory activities.
>
> Increases in pollution are determined by: (1) information on effluent characteristics that are provided in the application for the TPDES permit, the draft permit, and/or in other available sources; and (2) final effluent limits for flow, loading, and concentration in the previous permit compared with the proposed permit.[201]

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[198] *Robertson Cty: Our Land, Our Lives (RCOLOL) v. Tex. Comm'n on Envmt'l Quality*, Cause No. 03-12-00801-CV, 2014 WL 3562756 at *8 (Tex. App.—Austin July 17, 2014, no pet.) (op. on reh'g) (quoting Black's Law Dictionary 524 (10th ed. 2014)).

[199] 30 Tex. Admin. Code § 307.5(b)(2).

[200] 30 Tex. Admin. Code § 307.5(c)(1)(A); *see also* Ex. ED-JL-3 at 55-69.

[201] Ex. ED-JL-3 at 55.

Because the River exceeds fishable or swimmable quality, both a Tier 1 and a Tier 2 analysis are applicable. In this case however, it is undisputed that an antidegradation review was not performed for the Application.[202] The point of disagreement is as to whether one should have been completed.

b) Applicant's and the ED's Evidence and Argument

ED witness Jenna Lueg testified that an antidegradation review was not performed for the Application because it was not necessary.[203] She explained that because the Application is for a renewal to add an interim phase, she considers it as not increasing pollution from the existing permit, and therefore the original antidegradation review still applies and an updated antidegradation review is not necessary.[204]

Applicant argues that by not proposing any increase in waste loading, the existing uses to the stream will be maintained.[205] Applicant witness James Machin testified that in his opinion the proposed discharge will comply with the antidegradation requirements; however, he did not specify what antidegradation requirements he believes apply to the application.[206] Applicant witness Aaron Laughlin opined that an antidegradation review was not required for the Application because the TCEQ rules and the IPs do not require one in this

[202] Ex. ED-JL-1 at 7.

[203] Ex. ED-JL-1 at 7.

[204] Ex. ED-JL-1 at 8.

[205] Applicant Closing Brief at 13.

[206] Ex. APP-1 at 25-26.

situation.[207] He testified that under the current permit, the City is permitted to discharge a total loading of phosphorus of 5.0 pounds per day for both the 1.2 MGD and 4.0 MGD permit phases. Because the Application seeks an interim Phase II of 2.0 MGD with a total loading of phosphorus at 2.5 pounds per day, Mr. Laughlin explained that there is no increase in nutrient loading, and therefore the TCEQ rules do not require an antidegradation review.[208] He further testified that the City is not claiming that lowering water quality is necessary for important economic or social development.[209]

Applicant witness David Buzan testified that in his opinion the River downstream of the City's outfall has been degraded compared to River's baseline conditions.[210] He agreed that even if the River were scoured clean and the City discharged at 0.15 mg/L TP that algae would grow back.[211]

c) Protestants' Evidence and Argument

Protestants contend that the previous antidegradation review, which was completed in 2013 when the City applied for and was granted a major amendment to the permit, contains a mathematical error and has proven to be inadequate to protect the stream.[212]

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[207] Ex. APP-3 at 14.

[208] Ex. APP-3 at 14.

[209] Tr. at 472.

[210] Tr. at 390.

[211] Tr. at 390-91.

[212] Protestant Morris Closing Brief at 50.

The TCEQ originally set a 0.5 mg/L TP limit and required a nutrient study be performed. When the City applied for a major permit amendment in 2013, Staff noted that the stream was not being protected under the parameters of the original permit.[213] At that time, Staff noted visible algal growth downstream of the outfall in every aerial photo since the plant began discharging in late 2006. No algal growth was visible prior to the plant discharging. In addition, Staff noted that the plant was only discharging 0.1 MGD of the permitted 1.2 MGD discharge limit (which equates to approximately 0.417 lbs of phosphorus per day).[214]

At that time, Staff did not recommend tightening the existing permit limits of 0.5 mg/L TP for the 1.2 MGD phase. Rather, Staff recommended a lower limit of 0.15 mg/L TP for the newly proposed final phase of 4.0 MGD. This was to maintain the current TP limits of approximately 5 lbs of phosphorus per day.[215] Protestants argue that Staff's calculations demonstrated in 2013 that the concentrations of phosphorus in the river at the plant's full capacity will be much higher than the threshold at which the process of eutrophication begins to occur.[216]

In addition, Protestants point out that in performing the antidegradation review in 2013, Staff used inappropriately high numbers for the 7Q2 flow and harmonic mean flow values (0.15 and 0.4 cfs instead of 0.1 and

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[213] Ex. SM-3 at 17.

[214] Ex. SM-3 at 24-38.

[215] Ex. SM-3 at 20-21, 24.

[216] Protestant Morris Closing Brief at 50, citing Ex. SM-3 at 20-21, where Staff calculates the concentration of total phosphorus downstream of the outfall to be more than 0.14 mg/L, over the likely algal bloom threshold of approximately 0.02 mg/L.

0.2 cfs, respectively).[217] The 7Q2 flow is used during the nutrient screening analysis of an antidegradation review, and Staff used the harmonic mean flow during the phosphorus loading calculations.[218] These numbers represent relatively low flow conditions in the river and are used in agency calculations to ensure that even during periods of low flow, water quality standards will be maintained.[219] Using a higher number artificially dilutes the effluent's effects on the river, since the proportion of stream water to effluent will be higher.

Protestants also assert that Staff used incorrect values in estimating the background levels of TP for the stream. The 2013 antidegradation review estimated the ambient TP levels in the stream at 0.05 mg/L.[220] Protestant's expert biologist, Dr. Ryan King, testified that the naturally occurring conditions of the stream are less than 0.01 mg/L TP.[221] Protestants note that an assessment of the effect of phosphorus on the river that assumes the background concentrations are as high as 0.05 mg/L is problematic. At such a level, according to Dr. King's research, there would already be extensive algae in the river, which is not demonstrated upstream of the outfall.[222]

Protestants stress that an antidegradation review is supposed to prevent degradation and protect water quality; yet in this case, the effluent discharged by

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[217] Ex. SM-4 at 2 compared with Ex. SM-3 at 20-21.

[218] Ex. ED-JL-3 at 48; Ex. SM-3 at 20-21.

[219] Ex. ED-JL-3 at 75, 80.

[220] Ex. SM-3 at 20-21.

[221] Ex. SM-King at 17-18, 33, 35.

[222] Protestant Morris Closing Brief at 52.

the City has been impairing the River since the plant initially came online in 2006.[223] Citing to a case out of the United States District Court for the Southern District of West Virginia, Protestants contend that in order to comply with the federal Clean Water Act, TCEQ's rules and IPs must be interpreted to give the Commission the discretion to conduct an antidegradation review in this type of situation.[224]

The renewal of a permit is a chance for the TCEQ to reassess the Applicant and its performance; the permit; and the effects of the permit on the environment. Therefore, the Protestants assert that the Draft Permit cannot be issued without an adequate and accurate antidegradation review being performed.

d) OPIC's Position

OPIC takes the position that although antidegradation reviews may not be required regularly for permit renewals that are not authorizing an increase in pollutants, this practice is premised on the assumption that operations under the existing permit have adequately maintained baseline conditions. OPIC stresses that that is not true in this case.[225]

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[223] Protestant Morris Closing Brief at 53.

[224] Protestant Morris Closing Brief at 53, *citing Ohio Valley Env'l Coal. v. Horinko*, 279 F.Supp.2d 732, 752 at n 20 (S.D.W.Va. 2003). ("If [the W. Va. WQS] were interpreted to allow the Secretary of the WVDEP to decline to order Tier 2 review when an existing permitted discharge was causing significant degradation, then [the W.Va. WQS] would clearly be inconsistent with [40 CFR] § 131.12(a)(2)."

[225] OPIC Closing Brief at 12.

OPIC's position is that there are problems under the existing permit and that the public interest is only served by conducting an antidegradation review.[226] OPIC explains that the record in this case should contain a comparison of the water-quality conditions that would exist without the City's discharge with conditions that would exist at the 4.0 MGD discharge volume authorized in the final phase of this renewal permit.

In sum, OPIC concludes that without examining whether operations under the renewed permit would continue to cause more than a de minimis lowering of water quality, the proposed permit renewal does not comply with the Commission's antidegradation policy.[227]

e) ALJs' Analysis

It is undisputed that an antidegradation review was not performed for this Application. It is also undisputed that the Applicant did not seek permission from the Commission to degrade the water quality of the river as necessary for important economic or social development. Thus, the question becomes whether the Applicant can rely on a previous antidegradation review when the preponderance of the evidence is clear that the Draft Permit would allow the degradation of waters that exceed fishable/swimmable quality.

Here, the record includes evidence regarding the baseline conditions of the River upstream of the outfall. The record also includes extensive evidence of the

[226] OPIC Closing Brief at 12.

[227] OPIC Closing Brief at 12.

current impaired conditions at the outfall and downstream that have resulted in a noticeable lowering of water quality; as well as expert testimony that the degradation will continue under the proposed terms of the Draft Permit.

The Applicant and ED are of the opinion that once the antidegradation review is done, future permit renewals and minor amendments that do not propose to increase the permitted amounts of pollution are not subject to antidegradation review, regardless of the impact to the stream. The purpose of the Clean Water Act is unfulfilled if the degradation of waters of the United States can occur and a state has no discretion to reassess the permit causing that degradation. This case represents a prime example of the very reason for that discretion.

While the Commission may not regularly require antidegradation reviews for permit renewals that are not authorizing an increase in pollutants, the premise for not doing so—that operations under the existing permit have adequately maintained baseline conditions—is not true here. Under its current permit, the City has degraded the water quality of the River such that its uses have been impaired. The antidegradation policy can be served only by examining whether operations under the renewed permit would continue to cause more than a de minimis lowering of water quality.

For these reasons, the ALJs conclude that the Draft Permit does not comply with the Commission's antidegradation policy. In lieu of denial, the ALJs recommend modification to the TP effluent limit to 0.05 mg/L for all phases, and that the previously required nutrient sampling be performed.

B. WHETHER THE DRAFT PERMIT INCLUDES ADEQUATE PROVISIONS TO PROTECT THE HEALTH OF THE REQUESTERS AND THEIR FAMILIES AND AQUATIC AND TERRESTRIAL WILDLIFE (ISSUE B)

1. Background

One of the purposes of the TSWQS is to "maintain the quality of water in the state consistent with public health and enjoyment."[228] This purpose has been implemented in both the narrative and numerical requirements of the TSWQS. As part of the narrative requirements, water in the state must not be toxic to humans from ingesting the water or aquatic organisms, contacting the skin, or recreating in the water.[229] In addition, surface waters must not be toxic to terrestrial life, including livestock and domestic animals, due to contacting the water or ingesting the water or aquatic organisms.[230] As part of the numerical requirements, section 307.6(d) of the TSWQS provides specific numerical human health criteria related to toxicity that also apply to livestock and wildlife.

2. Applicant's and ED's Evidence and Arguments

Applicant contends that, because the draft permit meets the requirements of the TSWQS, it provides adequate provisions to protect the health of humans and aquatic and terrestrial wildlife. Applicant witness Mr. Buzan testified that the draft permit will protect the health of aquatic life, because of the required minimum of dissolved oxygen, and the pH limits in the effluent should ensure that pH values

[228] 30 Tex. Admin. Code § 307.1; *accord* Tex. Water Code § 26.003.

[229] 30 Tex. Admin. Code §§ 307.4(b)(7), (d), .6(b)(3).

[230] 30 Tex. Admin. Code §§ 307.4(b)(7), (d), .6(b)(4).

remain within a suitable range for aquatic life.[231] Additionally, ED witness Ms. Lueg testified that the draft permit will be protective of human health because she conducted her review according to standard Commission rules and procedures.[232] She stated that the draft permit meets the minimum standards required by the TSWQS.[233]

3. Protestants' Evidence and Arguments

In contrast, the Protestants presented both expert and fact witness testimony to support their contention that the Draft Permit does not include adequate provisions to protect the health of requesters and wildlife.

The Protestants presented testimony from experts raising concerns regarding adverse effects the terms of the Draft Permit will have on aquatic life, due to the additional nutrient load and its ramifications. Dr. King stated that the phosphorous levels in the water resulting from the effluent collectively reduce dissolved oxygen and adversely affect aquatic life.[234]

Dr. Ross testified that nitrogen and phosphorous nutrients are primary causes of stream eutrophication, which can cause a shift towards growth of undesirable species, such as *Cladophora sp.* and toxic cyanobacteria.[235] The potential for cyanotoxic blooms may cause higher mortality in fish, but can also

[231] Ex. APP-12 at 12.

[232] ED-JL-1 at 5:30–6:5.

[233] ED-AM-1 at 12:5–13.

[234] Ex. SM-King at 27.

[235] Ex. SM-Ross at 22.

harm humans, pets, and wildlife who drink or swim in the water.[236] Symptoms related to cyanobacterial exposure for humans may include abdominal pain, nausea, vomiting, headache, diarrhea, sore throat, blistering, pneumonia, fever, headache, numbness, tingling, burning sensations, drowsiness, salivation, speech disturbances, and, in severe cases, death.[237]

Dr. Ross stated that, by failing to adequately limit nutrients in the proposed effluent discharge, the Draft Permit would allow water quality degradation in the River.[238] The additional nutrient load would increase the risk of cyanotoxins in the water from the proliferation of cyanobacteria, especially due to the high potential for no or minimal dilution below the discharge point because of low- or no-flow conditions.[239]

The residents also testified regarding their concerns about exposure to water from the River and what they have observed regarding the presence of wildlife in and around the River. Mr. Engelke prevented his children and grandchildren from going into the River, due to concerns regarding *E. coli* levels in the water, a concern which he did not previously have.[240]

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[236] Ex. SM-Ross at 28.

[237] Ex. SM-Ross at 22.

[238] Ex. SM-Ross at 28.

[239] Ex. SM-Ross at 28.

[240] Bunnell Protestants Ex. 2 at 8.

Ms. Morris stated that she had concerns that the terms of the Draft Permit are not sufficient to protect the health of humans and terrestrial wildlife.[241] She testified that, initially, they would kayak, tube, fish, and play in the river on an almost daily basis.[242] Ms. Morris has been concerned about doing so lately, due in part to worries about microbes, chemicals, or parasites that might be in the water.[243]

Additionally, when Ms. Morris and her family first moved to the property, they would frequently see big fish, 12 to 15 inches long, in the river.[244] However, for the last several years, she has hardly seen anything other than tiny fish downstream of the outfall, and, occasionally, medium sized-fish.[245] Moreover, from 2013 to 2015, blue herons roosted near their back deck and fished in the river near their house.[246] But it has been years since she has seen the blue herons landing or fishing near their house; instead, they fly by and land upstream of the outfall.[247]

The day before the hearing, she walked in and along the river, and afterward, her legs were itching and burning from being in the river.[248] Ms. Morris testified that, at times, there is a chemical smell that is so strong that her nose burns, it

[241] Protestant Morris Initial Brief 54-56.

[242] Ex. SM-Morris at 5.

[243] Ex. SM-Morris at 16.

[244] Ex. SM-Morris at 11.

[245] Ex. SM-Morris at 11.

[246] Ex. SM-Morris at 12.

[247] Ex. SM-Morris at 12.

[248] Tr. at 56.

makes it difficult to breathe, and results in a headache and congestion for hours afterwards.[249]

4. OPIC's Position

OPIC asserts that the weight of the evidentiary record supports a finding that the draft permit that the current conditions are not conducive to sustaining aquatic life and territorial wildlife, pointing to the additional nutrient load referenced by Dr. Ross and Dr. King's testimony regarding the current conditions in the river.[250]

5. ALJs' Analysis

While Protestants raise concerns regarding the discharge's adverse effects on the health of humans and wildlife and specific instances of experienced ill-effects, they have not shown that those effects translate into adverse impacts sufficient to demonstrate that Applicant has not met its burden of proof. Therefore, Protestants have not rebutted the prima facie demonstration on this issue. Accordingly, the ALJs conclude that the record supports a finding that the proposed discharge will not adversely impact the health of the requesters and their families.

[249] Tr. at 55.

[250] OPIC Initial Brief at 13-14.

C. NUISANCE ISSUES (ISSUES C AND I)

1. Whether the draft permit adequately addresses nuisance conditions, including odor, in accordance with 30 TAC § 309.13(e) (Referred Issue C)

a) Background

To prevent any odors that a wastewater treatment facility may emit from becoming a nuisance to nearby properties, 30 Texas Administrative Code section 309.13(e) requires a permit applicant to comply with one of three options for abating nuisance odors:

- A 500-foot buffer zone to the nearest property line for lagoons with zones of anaerobic activity, or a 150-foot buffer zone to the nearest property line for all other wastewater treatment plant units;
- Implementation of an approved nuisance odor prevention plan; or
- An enforceable restriction against constructing residential structures within any part of a buffer zone not owned by the plant.

This requirement applies to the location of domestic wastewater treatment facilities,[251] with the aim of minimizing the possibility of exposing the public to nuisance conditions.[252]

[251] 30 Tex. Admin. Code § 309.10(a).

[252] 30 Tex. Admin. Code § 309.10(b).

b) Applicant's and ED's Evidence and Arguments

Applicant witness Mr. Laughlin contends that the draft permit meets the requirements of 30 Texas Administrative Code section 309.13(e), and, thus, it adequately addresses nuisance conditions.[253] He stated that no wastewater treatment plant units are located within 150 feet to the nearest property line.[254] Laughlin confirmed that there are no lagoons with zones of anaerobic activity at the plant site, so the buffer zone of 500 feet that is required for these types of lagoons does not apply to this application.[255] He notes that the rule does not require any additional odor abatement controls.[256]

Mr. Laughlin argued that the Applicant goes even further of its own volition, attempting to mitigate odors by using bioxide and an odor masking plant.[257] In addition, in 2019, the Applicant installed a scrubber unit and odor-controlling misting system at the influent headbox.[258] Currently, Applicant is planning on installing a second washer/compactor unit at the headbox in order to further address any odor issues.[259] Applicant believes that these measures are reasonable and that there should not be an issue of odor resulting from effluent at the outfall.[260]

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[253] Ex. APP-4 at 12.

[254] Ex. APP-4 at 12.

[255] Ex. APP-4 at 12.

[256] Ex. APP-4 at 12.

[257] Tr. at 422.

[258] Ex. APP-4 at 12.

[259] Ex. APP-4 at 12.

[260] Ex. APP-4 at 13.

Applicant witness David Thomison, the Applicant's wastewater treatment superintendent, testified that there is no odor at the plant.[261] However, if there is any odor at the plant, it is because of what individuals are putting down their drains, resulting in organics, grease, and fats that Applicant attempts to process.[262] Mr. Thomison recommended that public education on what individuals pour down the drain would greatly aid in the Applicant's attempts to process the wastewater and improve the odor.[263]

Applicant argued that the Protestants only raised generalized concerns regarding "the potential for nuisance odors," and that they fail to take into consideration any actions Applicant has been taking in order to mitigate any odors emanating from the treatment plant.[264]

ED takes the position that no evidence was presented illustrating any issue with odor control or that the draft permit fails to comply with applicable requirements regarding nuisance odors.[265] ED witness Mr. Martinez testified that the draft permit adequately addresses nuisance odors.[266] Moreover, since the

[261] Tr. at 422.

[262] Tr. at422–424.

[263] Tr. at 423–424.

[264] Applicant Initial Brief at 15.

[265] ED Initial Brief at 6.

[266] Ex. ED-AM-1 at 12.

Applicant will own the buffer zone, it will comply with 30 Texas Administrative Code section 309.13(e).[267]

c) Protestants' Evidence and Arguments

Protestants argue that the rule requirements are only the minimum design criteria and that additional protections are necessary in the draft permit, due to testimony regarding nuisance odors at and around the outfall, and downstream from the outfall.[268] Additionally, Protestants assert that there will be anaerobic activity in within the 500-foot buffer zone, and that there are no provisions to enclose the particularly odorous units at the plant.[269]

Mr. Engelke testified that the river smells when algae remain on the rocks in the sun and begin rotting, resulting in a "stink."[270] Mr. Bunnell stated that the smell originating from the river reminded him of what it smelled like when he cleaned out barns when he was a child, likening it to "lots of big, fat, stinky cows."[271]

Ms. Morris testified as to the "stinky, bubbling muck" that results from stirring up sediment from the riverbed.[272] In addition to decaying algae, she inhaled a "gaseous chlorine smell" when she ventured up the river, closer to the outfall, to

[267] Ex. ED-AM-1 at 12.

[268] Protestant Morris Initial Brief at 57-58.

[269] Protestant Morris Initial Brief at 58.

[270] Tr. at 97.

[271] Tr. at 117-118.

[272] Tr. at 45.

investigate the source of foam she saw in the river.[273] Sometimes, this chemical smell is so strong that it elicits a burning sensation in her nose and causes congestion for hours afterwards, in addition to a headache.[274]

d) OPIC's Position

OPIC argued that the draft permit does not adequately address nuisance odor, referring to the testimony from the Protestants.[275] It contended that the records support a conclusion that renewal of the permit will result in continued algae growth, contributing to the nuisance odor complained of by the Protestants.[276]

e) ALJs' Analysis

This referred issue solely addresses whether Applicant meets the Commission's requirements established in 30 Texas Administrative Code section 309.13(3), regarding compliance requirements to abate and control nuisance conditions, including odor. This applies specifically to minimum standards for the location of domestic wastewater treatment facilities.[277] Evidence presented regarding nuisance odors not in the immediate vicinity of the plant will be addressed in the next section, on Referred Issue I.

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[273] Tr. at 50.

[274] Tr. at 55.

[275] OPIC Initial Brief at 15.

[276] OPIC Initial Brief at 15.

[277] 30 Tex. Admin. Code § 309.10(a).

The ALJs find that Applicant provides sufficient evidence that it meets the requirements of 30 Texas Administrative Code section 309.13(e) because no wastewater treatment plant units are located closer than 150 feet to the nearest property line. Additionally, there are no lagoons with zones of anaerobic activity at the plant site, so the requirement of a 500-foot buffer zone does not apply. Applicant has also been proactively taking additional steps, such as installing a scrubber unit and odor-controlling misting system.

2. Whether the draft permit includes adequate provisions to protect the requesters' use and enjoyment of their property (Referred Issue I)

a) Background

Generally, Protestants contend that because the terms of the current permit already adversely affect their use and enjoyment of their property, adoption of the Draft Permit would only exacerbate the situation. Applicant takes the position that, because the Draft Permit meets the technical requirements of the rule, the Protestants' use and enjoyment of their land will not be affected, regardless of testimony otherwise.

b) Applicant's and ED's Evidence and Arguments

Applicant and the ED argued that the Protestants' use and enjoyment of their respective properties will not be affected by the modifications proposed in the Draft Permit because they meet the requirements of the rules.[278] The ED added

[278] Applicant Initial Brief at 16; ED Initial Brief at 6-7.

that the Draft Permit includes provisions requiring a third-party operator and maintenance of the facility in order to improve compliance.[279]

Applicant witness Mr. Laughlin testified that the language in the draft permit does not allow the permit holder to create or maintain a nuisance that interferes with a landowner's use and enjoyment of his or her property.[280] He also took the position that, as long as there is no adverse effect on human health or the environment, and as long as water quality is maintained, residents should not experience any adverse effects on their use and enjoyment of their respective properties.[281]

ED witness Mr. Martinez, the TCEQ permit coordinator, testified that in his professional opinion, because the Draft Permit meets the rule's requirements, the Protestants' use and enjoyment of their property will not be curtailed.[282]

Applicant also maintained that the Protestants rely on conjecture and unvetted studies to support their position that the algae growth in the river is due to effluent from the outfall.[283]

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[279] ED Initial Brief at 6-7.

[280] APP-3 at 18.

[281] Ex. APP-3 at 18-19.

[282] Applicant Initial Brief at 16-17.

[283] Applicant Initial Brief at 16.

c) Protestants' Evidence and Arguments

(i) David Bunnell

Mr. Bunnell and his wife bought their house in 2017, so they could live closer to their three daughters and their families, including a total of seven grandchildren.[284] They routinely hosted church events at their home and provided shelter for new pastors moving to the area.[285] Mr. Bunnell's home is located 3.83 miles downriver from the outfall.[286]

Previously, Mr. Bunnell would swim in the river, go tubing, and fish.[287] However, after the Applicant began increasing its effluent discharged into the river, he has noticed more algae growth in the river, including in the form of algal mats, to the point where the river is "constantly contaminated with algae."[288] Mr. Bunnell considers the river "completely unusable" now, due to the constant algae growth.[289]

(ii) Andrew Engelke

Mr. Engelke and his wife purchased their home in 2015, to have a central homestead where immediate and extended family could enjoy "family life together

[284] Bunnell Protestants Ex. 1 at 3.

[285] Bunnell Protestants Ex. 1 at 3.

[286] Bunnell Protestants Ex. 1 at 3.

[287] Bunnell Protestants Ex. 1 at 4.

[288] Bunnell Protestants Ex. 1 at 4.

[289] Bunnell Protestants Ex. 1 at 5.

by the San Gabriel River."[290] Initially, they would sit by the river on an almost daily basis, in order to enjoy the local flora and fauna.[291] Mr. Engelke's wife is an amateur photographer, and she enjoyed the play of light on the river and the natural setting in their backyard.[292]

However, in spring of 2018, Mr. Engelke began noticing algal blooms growing in the river on a daily basis.[293] The algal blooms reach their property upstream of the outfall.[294] The Applicant's remediation efforts of spraying and scrubbing result in algae, fecal matter, and scum reaching their property.[295] Mr. Engelke experiences a "horribly, swampy smell" that results from the algae rotting and decaying.[296] There are no longer any crayfish to catch, and the schools of small fish have greatly diminished.[297]

(iii) Dr. Susan Harkins

Dr. Harkins and her husband purchased their home in 2007.[298] They intended for it to be their "forever home," a permanent homestead to set down

[290] Bunnell Protestants Ex. 2 at 2.

[291] Bunnell Protestants Ex. 2 at 2.

[292] Bunnell Protestants Ex. 2 at 2.

[293] Bunnell Protestants Ex. 2 at 4.

[294] Bunnell Protestants Ex. 2 at 4.

[295] Bunnell Protestants Ex. 2 at 4.

[296] Bunnell Protestants Ex. 2 at 4.

[297] Bunnell Protestants Ex. 2 at 4.

[298] Bunnell Protestants Ex. 3 at 2.

roots after moving for 26 years with the military, seven years living in Pittsburgh, and six years residing in Round Rock.[299]

When Dr. Harkins purchased the house, the river was pristine and algae-free.[300] She and her husband would swim in the river and enjoy being in the outdoors, and they would have friends and family over to do the same.[301] Neighbors would regularly ask to access the river by going through their property.[302] Dr. Harkins would see wildlife drinking from the river.[303]

However, in spring of 2018, Dr. Harkins began to see an increased amount of algae growth in the river.[304] She now sees algae in the river year-round, wholly preventing her from use of the river.[305] Neighbors no longer ask to access the river, no one fishes in the river, and Dr. Harkins no longer sees wildlife drinking from the river.[306] These days, Dr. Harkins only goes out to the river to assess the algae levels, rather than to swim in the river, like she used to.[307]

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[299] Bunnell Protestants Ex. 3 at 2.

[300] Bunnell Protestants Ex. 3 at 4.

[301] Bunnell Protestants Ex. 3 at 4.

[302] Bunnell Protestants Ex. 3 at 4.

[303] Bunnell Protestants Ex. 3 at 4.

[304] Bunnell Protestants Ex. 3 at 4.

[305] Bunnell Protestants Ex. 3 at 5.

[306] Bunnell Protestants Ex. 3 at 5.

[307] Bunnell Protestants Ex. 3 at 5.

(iv) Stephanie Morris

Ms. Morris and her husband moved into their property in the fall of 2014 as renters, and they purchased it in February 2015.[308] They moved into the home to provide greater access to nature for their four children.[309] She considers the river to be a part of her backyard, which she intended to use every day.[310]

Camping and recreating outdoors was a regular family activity, and they wanted to be able to do that in their new home.[311] Initially, they kayaked, went tubing, fished, and played in the river on almost a daily basis.[312] They would invite family and friends over, and the neighborhood children flocked to their house and played in the river.[313] Ms. Morris is an amateur beekeeper, and she would watch as her bees drank from the river, a peaceful experience for her.[314] She would watch as larger fish and birds accessed the stream.[315] During their first year, Ms. Morris and her family hosted gatherings, including a Fourth of July party where guests went tubing, and hosted their church book club, where participants would sit in chairs by the riverbed and discuss books and future church events.[316]

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[308] Ex. SM-Morris at 4.

[309] Ex. SM-Morris at 4.

[310] Tr. at 48.

[311] Ex. SM-Morris at 5.

[312] Ex. SM-Morris at 5.

[313] Ex. SM-Morris at 5-6.

[314] Ex. SM-Morris at 15.

[315] Ex. SM-Morris at 10-12.

[316] Ex. SM-Morris at 14.

Now, Ms. Morris does not use the river as she used to, due mostly to excessive algae growth and the odor.[317] She would not intentionally set foot in the river, with what she considers to be ever-worsening conditions.[318] The algae is always present now, from the outfall until approximately a mile-and-a-half downstream,[319] unless there is a flood event that scours the riverbed.[320] One cannot walk or swim in the river without encountering algae, which she estimates to cover 70% of the surface, and 80% under the water, most of the time.[321]

In addition to the algae, Ms. Morris began noticing "millions" of tiny snails at the outfall starting in early 2020, then, later, also below the outfall.[322] Eventually, the snails became so numerous that she could not walk in the riverbed without hearing the crunch of snails with every step.[323] They fill her shoes and poke into her feet like stickers.[324]

The algal mats that cover the surface obscure visibility through the water down to the riverbed, making it difficult and unpleasant to traverse the river.[325] In some areas, it is difficult to walk alongside the river, because it is relatively

[317] Ex. SM-Morris at 9.

[318] Tr. at 48.

[319] Tr. at45.

[320] Ex. SM-Morris at 9.

[321] Ex. SM-Morris at 9.

[322] Ex. SM-Morris at 10.

[323] Ex. SM-Morris at 11.

[324] Tr. at42.

[325] Ex. SM-Morris at 9.

undeveloped.[326] So, Ms. Morris resorts to attempting to wade through the river, even though she tried in multiple locations to not step foot in the water.[327] She stated:

> I tried, I tried multiple locations to not be in it, but I did end up having to go through deeper areas and being up to my neck in that just nasty, just in 18 inches or so of muck I could feel around my – up to my knees at the bottom; and, of course, still the snails and algae floating at the top. It was very unpleasant that I would not like to do that ever again.

In some areas, there is a "stinky, bubbling muck"[328] and what looks like "floating turds on the surface of the water."[329] The "muck" lies below the slippery mixture that now covers the limestone at the bottom of the riverbed.[330] When the muck is stirred up, it releases an order that smells of decay.[331] This smell carries to Ms. Morris's house, and, when she smells the odor, she feels nauseated and experiences a persistent headache afterward.[332]

With the current conditions, Ms. Morris can no longer have her children and dog play in the riverbed unsupervised, if they do at all.[333] Her adult children hesitate to even come spend time on the property.[334] At one point, her youngest

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[326] Tr. at42–43.

[327] Tr. at43.

[328] Tr. at45.

[329] Tr. at46.

[330] Ex. SM-Morris at 9.

[331] Ex. SM-Morris at 10.

[332] Ex. SM-Morris at 10.

[333] Ex. SM-Morris at 14.

[334] Ex. SM-Morris at 14.

child invited his middle school friends over, but his friends were disgusted by the conditions.[335]

d) OPIC's Position

OPIC referred to the Protestants' testimony regarding how the current conditions affect their use and enjoyment of their property.[336] In particular, OPIC referred to how they cannot enjoy any activities in their backyards, and how Ms. Morris stated that she cannot walk or swim in the river because of the continued presence of excessive algae.[337]

As a result, OPIC argued that the draft permit does not include adequate provisions to prevent odor or other nuisance conditions that interfere with the use and enjoyment of property.[338]

e) ALJs' Analysis

Protestants contend that effluent from the outfall from the wastewater treatment facilities causes and contributes to algal growth, and that prohibits them from using and enjoying their respective properties in the way that they previously did.[339] They presented exhaustive testimony as to the ways in which the proliferation of algae affects their enjoyment of their property: they can no longer

[335] Ex. SM-Morris at 15.

[336] OPIC Initial Brief at 15.

[337] OPIC Initial Brief at 15.

[338] OPIC Initial Brief at 15-16.

[339] Protestant Morris Initial Brief at 60-61; Bunnell Protestants Initial Brief at 5.

swim in the river, they cannot go tubing or kayaking with their families, and they cannot host Fourth of July parties with friends and family, among other activities. Given the testimony from residents that along the river, one would be hard-pressed to state that the Protestants have been able to continue to use and enjoy their properties in the way that they did when they first moved in, and that they would be able to do so with the terms included in the draft permit.

Applicant referred to boilerplate language in the draft permit that it does not authorize and invasion of personal rights.[340] However, bare recitation of language does not necessarily effectuate it in practice. Protestants cannot wade through the river without encountering tiny snails, algal mats, and "stinky, bubbling muck," which, arguably, interferes with the enjoyment of the wonders of nature.

Thus, the ALJs find that the draft permit fails to include adequate provisions to protect the requestors' use and enjoyment of their property.

[340] Applicant Initial Brief at 17.

D. COMPLIANCE HISTORY AND REGIONALIZATION POLICY (ISSUES E AND F)

1. Whether the draft permit should be denied or altered based on the Applicant's compliance history (Referred Issue E)

a) Background

The Commission will use a plant's compliance history when making decisions regarding an amendment to that plant's permit.[341] The compliance history consists of several components, including, but not limited to, any final enforcement orders relating to compliance with applicable legal requirements, chronic excessive emissions events, dates of investigations, and participation in a voluntary pollution reduction program, amongst other factors.[342]

The Commission shall consider a plant's compliance history when deciding whether to amend a permit by evaluating the aggregate compliance history and classification, especially considering patterns of environmental compliance.[343]

During the review of any application for a new, amended, modified, or renewed permit, the ED or Commission may require permit conditions or provisions to address any concerns with an applicant's compliance history.[344] Moreover, while unsatisfactory performers are subject to any additional oversight

[341] 30 Tex. Admin. Code § 60.1(a)(1)(A).

[342] 30 Tex. Admin. Code § 60.1(c)(1).

[343] 30 Tex. Admin. Code § 60.3(a)(1)(B).

[344] 30 Tex. Admin. Code § 60.3(a)(2).

necessary to improve environmental compliance,[345] that categorical requirement is not necessary to address permit conditions or provisions for applicants that are not categorized as unsatisfactory performers.[346]

b) Applicant's and ED's Evidence and Arguments

The ED reviewed the compliance history for both the Applicant and the site for the five-year period before the date that TCEQ received the Application.[347] Both Applicant and the ED assert that, because Applicant's current compliance score categorizes it in the "satisfactory performer" category, the Draft Permit should not be denied or altered based on the Applicant's compliance history.[348]

ED witness Mr. Martinez testified that the Applicant had a compliance score of 17.29 as of the time of the Application, on May 24, 2019,[349] but as of September 1, 2021, its current compliance score jumped to 42.14.[350] The threshold for categorization as an unsatisfactory performer is a compliance score of 55 or above.[351] Additionally, Mr. Martinez testified that his team believed that it was necessary to require that Applicant enter into a contract with a third-party contractor to operate the Facility, due to the history of Applicant's violations.[352]

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[345] 30 Tex. Admin. Code § 60.3(a)(2).

[346] 30 Tex. Admin. Code § 60.3(a)(2).

[347] Applicant Ex. 5 at 7.

[348] Applicant Initial Brief at 18-19; ED Initial Brief at 7-8.

[349] ED-AM-1 at 9; Applicant Ex. 5 at 8.

[350] ED-AM-1 at 9; Applicant Ex. 5 at 8.

[351] Tr. Vol. 2 327:1-5.

[352] Tr. Vol. 2 558:18-24.

Applicant witness Paul Sarahan testified that, in his opinion, the key factor in considering the compliance history is the compliance score, and whether the applicant is categorized as a "satisfactory" or "unsatisfactory" performer.[353] Applicant argued that, because its most recent compliance score is 42.14, categorizing it as a "satisfactory" performer, denying or altering the Draft Permit on the basis of Applicant's compliance history would not be appropriate.[354] In Mr. Sarahan's experience, the Commission has considered altering provisions in a draft permit only in situations where the applicant has an "unsatisfactory" compliance score.[355] However, he acknowledged that the Commission has the authority to alter the provisions in the Draft Permit in this proceeding.[356]

c) Protestants' Evidence and Arguments

Protestants point to a minimum set of factors set in statute,[357] and expanded upon by rule, as what should be considered when looking at Applicant's compliance history, not just an applicant's compliance score.[358] As part of those considerations, Protestants raise the fact that fifteen administrative orders were issued against the Applicant from August 22, 2018, to February 28, 2022.[359] From September 30, 2016, to February 28, 2022, the Applicant also received 60 notices of violation, ranging from failing to properly operate and maintain the facility, to

[353] Ex. APP-5 REVISED at 7; *also see* 30 Tex. Admin. Code § 60.2(a) for classifications.

[354] Applicant Initial Brief at 18-19.

[355] Tr. at 327.

[356] Tr. at 325–326.

[357] Protestant Morris Initial Brief at 63.

[358] Protestant Morris Initial Brief at 63.

[359] Bunnell Protestants Ex. 1-5.

the failure to meet the limit for one or more permit parameter.[360] Protestants request that the full compliance history be taken into account, especially given Applicant's numerous notices of violation.

Protestants also provided testimony regarding their concerns about the administrative orders and notices of violation issued against Applicant.

Mr. Bunnell expressed unease regarding the notices of violation the Applicant has received, amounting to what he perceives to be an inability to comply with permit conditions.[361] One specific violation directly affected Mr. Bunnell's property, as the order referenced exceedances from the outfall that facilitated growth of algal blooms, algae, and algal mats 3.6 miles downstream from the outfall.[362] As noted above, Mr. Bunnell's property is located 3.86 miles downstream from the outfall.[363] Mr. Engelke testified that he worried about the Applicant's compliance with permit requirements, as they had previously been cited by TCEQ for failure to comply with *E. coli* levels.[364]

Ms. Morris testified that she was concerned about the Applicant's history of permit violations, including unauthorized discharges and *E. coli* levels.[365] She

[360] Bunnell Protestants Ex. 1-9.

[361] Bunnell Protestants Ex. 1 at 7.

[362] Bunnell Protestants Ex. 1 at 7; also see Ex. 1-7.

[363] Bunnell Protestants Ex. 1 at 3.

[364] Bunnell Protestants Ex. 2 at 3.

[365] SM-Morris-1 at 18.

referred to the list of permit violations,[366] as well as to witnessing and reporting multiple solids discharges.[367] A TCEQ investigator taught her how to look for blood worms, since they are an indicator of new, "fresh" solid discharges, which should be reported to TCEQ as a potential violation of the permit.[368]

Protestants argued that Applicant's poor compliance history, especially its numerous administrative orders and notices of violation, weighs in favor of inserting additional terms to the Draft Permit, in order to ensure future compliance.

d) OPIC's Position

OPIC took the position that the Applicant's compliance score is not dispositive as to whether the Draft Permit should be denied or altered based on the Applicant's compliance history.[369] It argued that TCEQ may consider the entirety of an applicant's compliance history when evaluating an application to renew a permit, and the compliance history is not limited to just the compliance score.[370] Moreover, in a contested case hearing, any party may submit information regarding an applicant's compliance history, including the underlying components of classifications.[371]

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[366] *See* SM-Morris-5 and SM-Morris-6.

[367] SM-Morris-1 at 17.

[368] SM-Morris-1 at 18.

[369] OPIC Initial at 17.

[370] OPIC Initial at 17; *see* 30 Tex. Admin. Code § 60.3(4)(A)(i).

[371] OPIC Initial at 17; *see* 30 Tex. Admin. Code § 60.3(g).

e) ALJs' Analysis

Applicant and ED focus solely on the Applicant's compliance score in evaluating whether the Draft Permit should be denied or altered on that basis, concluding that, because Applicant has a compliance score that categorizes it at as a "satisfactory" performer, its compliance history is of no consequence.

The ALJs disagree. First, the rule clearly states that TCEQ may alter the provisions of a draft permit, and there is no language stating that doing so is limited only to applicants categorized as "unsatisfactory" performers.

Second, the rule provides that there are several components to an applicant's compliance history, all of which must be considered when deciding whether to grant an amendment to a permit, including final orders and investigations, among other considerations. Fifteen administrative orders were issued against the Applicant from August 22, 2018, to February 28, 2022.[372] This includes one classified as a major violation, where the Applicant failed to take all reasonable steps to minimize or prevent the unauthorized discharge that has a reasonable likelihood of adversely affecting human health or the environment.[373] Specifically, in one administrative order issued on June 20, 2020, the Commission found that nutrient exceedances contributed to and facilitated the proliferation of algae near Mr. Bunnell's property.[374] From September 30, 2016, to February 28, 2022, the Applicant received 60 notices of violation, ranging from

[372] Bunnell Protestants Ex. 1-5.

[373] Bunnell Protestants Ex. 1-5.

[374] Bunnell Protestants Ex. 1-7.

failing to properly operate and maintain the facility, to the failure to meet the limit for one or more permit parameter.[375]

Finally, even if the ALJs were to only consider the Applicant's compliance score, that score jumped from 17.29 to 42.14 in just two years, which would give anyone pause, especially considering the fact that Applicant is in the midst of renewal of a draft permit.

Considering the fact that their arguments run contrary to the rules, the ALJs reject the Applicant's and ED's contention that the compliance score is the dispositive factor in considering an applicant's compliance history. Additionally, there is ample evidence to justify denying or altering the Draft Permit based on a review of the compliance history, as set out in the rule, not just the compliance score. Applicant received notices of violation for a range of events, including those that align with Protestants' concerns regarding this Application, such as whether Applicant has the ability to currently operate and maintain the facility and exceedances. Amendment of the Draft Permit to include additional terms tailored to address Applicant's past violations could provide added constraints and levels of oversight in order to help ensure future compliance. Thus, additional terms to the draft permit are warranted.

[375] Bunnell Protestants Ex. 1-9.

2. Whether the draft permit should be denied or altered in consideration of the need for the facility in accordance with Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options (Referred Issue F)

a) Background

The policy of Chapter 26 of the Texas Water Code is to encourage and promote the development and use of regional and areawide waste collection, treatment, and disposal systems.[376] Texas Water Code section 26.0282 gives TCEQ permissive authority to "deny or alter the terms and conditions of the proposed permit, amendment, or renewal based on consideration of need, including the expected volume and quality of the influent and the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems."

b) Applicant's and ED's Evidence and Arguments

Applicant contended that everyone agreed that there is a population explosion in the area served by the Facility.[377] Thus, it argued, the Draft Permit needs to be approved in order to serve increased demand warranted by the population growth.[378]

ED witness Mr. Martinez testified as to the rule's requirements, explaining that the application must demonstrate how the proposed flows were derived and provide the following: anticipated growth rate in the proposed service area,

[376] Tex. Water Code § 26.003.

[377] Applicant Initial Brief at 19-20.

[378] Applicant Initial Brief at 20.

estimated wastewater generation rate, estimated construction start date for the proposed facility, estimated start date for effluent disposal, and proposed phasing of the facility.[379] Even so, he stated that, since this is a renewal application, there is no requirement to justify need.[380] In the event that need is to be established, Mr. Martinez testified that Applicant has demonstrated that it "absolutely needs it."[381]

Applicant witness Mr. Thomison testified that increased development drove the need to request to add the interim phase in the draft permit, but that it is not yet at the 4.0 MGD level.[382] However, he stated that the plant is only receiving approximately 1.4 to 1.5 MGD a day, which is well below the current limit of 20 percent above 2 MGD a day.[383] Mr. Thomison asserted that there is no problem with being able to treat the current incoming influent or future levels of influent.[384]

c) Protestants' Evidence and Arguments

Generally, Protestants recognized the area's need for wastewater treatment.[385] However, the Bunnell Protestants argued that the Draft Permit should limit the maximum daily average flow of effluent to 2.0 MGD to align with

[379] ED-AM-1 at 10.

[380] ED-AM-1 at 10.

[381] ED-AM-1 at 10.

[382] Ex. APP-9 at 6.

[383] Tr. at 430.

[384] Tr. at 430.

[385] Bunnell Protestants Initial Brief at 6.

the need for the Facility.[386] Additionally, they proposed an alternative: a permit to direct a small portion of its effluent to reuse applications.[387] Finally, the Bunnell Protestants asserted that the Draft Permit should be amended to provide a deadline by which Applicant would be required to enter into a contract with a third-party operator to operate the facility on its behalf.[388]

Ms. Morris did not present any argument or evidence that the Draft Permit should be denied or altered to promote utilization of another regional plant.[389] However, she argued that she does oppose the renewal of the permit with the final phase of 4.0 MGD, citing testimony from Applicant's witness that the current total capacity of 2.4 MGD is sufficient.[390] Ms. Morris supports a change to the draft permit to amend the language to state that the final phase should be limited to 2.4 MGD.[391]

d) OPIC's Position

OPIC did not present any evidence or submit any arguments on this issue.

e) ALJs' Analysis

Protestants argued for alterations to the terms of the Draft Permit. One is an alternative in the form of a permit to reuse/land apply the effluent. However, the

[386] Bunnell Protestants Initial Brief at 6.

[387] Bunnell Protestants Initial Brief at 6.

[388] Bunnell Protestants Initial Brief at 5.

[389] Protestant Morris Initial Brief at 62-63; Protestant Morris Reply Brief at 21.

[390] Protestant Morris Reply Brief at 21.

[391] Protestant Morris Reply Brief at 21.

Protestants failed to present sufficient evidence of that option as a viable alternative.

The second recommendation for an alteration is to set the total capacity to 2.4 MGD for the final phase if the Draft Permit is approved. Protestants argued that Applicant has not sufficiently established that a level of 2.4 MGD would not serve its current and more immediate future needs, referring to testimony from Applicant's witness. However, given that no party contests that the population in the surrounding area continues to grow, it is reasonable for Applicant to include a discharge limit higher than what it currently treats, and have a certain amount of a buffer on top of that, in order to meet anticipated demand in the near future.

Thus, Protestants failed to rebut the presumption that Applicant requires the level requested in the draft permit, and the ALJs do not recommend that the draft permit be denied or altered in consideration for need for the facility.

E. Facility management and monitoring (issues h and j)

1. Whether the draft permit requires adequate licensing requirements for the operator of the facility and adequate requirements regarding operator supervision (Referred Issue H)

a) Background

Under 30 Texas Administrative Code section 30.350(d), a wastewater treatment facility shall employ or contract with (a) one or more licensed facility

operators holding the appropriate level of license or (b) wastewater system operations companies holding a valid registration that employ licensed wastewater treatment facility operators holding the appropriate level of license. A domestic wastewater treatment facility that uses an activated sludge treatment system with a permitted daily average flow of 1.0 to 10.0 MGD is classified as Category B.[392] The chief operator of a Category B system must have a license equal to or higher than that of the category of the treatment facility.[393]

Under "Other Requirements" in the Draft Permit, Item No. 2 requires Applicant to enter into a contract with a third-party company that holds a valid registration in accordance with the relevant requirements.[394]

b) Applicant's and ED's Evidence and Arguments

Applicant witness Mr. Laughlin testified that the permit requires at least a Class B operator, which he believed is appropriate, especially due to the automation and technical support provided with MBR systems, such as what Applicant has at its plant.[395] He stated that a Class B operator has the capability of operating the plant, with the manufacturer's support.[396] Mr. Laughlin noted that the current operator, Mr. Thomison, has both a Category A wastewater operator license and Category A water operator license.[397]

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[392] *See* Figure 30 Tex. Admin. Code § 30.350(e).

[393] 30 Tex. Admin. Code § 30.350(i).

[394] *See* 30 Tex. Admin. Code § 30.350(d).

[395] Ex. APP-3 at 18.

[396] Ex. APP-3 at 18.

[397] Ex. APP-3 at 18.

ED witness Mr. Martinez testified that a third-party operator is a mechanism for ensuring compliance at a wastewater treatment facility.[398] At hearing, he testified:

> And so when we looked at all these and heard about all the violations and everything, I mean, it was reviewed, it came to a determination that we felt more comfortable that a third-party company should be brought in to begin operating the City's wastewater treatment plant when were initially dealing with this draft permit.[399]

As discussed above, in Referred Issue E, regarding whether the Draft Permit should be altered based on Applicant's compliance history, Mr. Martinez determined that, given Applicant's history of violations and the turnover of operators at the facility, the addition of a third-party operator would be appropriate.[400] Mr. Martinez noted that it was not a common requirement included in permits, but the Commission will impose that requirement if there is a concern due to the applicant's compliance history.[401] He testified that, if the Draft Permit were to be issued today, they should already have entered into a contract with the third-party operator and be able to provide all relevant information to the parties that are required to be notified, such as the Commission and the regional office.[402] He stated that, as of the date of his testimony at trial, he had not received any

[398] Tr. at 557-558.

[399] Tr. at 558.

[400] Tr. at 558.

[401] Tr. at 562.

[402] Tr. at 563-564.

correspondence from Applicant regarding whether it was in negotiations with any potential third-party contractors.[403] Mr. Martinez confirmed that, if Applicant had not yet entered into a contract with a third-party operator upon the issuance of the Draft Permit, it would already be in violation of that particular requirement of the Draft Permit.[404]

Mr. Thomison began working at the Facility on June 28, 2021.[405] Four out of the 60 notices of violation were issued after he began working at the Facility.[406]

c) Protestants' Evidence and Arguments

Protestants argued that, although the rule only requires that a Category B license holder operate the facility, the Draft Permit should go beyond the minimum and require the chief operator of the facility to hold a Category A license to ensure future compliance.[407] In support, Protestants refer to Applicant's compliance history and notices of violation. Moreover, although Mr. Thomison, a double-AA license holder, currently operates the facility, he may leave his position, and then Applicant would only be required to hire someone with a Category B license as his replacement.[408]

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[403] Tr. at 564.

[404] Tr. at 564-565.

[405] Tr. Vol. 2 427:3.

[406] Bunnell Ex. 1-9.

[407] Protestant Morris Initial Brief at 68-69.

[408] Protestant Morris Initial Brief at 72.

Since the Draft Permit includes a requirement for Applicant to enter into a contract with a third-party operator, Protestants also recommend requiring the third-party operator to have a Category A license as well.[409] In addition to the inspection reports detailed in Item No. 6 of the "Other Requirements" section of the Draft Permit, Protestants recommend requiring the third-party operator to include the following information: (1) a minimum frequency of effluent monitoring for at least twice a month of all effluent characteristics already included in the draft permit; and (2) the third-party operator's results in calculating daily averages reported as part of Applicant's discharge monitoring report or monthly effluent report.[410]

d) OPIC's Position

OPIC acknowledged that the rule requires a Class B operator license for Applicant's facility size.[411] However, because of Applicant's compliance issues and the fact that there is no guarantee that Mr. Thomison will stay employed with Applicant, OPIC recommended amending the draft permit to require that the facility be operated by an individual holding a Class A license.[412]

e) ALJs' Analysis

The Commission has the authority to amend the Draft Permit to include additional terms, as it has with requiring Applicant to enter into a contract with a

[409] Protestant Morris Initial Brief at 72.

[410] Protestant Morris Initial Brief at 72-73.

[411] OPIC Initial Brief at 19.

[412] OPIC Initial Brief at 19.

third-party operator. Accordingly, the ALJs recommend that the Draft Permit be amended to require that the plant be operated by a Class A license holder. As discussed in a previous section, Applicant has had numerous administrative decisions and notices of violation issued against it, even recently, covering a range of issues. Moreover, although Applicant was touting the fact that its compliance score categorizes it as a "satisfactory" performer, its compliance score jumped from 17.29 to 42.14 in just a year and a half, during the pendency of this application. ED's witness even had concerns with Applicant's compliance history and turnover amongst operators. However, even given that, the frequency with which Applicant was issued notices of violation greatly decreased after it employed Mr. Thomison, a double-AA operator, to run the Facility. Thus, even though the rule only requires a Class B operator, Protestants' recommendation of requiring a Class A license holder (for facility operators and the third-party operator) and imposing certain obligations upon a third-party operator are reasonable.

2. Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements (Referred Issue J)

a) Background

The issue of whether the draft permit includes sufficient monitoring and reporting requirements is tied to Applicant's compliance history and whether the Draft Permit appropriately addresses its capabilities of ensuring compliance.

b) Applicant's and ED's Evidence and Arguments

Applicant and ED both argued that Applicant established that the Draft Permit includes sufficient monitoring and reporting requirements.[413] ED witness Mr. Martinez testified that the monitoring and reporting requirements included in the draft permit are stricter than those included in the current permit and they will result in providing more information to the Commission.[414]

c) Protestants' Evidence and Arguments

Protestants asserted that the draft permit does not include all appropriate and necessary requirements. They argued that Applicant's poor compliance history justifies the inclusion of additional monitoring and reporting requirements.[415] Protestants recommended amending the terms of the draft permit to include the following:

- A nutrient sampling plan mirroring language in the 2004 permit, which would conduct a study of nutrients and algal growth in the receiving stream;[416]

- Public posting and notification of certain reported information, where the Monitoring and Reporting Requirements Nos. 1 and 7a would be posted on Applicant's or public website dedicated to providing information and alerts about the wastewater treatment plant and discharge;[417]

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[413] Applicant Initial Brief at 20; ED Initial Brief at 9.

[414] Ex. ED-AM-1 at 14; *see* 30 Tex. Admin. Code § 319.19 for self-monitoring frequency requirements.

[415] Protestant Morris Initial Brief at 73.

[416] Protestant Morris Initial Brief at 74.

[417] Protestant Morris Initial Brief at 75-76.

- Continuous turbidity monitoring with opt-in alert system, where the public can opt-in to receiving a text if the turbidity of the effluent fell below a certain level;[418] and

- Signage at the outfall, where signs would be posted, in English and Spanish, warning individuals that the effluent is discharge from a municipal wastewater plant.[419]

d) OPIC's Position

OPIC did not submit any arguments on this particular issue.[420]

e) ALJs' Analysis

As discussed in other sections, Applicant has failed to meet its burden of proof to demonstrate that it consistently and sufficiently meets compliance requirements imposed by the Commission. Moreover, the Commission has the authority to amend the terms of the Draft Permit to include additional terms, depending on the applicant's compliance history. Inclusion of the additional recommended monitoring and reporting requirements will help ensure future compliance.

The ALJs agree with and adopt two of Protestants' recommendations regarding amending the draft permit to include additional monitoring and reporting

[418] Protestant Morris Initial Brief at 76-77.

[419] Protestant Morris Initial Brief at 77.

[420] OPIC Initial Brief at 19.

requirements, given Applicant's compliance history: the nutrient sampling plan[421] and public posting and notification of certain reported information.

The ALJs do not recommend requiring Applicant to perform continuous turbidity monitoring, as that was not an issue or concern that was touched on in this case. Additionally, because the effluent would already need to meet the parameters for primary contact use, signage at the outfall is unnecessary.

IV. TRANSCRIPTION COSTS

The Commission may assess reporting and transcription costs to one or more of the parties participating in a proceeding, and when doing so, must consider the following factors:

> (A) the party who requested the transcript;
> (B) the financial ability of the party to pay the costs;
> (C) the extent to which the party participated in the hearing;
> (D) the relative benefits of the various parties of having a transcript;
> . . . [and]
> (G) any other factor which is relevant to a just and reasonable assessment of costs.[422]

[421] *See* Applicant Reply Brief at 32-33, where Applicant argued that it should not be required to perform a nutrient sampling plan because it is already performing one, which is due to be completed in October 2022. However, that argument is actually in favor of Applicant, as that would be one compliance task that could be completed soon.
[422] 30 Tex. Admin. Code § 80.23(d)(1).

Additionally, the Commission will not assess reporting or transcription costs against the ED or OPIC because they are statutory parties who are precluded by law from appealing the Commission's decision.[423]

Applicant submitted invoices for transcript costs totaling $9,797.25, covering the transcription of the hearing, two copies of the transcript prepared on a 5-day turnaround, and rough draft dailies of the transcript each day. Protestant Morris states that she had to pay $2,243.90 for a copy of the transcript in order to prepare closing arguments. She did not order a 5-day turnaround in order to save on her costs. Each of the non-agency parties, Applicant, Protestant Morris, and the Bunnell Protestants, were represented by outside legal counsel—in Protestant Morris's case, a non-profit legal aid organization that provides free legal services to low-income Texans. Both Applicant and Protestant Morris hired expert witnesses for the hearing; however, Protestant Morris notes that her experts were funded by Legal Aid.

Applicant contends that each of the non-agency parties—Applicant, Protestant Morris, and the Bunnell Protestants—participated in the hearing on the merits and benefited from the transcripts and that no party offered evidence of a financial inability to pay transcription costs. Protestant Morris notes that Applicant is attempting to allocate all of its reporting and transcriptions costs, which include same-day rough drafts which were not shared with the Protestants, and a 5-day turnaround schedule, which the Protestants were not consulted on. They add that the transcript was not shared with Protestants or filed for viewing at the Office of

[423] 30 Tex. Admin. Code § 80.23(d)(2).

the Chief Clerk of TCEQ until approximately two weeks after the hearing. Pointing to the City's poor compliance history and the extensive degradation of the River as a result of the City's discharge, Protestant Morris notes that permit renewals often do not require a contested case hearing and that the cost of holding the City accountable should not be shifted to members of the public. For these reasons, Protestant Morris disputes that she should be apportioned any transcript costs, and requests that her transcript costs be allocated to Applicant and Applicant be ordered to reimburse them. The Bunnell Protestants request that the full transcript costs be allocated to the City. OPIC and the ED take no position on cost apportionment.

In considering the factors in 30 Texas Administrative Code section 80.23(d)(1), the ALJs find that no party requested the transcript, because it was required by SOAH; the Bunnell Protestants consist of a small group of neighbors, Protestant Morris is one resident who was represented by a non-profit legal organization, whereas Applicant is a municipality; all parties equally participated in the hearing; and both parties equally benefited from having a transcript. The ALJs find the fact that Protestants prevailed in exposing deficiencies in the Draft Permit to be relevant to cost apportionment. Based on all these factors, the ALJs conclude that Applicant should bear the entire cost of the transcript and Applicant should be ordered to reimburse Protestant Morris $2,243.90 for her transcript costs.

V. CONCLUSION

This is an exceptional case. For the reasons discussed above, the ALJs find that Applicant has failed to meet its burden of proof on all referred issues, specifically on Issues A, D, E, G, H, I, and J. Accordingly, the ALJs recommend that in lieu of denial, the Draft Permit be issued after being revised to require: a TP effluent limit of 0.05 mg/L for all phases; both the operator and third-party operator to have a Class A license; a nutrient sampling plan mirroring language in the 2004 permit, which would conduct a study of nutrients and algal growth in the receiving stream; and public posting and notification of Monitoring and Reporting Requirements Nos. 1 and 7a on a public website dedicated to providing information about the wastewater treatment plant and discharge. The ALJs also recommend that all findings of fact proposed by the parties that are not contained in the Proposed Order be denied.

SIGNED October 24, 2022.

Meitra Farhadi
Administrative Law Judge

Rachelle Nicolette Robles
Administrative Law Judge

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER
GRANTING THE APPLICATION BY
CITY OF LIBERTY HILL
FOR RENEWAL OF TPDES PERMIT NO. WQ0014477001
IN WILLIAMSON COUNTY, TEXAS;
SOAH DOCKET NO. 582-22-1222;
TCEQ DOCKET NO. 2021-0999-MWD

On _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of the City of Liberty Hill (Applicant or City), for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0014477001 in Williamson County, Texas. A Proposal for Decision (PFD) was presented by Administrative Law Judges (ALJs) Meitra Farhadi and Rachelle Nicolette Robles with the State Office of Administrative Hearings (SOAH), who conducted an evidentiary hearing concerning the application on July 20-22, 2022, in Austin, Texas via Zoom videoconferencing.

After considering the PFD, the Commission makes the following findings of fact and conclusions of law.

I. FINDINGS OF FACT

Application

1. Applicant filed its application (Application) to renew its TPDES permit with the Commission on September 5, 2018.

2. The Application requested continued authorization to discharge treated domestic wastewater from a municipal wastewater treatment plant, the Liberty Hill Regional Wastewater Treatment Facility (Facility), SIC Code 4952, located approximately 8,800 feet southeast of the intersection of U.S. Highway 29 and U.S. Highway 183 in Williamson County, Texas, 78641, into the South Fork San Gabriel River (River) in Segment No. 1250 of the Brazos River Basin.

3. The Application requested continued authorization to treat domestic wastewater and discharge that treated wastewater from the proposed Facility at a daily average flow not to exceed 2.0 million gallons per day (MGD) in the interim phase, and a daily average flow not to exceed 4.0 MGD in the final phase.

4. The Executive Director (ED) of the Commission declared the Application administratively complete on November 9, 2018.

5. The ED completed the technical review of the Application, prepared a draft permit (Draft Permit) and made it available for public review and comment.

Background

6. In 2003, the Lower Colorado River Authority and the Brazos River Authority submitted the original wastewater permit application to authorize the Facility to treat, pipe, and discharge effluent directly to River.

7. The original permit authorized the discharge of proposed effluent in an Interim I phase at 0.4 MGD, Interim II phase at 0.8 MGD, and Final phase at 1.2 MGD, and with an effluent limit in all phases of 0.5 mg/L of Total

Phosphorus (TP) and an effluent reporting requirement for Total Nitrogen (TN).

8. The original permit also included language in the "Other Requirements" section of the permit requiring the permit holder to conduct nutrient input and response monitoring. This study was to evaluate the effectiveness of the discharge limitations and could result in, if warranted, the assignment of more stringent permit controls in future permit actions.

9. The permit was transferred to the City in 2012 and was subsequently amended such that the phases were an Interim I phase at 0.4 MGD, Interim II phase at 1.2 MGD, and Final phase at 4.0 MGD, with an effluent limit in the interim phases of 0.5 mg/L of TP and in the Final phase at 0.15 mg/L of TP.

10. The Draft Permit would constitute a renewal with minor amendment, in that it would authorize the continued discharge of treated wastewater effluent from the Facility directly to the River, in an Interim phase at 2.0 MGD and Final phase at 4.0 MGD, and with an effluent limit in all phases of 0.15 mg/L of TP.

Draft Permit

11. The Facility is a membrane bioreactor (MBR) facility. Treatment units in the Interim phase include an 0.8 MGD MBR facility which consists of a package headworks unit with screening, grit, and grease removal, an anaerobic tank, an anoxic tank, a pre-aeration tank, and two MBR units. The MBR plant uses the same alum feed system, ultraviolet light (UV) disinfection system, and step aeration treatment units as the previously operated sequencing batch reactor (SBR) facility. The Facility also has a sludge storage tank and a belt press sludge processing unit. A 1.2 MGD MBR facility identical to the 0.8 MGD MBR facility has been built to reach the Interim phase capacity of 2.0 MGD design flow rate. It will consist of two anaerobic tanks, two anoxic tanks, two pre-aeration tanks, and five MBR units. For the Final phase, an additional 2.0 MGD facility, identical to the Interim phase facility, will be built to bring the total plant capacity up to 4.0 MGD. In addition, the 0.4 MGD SBR facility will be decommissioned.

12. The effluent limitations in the Draft Permit are as follows for all phases or as noted:

Parameter	30-Day Average in mg/L	30-Day Average in lb/day (interim phase)	30-Day Average in lb/day (final phase)	7-Day Average mg/L	Daily Maximum mg/L
CBOD5	5	83	167	10	20
TSS	5	83	167	10	20
NH3-N	2	33	67	5	10
NO3-N	16.6	277	554	N/A	35.2
TN	Report	Report	Report	N/A	Report
TP	0.15	2.5	5	0.3	0.6
DO (minimum)	5	N/A	N/A	N/A	N/A
E. coli, CPU or MPN per 100 ml	126	N/A	N/A	N/A	399

13. In the Interim phase, the average discharge during any two-hour period (2-hour peak) shall not exceed 4,514 gallons per minute (gpm). In the final phase, the average discharge during any two-hour period (2-hour peak) shall not exceed 9,028 gpm.

14. The permittee shall utilize an UV system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the ED.

Notice and Jurisdiction

15. The Notice of Receipt of Application and Intent to Obtain Water Quality Permit was published on December 2, 2018, in the *Williamson County Sun*.

16. The Application was determined technically complete on March 12, 2020.

17. The Combined Notice of Application and Preliminary Decision and Notice of Public Meeting was published on July 15, 2020 in the *Williamson County Sun.*

18. A public meeting was held on August 17, 2020, via videoconference.

19. The public comment period ended at the close of the public meeting on August 17, 2020.

20. Sharon Cassady, Terry Ira Cassady, Stephanie Morris, Daniel Morris, and Jeff Wiles, among others, timely filed formal Public Comments and Requests for a Contested Case Hearing.

21. The ED filed its Response to Comments with the Chief Clerk on June 15, 2021.

22. On October 6, 2021, the Commission considered during its open meeting the requests for hearing and requests for reconsideration. After evaluation of all relevant filings, the Commission determined that Sharon Cassady, Terry Ira Cassady, Stephanie Morris, Daniel Morris, and Jeff Wiles were affected persons and were entitled to a contested hearing.

23. At its October 6, 2021 open meeting, the Commission determined to refer the hearing requests filed by Jon and Carolyn Ahrens, David and Louise Bunnell, Gerald and Susan Harkins, Carrol Holley, Jessica Jensen, LaWann Tull, and Mark Tummons to SOAH for a determination on whether they qualified as affected persons.

24. At its October 6, 2021 open meeting, the Commission considered the issues to be referred to SOAH.

25. On October 19, 2021, the Commission issued an Interim Order granting certain hearing requests, referring certain hearing requests to SOAH, denying certain hearing requests, and referring the Application to SOAH for a contested hearing on the following ten issues (Referred Issues):

    A) Whether the draft permit is protective of water quality, groundwater, and uses of the receiving waters of the South Fork San Gabriel River

in accordance with the Texas Surface Water Quality Standards, including recreational use and with consideration of the maximum volume of the proposed discharge;

B) Whether the draft permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife;

C) Whether the draft permit adequately addresses nuisance conditions, including odor, in accordance with 30 Texas Administrative Code § 309.13(e);

D) Whether the draft permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code § 307.4, including aquatic nutrient limitations;

E) Whether the draft permit should be denied or altered based on the Applicant's compliance history;

F) Whether the draft permit should be denied or altered in consideration of the need for the facility in accordance with Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options;

G) Whether the draft permit complies with applicable antidegradation requirements;

H) Whether the draft permit requires adequate licensing requirements for the operator of the facility and adequate requirements regarding operator supervision;

I) Whether the draft permit includes adequate provisions to protect the requesters' use and enjoyment of their property; and

J) Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

26. At its October 6, 2021, open meeting, the Commission also denied all requests for reconsideration and set the maximum duration of the hearing at 180 days from the date of the preliminary hearing until the date the PFD is issued by SOAH.

27. On February 16, 2022, notice of the preliminary hearing was published in the *Williamson County Sun*. On February 23, 2022, an amended notice of the preliminary hearing was published in the *Williamson County Sun*. Known parties received mailed notice. The notice included the time, date, and place of the hearing, as well as the matters asserted, in accordance with the applicable statutes and rules.

Proceedings at SOAH

28. On March 28, 2022, a preliminary hearing was convened in this case via videoconference by SOAH ALJ Meitra Farhadi. The following parties, represented by counsel, appeared and were admitted as parties: Applicant; the ED; Office of Public Interest Council (OPIC); and Stephanie Morris. Self-represented individuals admitted as parties were: Daniel Morris, Jeff Wiles, Jon and Carolyn Ahrens, David and Louise Bunnell, Gerald and Susan Harkins, Frank and LaWann Tull, Andrew and Elizabeth Engelke, Pamela Sylvest, Joanne and John Swanson, Tom and Valerie Erikson, Carolyn and Donnie Dixon, and Sharon, Terry Ira, and Jackson Cassady. Subsequently, all of the self-represented individuals except for Daniel Morris and Jeff Wiles hired counsel and were represented collectively as the "Bunnell Protestants." Daniel Morris withdrew as a party in advance of the hearing on the merits, and Jeff Wiles did not participate in the hearing on the merits.

29. The Administrative Record was admitted into the record as Applicant's Exhibits AR-1, AR-2, AR-3, AR-4, AR-5, AR-6, and AR-7, and the ALJ determined that jurisdiction was established. By agreement, the 180-day deadline for the PFD was extended to October 24, 2022, to accommodate the parties' desired procedural schedule.

30. On May 20, 2022, Protestant Stephanie Morris filed a motion to certify to the Commissioners a question, pursuant to 30 Texas Administrative Code § 80.131, as to whether an antidegradation analysis under 30 Texas

Administrative Code § 307.5 was required for the Applicant's permit renewal that is the subject of this docket. After briefing by all interested parties, the ALJ denied the motion by order dated June 15, 2022.

31. A prehearing conference was held via videoconference on July 13, 2022, with SOAH ALJs Meitra Farhadi and Rachelle Nicolette Robles presiding. All parties appeared through their respective representatives and the ALJs addressed pending motions and matters of hearing organization.

32. The hearing on the merits was convened via Zoom videoconference on July 20, 2022, and concluded on July 22, 2022. The record ultimately closed on August 23, 2022, the date on which the last post-hearing written arguments were filed.

Referred Issues Related to Regulatory Water Quality Standards

Issue A: Whether the Draft Permit is protective of water quality, groundwater, and uses of the receiving waters of the South Fork San Gabriel River in accordance with the Texas Surface Water Quality Standards, including recreational use and with consideration of the maximum volume of the proposed discharge.

Issue D: Whether the Draft Permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code § 307.4, including aquatic nutrient limitations.

Issue G: Whether the Draft Permit complies with applicable antidegradation requirements.

33. The Texas Surface Water Quality Standards (TSWQS) are intended to maintain the quality of water in the state in order to be protective of public health and enjoyment, and terrestrial and aquatic life, and to consider other environmental and economic resources.

34. The TSWQS designate uses for the state's surface waters and establish narrative and numerical water quality standards to protect those uses.

35. The TCEQ has adopted standard procedures to implement the TSWQS, which are set forth in "Procedures to Implement the Texas Surface Water Quality Standards (RG 194)" (IPs).

36. The TSWQS and IPs are used to set permit limits for wastewater discharges.

37. The TSWQS do not contain numerical criteria for nutrients, including phosphorus and nitrogen.

38. Under the TSWQS, surface waters must be maintained in an aesthetically attractive condition.

39. Under the TSWQS, nutrients from permitted discharges must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use.

40. An existing use is one that is currently being supported by a specific water body or that was attained on or after November 28, 1975.

41. A designated use is one assigned to specific water bodies in Appendix A, D, or G of 30 Texas Administrative Code § 307.10.

42. A presumed use is one that is assigned to generic categories of water bodies, but these are superseded by designated uses.

43. An attainable use is one that can be reasonably achieved by a water body in accordance with its physical, biological, and chemical characteristics, whether it is currently meeting that use or not.

44. Under the TSWQS, surface water must be essentially free of floating debris and suspended solids that are conducive to producing adverse responses in aquatic organisms or putrescible sludge deposits or sediment layers that adversely affect benthic biota or any lawful uses.

45. Under the TSWQS, waste discharges must not cause substantial and persistent changes from ambient conditions of turbidity or color.

46. The TCEQ's Antidegradation Policy provides that for Tier 1 review, existing uses and water quality sufficient to protect those existing uses must be maintained. For Tier 2, no activities subject to regulatory action that would cause degradation of waters that exceed fishable/swimmable quality are allowed unless it can be shown to TCEQ's satisfaction that the lowering of water quality is necessary for important economic or social development.

47. A permit may not cause or contribute to a violation of applicable water quality standards, including state narrative criteria.

48. The South Fork San Gabriel River is Segment 1250 in the Brazos River Basin. The designated uses for Segment 1250 are primary contact recreation 1, high aquatic life use, public water supply, and aquifer protection.

49. Primary contact recreation one consists of activities that are presumed to involve a significant risk of ingestion of water, such as wading by children, swimming, water skiing, tubing, surfing, handfishing, kayaking, canoeing, and rafting.

50. A high aquatic life use has the following attributes: 1) highly diverse habitat; 2) usual association of regionally expected species; 3) the presence of sensitive species; 4) high diversity; 5) high species richness; and 6) a balanced to slightly imbalanced trophic structure.

51. Under the TSWQS, Segment 1250 is subject to numerical criteria for dissolved oxygen (DO). The 24-hour average criterion for DO is 5.0 mg/L and the 24-hour minimum is 3.0 mg/L. These criteria become 5.5 mg/L and 4.5 mg/L, respectively, during the spawning season.

52. Under the TSWQS, Segment 1250 is subject to numerical maximum criteria for dissolved minerals such as total dissolved solids, chloride, and sulfate that must be maintained such that existing, designated, presumed, and attainable uses are not impaired. The criteria for Segment 1250 are as follows: 350 mg/L for total dissolved solids, 50 mg/L for chloride, and 50 mg/L for sulfate.

53. TCEQ screening determined that the discharge would exceed the instream standards. Because of this, the Draft Permit requires the City to conduct a study to determine the sources of TDS in the influent to see if it can be reduced that way, as opposed to imposing a limit on TDS in the Draft Permit.

54. The South Fork San Gabriel River in the area of the outfall is a predominantly wide, shallow, limestone riverbed, with low harmonic mean flow and low background levels of nutrients in the water, such as phosphorus and nitrogen, making the water sensitive to nutrient enrichment and particularly susceptible to overgrowth of algae.

55. Upstream of the outfall, the water in the South Fork San Gabriel River is clear, the limestone riverbed with a thin layer of chalky-white sediment composed of calcium carbonate precipitates is visible, and the river contains very little filamentous algae.

56. Conditions upstream of the outfall, where the river is unaffected by the effluent, are typical of naturally occurring conditions in low-nutrient Hill Country streams and what would be expected of naturally occurring conditions in the South Fork San Gabriel River.

57. Background levels of phosphorus in the South Fork San Gabriel River upstream of the outfall, where the river is unaffected by the effluent, are at or below 0.01 mg/L.

58. The existing uses of the South Fork San Gabriel River include fishing, swimming, wading, tubing, and paddling.

59. Algae is a type of aquatic vegetation. Significant algae grows at the outfall and persists at least 3.83 miles downstream of the outfall.

60. The City's effluent discharge from the Facility is the predominant cause of the algae found at and downstream of the outfall.

61. Phosphorus, nitrate-nitrogen, and ammonia nitrogen all contribute to the growth of algae in the river.

62. The quantity of the algae growth is excessive, such that it impairs wading, swimming, fishing, paddling, and other recreational uses.

63. The quantity and geographical extent of the algae growth causes the river to be aesthetically unattractive for several miles.

64. The algal bloom downstream of the outfall is related to the outfall and not the other potential sources.

65. The presence of algae can cause levels of DO in a water body to rise during the day due to photosynthesis by the vegetation, which produces oxygen, and to drop at night.

66. For a continuous four-month period between December 2021 and March 2022, Applicant discharged effluent that averaged between 1.36 and 1.463 MGD with concentrations of phosphorus between 0.06 and 0.081 mg/L.

67. In April and May 2022, the City spent weeks cleaning the algae from the area immediately around and downstream of the outfall; however, this algae grew back within days and weeks.

68. Staff performed DO modeling based on the Draft Permit limits for carbonaceous biochemical oxygen demand, ammonia nitrogen, and DO using QUAL-TX.

69. Indirect impacts, such as from algae or TP, are not taken into account under the QUAL-TX model.

70. Nutrients, such as TP and the resultant effect of algae, do affect the DO in a stream.

71. Neither Staff nor the Applicant performed any nutrient modeling for the Draft Permit.

72. The QUAL-TX model did not take swings in DO levels over a 24-hour period of time into account.

73. The QUAL-TX model is intended to evaluate the 24-hour average DO criteria.

74. The QUAL-TX model is not used for modeling nutrients or evaluating the potential impacts of nutrients on a water body.

75. The QUAL-TX model does not provide any information as to whether the DO minimum standard will be met.

76. For the DO criteria to be met, sufficiently protective nutrient limits, like TP, must also be included in the permit.

77. Neither the Applicant nor the ED has demonstrated that the Draft Permit will achieve the DO criteria for the South Fork San Gabriel River.

78. Water Quality Analysis Simulation Program (WASP) is a water quality model that has been developed by the United States Environmental Protection Agency. It is specifically designed to predict, among other things, algae responses to nutrient loads.

79. The City of Austin implemented a calibrated WASP model for the South Fork San Gabriel River specifically to characterize the predicted occurrence of algae in response to Applicant's effluent discharge.

80. Based on a maximum effluent discharge of 1.2 MGD at 0.1 mg/L TP, the WASP model concluded that the River will be eutrophic below the outfall, and that nuisance benthic algae levels are predicted to occur most of the time.

81. The IPs provide that when screening indicates that a reduction of effluent TP is needed, an effluent limit is recommended based on reasonably achievable technology based limits, with consideration of the sensitivity of the site. Higher or lower limits may be recommended based on site-specific mitigating factors.

82. The IPs state that considerations for nutrient impacts should focus on TP rather than nitrogen for a number of reasons, including that less data on TN has been collected in Texas reservoirs, streams, and rivers; and available

waste treatment technologies make reducing phosphorus more effective than reducing nitrogen as a means of limiting algal production.

83. The IPs state that permit renewals may be evaluated for potentially significant concentrations of TP (and if appropriate, TN) on a case by case basis.

84. Under the Applicant's current permit, at the Interim phase of 1.2 MGD and 0.5 mg/L total phosphorus, the phosphorus loading amounts to 5 pounds per day.

85. Under the Draft Permit, total loading of phosphorus will increase from the Interim phase at 2.0 MGD and 2.5 pounds per day of phosphorus, to 5 pounds per day in the Final phase at 4.0 MGD.

86. Effluent discharge pursuant to the limitations of the Draft Permit will cause algae to continue to grow in similar quantities and to persist for a similar distance downstream as is present today and under Applicant's current permit.

87. The algae that will grow under the Draft Permit will be excessive and will impair existing, designated, and attainable uses, including recreational uses and high aquatic life use, in the South Fork San Gabriel River for multiple miles.

88. The algae under the Draft Permit will cause the river to be aesthetically unattractive at and downstream of the outfall, for multiple miles.

89. The effluent limit of 0.15 mg/L TP in the Draft Permit will not prevent the excessive growth and accumulation of aquatic vegetation in the South Fork San Gabriel River, nor will it maintain the aesthetic parameters of the South Fork San Gabriel River.

90. The best available information indicates that a TP limit of no more than 0.02 mg/L would be necessary to maintain oligotrophic conditions.

91. TCEQ's guidance requires that limits for total phosphorus in TPDES permits be based on reasonably achievable technology-based limits, with consideration of the sensitivity of the site.

92. An effluent limit of 0.05 mg/L TP has been demonstrated as a reasonably achievable technology in this case.

93. Protestants failed to rebut the prima facie demonstration that the effluent limits in the Draft Permit are protective of groundwater.

94. An antidegradation review was completed in 2013 for the current permit.

95. The 2013 antidegradation review involved a mathematical error. The 7Q2 flow used was 0.15 cubic feet per second (cfs) instead of 0.1 cfs, and the harmonic mean flow used was 0.4 cfs instead of 0.2 cfs.

96. The effect of the effluent on the stream was therefore underestimated in the 2013 antidegradation review.

97. The 2013 antidegradation review has also been shown to be inadequate, based upon the widespread degradation of the South Fork San Gabriel River at and downstream of the City's effluent discharge point since the permit analyzed in the 2013 review became effective.

98. The Commission has the discretion to conduct an antidegradation review for permit renewal applications that do not seek an increase in pollutants.

99. No antidegradation review was performed for this Application.

100. The Applicant did not seek permission from the Commission to degrade the water quality of the River as necessary for important economic or social development.

Referred Issues Related to Wildlife and Health Protection

1. **Issue B: Whether the draft permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife**

101. One of the purposes of the TSWQS is to maintain the quality of water in the state consistent with public health and enjoyment.

102. The proposed discharge will not adversely impact the health of the requesters, their families, and aquatic and terrestrial wildlife.

Referred Issues Related to Nuisance Issues

Issue C: Whether the draft permit adequately addresses nuisance conditions, including odor, in accordance with 30 TAC§ 309.13(e)

Issue I: Whether the draft permit includes adequate provisions to protect the requesters' use and enjoyment of their property

103. The Facility's wastewater treatment plant units are located at least 150 feet from the nearest property line.

104. The Facility does not contain lagoons with zones of anaerobic activity.

105. Applicant will own the buffer zone, the area between the Facility and the nearest property line.

106. The Texas Water Code requires a permit applicant to comply with one of three options for abating nuisance odors: a 500-foot buffer zone to the nearest property line for lagoons with zones of anaerobic activity or a 150-foot buffer zone to the nearest property line for all other wastewater treatment plant units; the implementation of an approved nuisance odor prevention plan; or an enforceable restriction against constructing residential structures within any part of a buffer zone not owned by the plant.

107. The algae growth in the River, which is caused by the effluent, impairs the ability of requesters to enjoy their property because: the requesters are unable to enjoy the River in an aesthetically attractive condition; the smells of decaying algae in the river impair the ability of requesters to enjoy spending time outdoors on their property; the algae growth impairs the ability of requesters to go swimming, wading, and fishing in the river from their

property; and the algae impairs the ability of requesters to observe wildlife from their property.

108. Considering Applicant's compliance history, revisions to the Draft Permit are warranted to address odors from the Facility and nuisance odor conditions in the effluent itself, and to control the growth of algae so that it does not present a nuisance to properties downstream.

Referred Issues on Effects on Permit of Compliance History and Regionalization Policy

Issue E: Whether the draft permit should be denied or altered based on the Applicant's compliance history.

Issue F: Whether the draft permit should be denied or altered in consideration of the need for the facility in accordance with Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options.

109. The Facility and the Applicant each had a "satisfactory" compliance rating, as determined by the standards of 30 Texas Administrative Code chapter 60.

110. The TCEQ has the authority to alter the terms of the Applicant's Draft Permit.

111. The City has agreed, since August 21, 2018, to three administrative orders entered by TCEQ.

112. The 2018 administrative order covered allegations of eight different violations of permit limits in a 10-month period beginning in December 2015, and three of the eight involved phosphorus.

113. The 2020 administrative order alleged eight permit violations in a 19-month period beginning in November 2016. One of those violations included 50 separate exceedances of permit limits, 11 of which involved phosphorus.

114. The 2022 administrative order dealt with nine alleged exceedances of permit limits in an 11-month period beginning in September 2019. Six of the exceedances involved phosphorus.

115. Videos, photographs, and eye-witness testimonies in the record establish that the operation of the City's wastewater plant has badly degraded the River for at least several miles downstream of the plant's outfall.

116. The total flow in the Final phase should remain at 4.0 MGD.

117. The policy of the Texas Water Code is to encourage and promote the development and use of regional and areawide waste collection, treatment, and disposal systems.

118. The Texas Water Code gives TCEQ permissive authority to deny or alter the terms and conditions of the proposed permit terms on consideration of need, including expected volume and quality of the influent and the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems.

119. An increase in population growth in the area served by the Facility results in an increased demand for wastewater collection, treatment, and disposal.

120. Applicant needs the requested levels of 4.0 MGD in order to effectively provide its services.

Referred Issues Related to Permit Terms Referring to Facility Management and Monitoring

Issue H: Whether the draft permit requires adequate licensing requirements for the operator of the facility and adequate requirements regarding operator supervision.

Issue J: Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

121. The TCEQ has the authority to require permit conditions or provisions to address any concerns with an applicant's compliance history, as it had with the addition of requiring Applicant to enter into a contract with a third-party operator.

122. Applicant's system is currently classified as a Category B system and must have a chief operator with an operator license of a Class B or higher.

123. The ED may increase the treatment facility classification, and, as a result, the required chief operator license, for facilities which include unusually complex processes or present unusual operation or maintenance conditions.

124. The Draft Permit requires the Applicant be supervised by a third party to ensure it is complying with the terms of its permit.

125. Considering the Applicant's complex treatment system, low phosphorus limit, compliance history, and the unusual condition that the Applicant needs to be supervised by a third party to ensure compliance, a revision to the Draft Permit is warranted, requiring the Facility be classified as a Category A system and to require a chief operator with an operator license of Class A or higher, and to require that the third-party operator must meet this same Class A classification.

126. Considering Applicant's compliance history, a revision to the Draft Permit is warranted, requiring the third-party operator to conduct effluent monitoring at least twice per month and that this effluent data be included in calculating daily averages.

127. Considering Applicant's compliance history, history of algae growth at and below the outfall, and the ecologically sensitive nature of the River, particularly to nutrient enrichment, a revision to Item No. 9 in the "Other Requirements" section in the Draft Permit is warranted, modifying the language to require Applicant to include parameters from the initial permit issued in 2003.

128. Considering Applicant's compliance history, a revision to the Draft Permit is warranted requiring that certain information that is collected and reported to TCEQ also be made publicly available, including notification to the public, within 24 hours of instances of noncompliance that the Draft Permit requires be reported to TCEQ within 24 hours.

Transcription Costs

129. Reporting and transcription of the hearing on the merits was warranted because the hearing lasted for three days.

130. Each of the non-agency parties—Applicant, Protestant Morris, and the Bunnell Protestants—were represented by outside legal counsel.

131. Both Applicant and Protestant Morris hired expert witnesses for the hearing.

132. Applicant is a municipality.

133. Protestant Morris is represented by a non-profit legal aid organization that provides free legal services to low-income Texans.

134. The Bunnell Protestants consist of a small group of neighbors.

135. The total cost paid by Applicant for recording and transcribing the hearing on the merits, two copies of the transcript prepared on a 5-day turnaround, and rough draft dailies of the transcript each day, was $9,797.25.

136. Applicant ordered same-day rough drafts and for the transcript to be expedited on a five-day turnaround schedule, without conferring with other parties.

137. Protestant Morris ordered a copy of the transcript at a cost of $2,243.90.

138. Transcript costs cannot be assessed against the ED or OPIC because they are statutory parties who are precluded from appealing the decision of the Commission.

139. The City's poor compliance history and the extensive degradation of the River as a result of the City's discharge, led to Protestants opposing this permit renewal application.

140. Applicant should pay the full cost of the reporting and transcription costs and reimburse Protestant Morris for transcript costs incurred.

II. CONCLUSIONS OF LAW

1. TCEQ has jurisdiction over this matter. Tex. Water Code chs. 5, 26.

2. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in contested cases referred by the Commission under Texas Government Code § 2003.047.

3. Notice was provided in accordance with Texas Water Code §§ 5.114 and 26.028; Texas Government Code §§ 2001.051 and .052; and 30 Texas Administrative Code chapter 39.

4. The Application is subject to the requirements in Senate Bill 709, effective September 1, 2015. Tex. Gov't Code § 2003.047(i-1) through (i-3).

5. Applicant's filing of the Administrative Record established a prima facie demonstration that: (1) the Draft Permit meets all state and federal legal and technical requirements; and (2) a permit, if issued consistent with the Draft Permit, would protect human health and safety, the environment, and physical property. Tex. Gov't Code § 2003.047(i-1); 30 Tex. Admin. Code §§ 80.17(c)(1), .117(c)(1), .127(h).

6. To rebut the prima facie demonstration established by the Administrative Record, a party must present evidence that (1) relates to one of the Referred Issues; and (2) demonstrates that one or more provisions in the Draft Permit violates a specifically applicable state or federal requirement. *See* Tex. Gov't Code § 2003.047(i-2); 30 Tex. Admin. Code §§ 80.17(c)(2), .117(c)(3).

7. Protestants rebutted the prima facie demonstration by presenting evidence demonstrating that one or more provisions in the Draft Permit violate a specifically applicable state or federal requirement that relates to a matter referred by the TCEQ. 30 Tex. Admin. Code § 80.17(c)(2).

8. If a party rebuts the prima facie demonstration, the Applicant and the ED may present additional evidence to support the Draft Permit. Tex. Gov't Code § 2003.047(i-3); 30 Tex. Admin. Code §§ 80.17(c)(3), .117(c)(3).

9. Applicant retains the burden of proof on the issues regarding the sufficiency of the Application and compliance with the necessary statutory and regulatory requirements. 30 Tex. Admin. Code § 80.17(a).

10. The standard of proof is by a preponderance of the evidence. *Granek v. Texas St. Bd. of Med. Examn'rs*, 172 S.W.3d 761, 777 (Tex. App.—Austin 2005, no pet.); *Southwestern Pub. Servs. Co. v. Pub. Util. Comm'n of Tex.*, 962 S.W.2d 207, 213-14 (Tex. App.—Austin 1998, pet. denied).

11. The Draft Permit is protective of groundwater.

12. The Draft Permit will not be protective of water quality and will not protect uses of the receiving waters under the TSWQS because it would allow significant increases in nutrient pollutants to be discharged into River, leading to reduced DO, algae blooms, and an impairment of the designated uses.

13. The Draft Permit does not include appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code § 307.4, including aquatic nutrient limitations.

14. The Draft Permit does not comply with the TCEQ's antidegradation requirements. 30 Tex. Admin. Code § 307.5.

15. The Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e).

16. The Applicant did not establish by a preponderance of the evidence that the Draft Permit includes adequate provisions to protect the requesters use and enjoyment of their properties.

17. The Applicant established by a preponderance of the evidence that the Draft Permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife.

18. The TCEQ has the authority to amend the Draft Permit in light of compliance concerns, even if the facility or person has a satisfactory compliance rating.

19. The compliance history of the City at this facility, notwithstanding the "satisfactory" compliance ratings of the City and the facility, raises compliance concerns and presents circumstances that dictate it is appropriate to alter the terms of the draft permit.

20. The Applicant has shown the need to be able to discharge a maximum amount of 4.0 MGD.

21. The Applicant did not establish by a preponderance of the credible evidence that the Draft Permit includes sufficient operational, monitoring, and reporting requirements.

22. Because the Draft Permit does not require the plant operator be a "Class A" operator and the supervising third party need only be qualified to operate a "Class B" facility, the Draft Permit does not require adequate licensing requirements for the operator of the facility or adequate requirements regarding operator supervision.

23. No transcript costs may be assessed against the ED or OPIC because the TCEQ's rules prohibit the assessment of any cost to a statutory party who is precluded by law from appealing any ruling, decision, or other act of the Commission. 30 Tex. Admin. Code § 80.23(d)(2).

24. Factors to be considered in assessing transcript costs include: the party who requested the transcript; the financial ability of the party to pay the costs; the extent to which the party participated in the hearing; the relative benefits to the various parties of having a transcript; and any other factor which is relevant to a just and reasonable assessment of the costs. 30 Tex. Admin. Code § 80.23(d)(1).

25. Considering the factors in 30 Texas Administrative Code § 80.23(d)(1), no reporting or transcription costs should be assessed or allocated against the Protestants, but rather the Applicant should bear all reporting and transcription costs, including those already paid for by Protestant Morris.

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 by the City of Liberty Hill for Texas Pollutant Discharge Elimination System Permit No. WQ0014477001 is approved and the attached permit is issued with the following modifications:

    - a TP effluent limit of 0.05 mg/L for all phases;
    - both the operator and third-party operator must have a Class A license;
    - a modification of the study outlined in "Other Requirements" Item No. 9, to include a nutrient sampling plan that mirrors language in the 2004 permit, which requires the permittee to conduct a study of nutrients and algal growth in the receiving stream prior to discharge, and for at least two years after discharge; and
    - public posting and notification of Monitoring and Reporting Requirements Nos. 1 and 7a on a public website dedicated to providing information about the wastewater treatment plant and discharge.

2. The City shall pay all of the transcription costs and shall reimburse Protestant Morris $2,243.90.

3. The Commission adopts the ED's Response to Public Comment in accordance with 30 Texas Administrative Code § 50.117. If there is any conflict between the Commission's Order and the Executive Director's Responses to Public Comments, the Commission's Order prevails.

4. 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.

5. The effective date of this Order is the date the Order is final, as provided by Texas Government Code § 2001.144 and 30 Texas Administrative Code § 80.273.

6. TCEQ's Chief Clerk shall forward a copy of this Order to all parties.

7. If any provision, sentence, clause, or phrase 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:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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Jon Niermann, Chairman, For the Commission