State Office of Administrative Hearings

Kristofer S. Monson
Chief Administrative Law Judge

February 3, 2025

TCEQ Executive Director **VIA EFILE TEXAS**

HK Real Estate Development, LLC **VIA EFILE TEXAS**

Freasier, LLC **VIA EFILE TEXAS**

Office of Public Interest Counsel **VIA EFILE TEXAS**

RE: SOAH Docket No. 582-23-21878
TCEQ Docket No. 2023-0385-MWD
Application by HK Real Estate Development, LLC for TPDES Permit No. WQ0016150001

Dear Parties:

Please find attached a Supplemental Proposal for Decision on Remand (PFD) in this case.

Any party may, within 20 days after the date of issuance of the PFD, file exceptions or briefs. Any replies to exceptions, briefs, or proposed findings of fact shall be filed within 30 days after the date of issuance on the PFD. 30 Tex. Admin. Code § 80.257.

All exceptions, briefs, and replies along with certification of service to the above parties and the Administrative Law Judges shall be filed with the Chief Clerk of the Texas Commission on Environmental Quality (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.

CC: Service List

SOAH Docket No. 582-23-21878 **Suffix: TCEQ**
TCEQ Docket No. 2023-0385-MWD

BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPLICATION BY HK REAL ESTATE DEVELOPMENT, LLC FOR TPDES PERMIT NO. WQ0016150001

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BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPLICATION BY HK REAL ESTATE DEVELOPMENT, LLC FOR TPDES PERMIT NO. WQ0016150001

SUPPLEMENTAL PROPOSAL FOR DECISION ON REMAND

HK Real Estate Development, LLC (Applicant) filed an application (Application) with the Texas Commission on Environmental Quality (Commission or TCEQ) for a new Texas Pollutant Discharge Elimination System (TPDES) permit No. WQ0016150001 (Draft Permit) to authorize the discharge of treated domestic wastewater from a proposed plant site (Facility) in Wilson County, Texas. Freasier, LLC (Protestant) opposed the Application. The Administrative Law Judges (ALJs) of the State Office of Administrative Hearings (SOAH) recommend denying the Application and not issuing the Draft Permit.

I. NOTICE, JURISDICTION, AND PROCEDURAL HISTORY

No party contested the Commission's jurisdiction to act on the Application or SOAH's jurisdiction to convene a hearing and prepare a Supplemental Proposal for Decision on Remand (PFD). Therefore, the ALJs will address jurisdiction only in the findings of fact and conclusions of law in the Proposed Order attached to this PFD. The Commission's Executive Director (ED) and Protestant raised the issue of public notice regarding the Application, which is addressed in Section B of the PFD.

Applicant filed the Application on April 20, 2022. The ED determined the Application was administratively complete on June 27, 2022, and technically complete on August 25, 2022, and prepared the Draft Permit. The Commission originally referred the matter to SOAH on June 16, 2023, for a hearing on six issues.[1] On September 27, 2023, at a preliminary hearing, the ALJs admitted the administrative record into evidence and named Applicant, the ED, the Office of Public Interest Counsel (OPIC), and Protestant parties to the proceeding.[2]

The ALJs granted Applicant's Motion for Summary Disposition on December 1, 2023, and issued a Proposal for Decision on Summary Disposition on January 12, 2024 (Initial PFD). The Initial PFD concluded: (A) the Draft Permit is adequately protective of water quality, including the protection of surface water, groundwater, and animals, in accordance with applicable regulations including the

[1] Applicant (Appl.) Exhibit (Ex.) 1 at 4-6.

[2] *See* SOAH Order Memorializing Preliminary Hearing, Adopting Procedural Schedule, and Setting Hearing on the Merits (Oct. 2, 2023). The Administrative Record is Applicant's Exhibit 1 and consists of Tabs A-F.

Texas Surface Water Quality Standards (TSWQS); (B) the discharge route is adequately characterized in accordance with 30 Texas Administrative Code section 309.12; (C) the Draft Permit is protective of the requester's use and enjoyment of its property in accordance with the TSWQS; (D) the proposed facility is located above the 100-year flood plain and is adequately protected from inundation as required by 30 Texas Administrative Code chapter 309; (E) the Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code section 309.13; and (F) Applicant complied with the requirement to make a copy of the administratively complete application available for public viewing.[3]

On May 10, 2024, the Commission considered the Initial PFD during an open meeting and remanded the matter to SOAH to conduct a hearing on Issues A-C above.[4] Additionally, the Commission requested that the hearing on the merits include, but not be limited to, determining whether Sandpit Creek flows into the San Antonio River or terminates on Protestant's property (Property).[5] After a June 2024 site visit and examination of the discharge route proposed in the Application, the ED concluded that the discharge route in the Application is incorrect, and "[u]ntil a discharge route that is contained wholly within surface

[3] *See* SOAH Order Granting Motion for Summary Disposition (Dec. 1, 2023); Initial PFD (Jan. 12, 2024).

[4] Interim Order (May 17, 2024) (Interim Remand Order). As stated in the Initial PFD, Protestant conceded that summary disposition was appropriate for Issues D, E, and F. Initial PFD at 13. Issues D-F, therefore, were not remanded to SOAH for further proceedings and are not addressed further in this PFD other than to incorporate the findings of fact and conclusions of law from the Initial PFD concerning those issues.

[5] Interim Remand Order. Protestant's property consists of approximately 340 acres located at 4005 U.S. Highway 181 North in Floresville, Wilson County, Texas. Prot. Ex. 1 (Freasier Direct (Dir.)) at 2.

waters in the state is provided by the Applicant, [the ED] cannot complete the technical review of the [A]pplication and a permit cannot be drafted."[6]

On September 30, October 1, and October 21, 2024, ALJs Katerina DeAngelo and Shelly M. Doggett convened a videoconference hearing. Applicant was represented by attorneys Helen S. Gilbert, Randall B. Wilburn, and Kerrie Jo Qualtrough; Protestant was represented by attorneys Natasha J. Martin and Bobby M. Salehi; the ED was represented by attorneys Fernando Salazar Martinez and Michael T. Parr, II; and OPIC was represented by attorney Eli Martinez. The record closed after submission of replies to closing briefs on December 4, 2024.

II. APPLICABLE LAW

A. BURDEN OF PROOF AND PRIMA FACIE CASE

The Application was filed after September 1, 2015, and TCEQ referred it to SOAH under Texas Water Code section 5.556, which governs referral of environmental permitting cases to SOAH.[7] Such permitting cases are subject to Texas Government Code section 2003.047(i-1)-(i-3).[8] Section 2003.047(i-1) states:

[6] ED Ex. BC-5 at 357.

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

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

> (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 ED, the preliminary decision issued by the ED, 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.

TCEQ construed section 2003.047(i-1) by rule specifying that the prima facie demonstration is established by the filing of the administrative record as described in 30 Texas Administrative Code section 80.118(c).[9] TCEQ rules further prescribe that the ALJ in a contested case hearing governed by the S.B. 709 framework "shall admit the administrative record into evidence for all purposes."[10] The applicant's presentation of evidence to meet its burden of proof may consist solely of the filing with SOAH, and admittance by the ALJ, of the administrative record.[11] Any party may present a rebuttal case when another party presents evidence that could not have been reasonably anticipated.[12]

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[9] 30 Tex. Admin. Code §§ 80.17(c)(1), .117(c)(1), .118(c); *accord id.* § 80.127(h). TCEQ rules, found in Title 30, part 1, chapters 1 to 352 of the Texas Administrative Code, are referred to herein as "Rule ____."

[10] Rule 80.127(h).

[11] Rule 80.117(b).

[12] Rule 80.117(b).

According to Texas Government Code section 2003.047(i-2):

> (i-2) A party may rebut a demonstration under Subsection (i-1) by presenting evidence that:
>
> (1) relates to . . . an issue included in a list submitted under Subsection (e) in connection with a matter referred under section 5.556 of the Water Code; and
>
> (2) demonstrates that one or more provisions in the draft permit violate a specifically applicable state or federal requirement.

Section 2003.047(i-3) further provides:

> (i-3) If in accordance with subsection (i-2) a party rebuts a presumption established under subsection (i-1), the applicant and the ED may present additional evidence to support the draft permit.[13]

In contested case hearings, the longstanding general or default rule is that facts are deemed proven to exist or to be true by a preponderance of the evidence.[14] As applied within the context of the S.B. 709 framework, an opposing party's burden under section 2003.047(i-2) is to present evidence that would, as compared to the contents of the administrative record filed with the SOAH and admitted into evidence, preponderate in favor of a finding or conclusion that "one or more provisions in the draft permit violate a specifically applicable state or federal

[13] Tex. Gov't Code § 2003.047(i-1)-(i-3), added by Acts 2015, 84th Leg., R.S., ch. 116 (S.B. 709), §§ 1 and 5, eff. Sept. 1, 2015.

[14] *See Granek v. Tex. State Bd. of Med. Examn'rs*, 172 S.W.3d 761, 777 (Tex. App.—Austin 2005, no pet.).

requirement," thereby rebutting material facts that would otherwise be deemed proven from the mere filing and admission of the administrative record.[15]

Then, according to section 2003.047(i-3), the applicant and the ED have the right to "present additional evidence to support the draft permit" to augment or elaborate upon the administrative record. The burden of proof on the ultimate merits of the issue remains with the applicant. In this respect, an opposing party's burden under section 2003.047(i-2) is similar to one of production rather than proof in the sense of ultimate persuasion. The ALJs note that neither the statute nor TCEQ rules require the applicant to rely solely on the administrative record unless and until it is rebutted. Rather, the applicant may present any additional evidence to support the permit once the administrative record is admitted.[16] To the extent an applicant does so, the S.B. 709 analysis, as a practical matter, could reduce simply to weighing the totality of competing evidence presented by both sides, as contemplated by section 2003.047(i-3), and determining whether the applicant carried its burden of proof on each contested issue.

As noted previously, the Administrative Record was filed with SOAH and admitted into evidence. At the time, there were no objections to either the filing or the admission of the Administrative Record into evidence. Subsequently, however, the ED modified her position such that she no longer supports the issuance of the

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[15] *Accord* 40 Tex. Reg. 9688 (Dec. 25, 2015) (explaining, in regard to TCEQ's rules implementing S.B. 709, that because contested case hearings are similar to non-jury civil trials in district court, the evidentiary standard in contested case hearings for permit applications is preponderance of the evidence).

[16] Rule 80.117(c)(2) (the applicant, protesting parties, OPIC, and the ED may present evidence after admittance of the administrative record by the ALJ); *see also* Rule 80.117(b) (the applicant's presentation of evidence to meet its burden of proof may consist solely of the filing with SOAH, and admittance by the ALJ, of the administrative record).

Draft Permit.[17] OPIC argues that, because the ED changed her position: Applicant cannot rely on a prima facie demonstration; no presumption should apply; and Applicant alone, as the moving party, must bear the entirety of the burden under Rule 80.17 to prove by a preponderance of the evidence that the Application complies with applicable requirements related to the referred issues.[18] Similarly, Protestant argues that Applicant "can no longer claim that the Draft Permit is protective of the environment."[19]

The ED argued that, because the Application was received after September 1, 2015, it is subject to the S.B. 709 framework. The ED added that "her position is not static and is informed by information obtained, developed, and analyzed from the time the application is submitted until the Commission issues its final order."[20] Applicant claims that the burden-shifting process did not change because of the ED's new position and that Applicant was entitled to offer additional evidence to support the Draft Permit, as finding otherwise would infringe on its due process rights.[21]

Nothing in the statute, TCEQ rules, legislative history, or the Interim Remand Order indicates that the presumption in section 2003.047(i-1) no longer applies when the ED changes her position after the prima facie demonstration

[17] ED's Closing Brief (Br.) at 2, 3.

[18] OPIC Closing Br. at 7.

[19] Protestant (Prot.) Closing Br. at 5.

[20] The ED's Brief to ALJs (Sept. 20, 2024) at 3.

[21] Appl. Closing Br. at 3; Appl. Reply Br. at 2-3.

has been established. The ED, in addition to her statutory duty to complete the administrative record, must actively participate in contested case permit hearings.[22]

In this case, the Application, Draft Permit, and other materials were offered and admitted into the record. Even though the ED no longer supports the issuance of the Draft Permit, the ALJs find that the Draft Permit remains subject to the presumption, and that any evidence regarding the ED's changed position on remand is considered as part of the rebuttal under section 2003.047(i-2). The burden of proof remains with Applicant to establish by a preponderance of the evidence that the Application would not violate applicable requirements and that the permit, if issued consistent with the Draft Permit, would protect human health and safety, the environment, and physical property.[23]

Here, while not conceding that Protestant and the ED met their rebuttal burden, Applicant presented evidence beyond the Administrative Record regarding the referred issues. Accordingly, the ALJs have focused relevant portions of the analysis simply on whether Applicant met its burden of proof based on the totality of evidence ultimately presented.

The Administrative Record, therefore, established a prima facie demonstration that: (1) the Draft Permit meets all state and federal legal and

[22] Tex. Water Code § 5.228(c).

[23] Rule 80.17(a), (c); 1 Tex. Admin. Code § 155.427.

technical requirements; and (2) a permit, if issued consistent with the Draft Permit, would protect human health and safety, the environment, and physical property.[24]

B. WASTEWATER DISCHARGE PERMIT REQUIREMENTS

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 TCEQ pursuant to filing requirements in 30 Texas Administrative Code chapter 305, subchapter C.[25] TCEQ reviews the applications in accordance with 30 Texas Administrative Code chapter 281. Based on a technical review, TCEQ prepares a draft permit that is consistent with United States Environmental Protection Agency (EPA) and TCEQ rules, and a technical summary that discusses the application's facts and significant factual, legal, methodological, and policy questions considered while preparing the draft permit.

A domestic wastewater treatment facility in Texas is subject to wastewater discharge permit requirements. Standard requirements, which TCEQ has adopted specifically for use in such permits, are found in 30 Texas Administrative Code chapter 305, subchapter F. All wastewater discharge permits are also subject to regulations found in 30 Texas Administrative Code chapter 319, which require the permittee to monitor effluent and report the results as required in the permit.

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[24] Tex. Gov't Code § 2003.047(i-1).

[25] Tex. Water Code § 26.027(b). "Water in the state" is defined as "groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state." Tex. Water Code § 26.001(5).

TCEQ has adopted water quality standards, the TSWQS, applicable to wastewater discharges in accordance with section 303 of the federal Clean Water Act and section 26.023 of the Texas Water Code. These standards are found in 30 Texas Administrative Code chapter 307. 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. TCEQ has standard procedures for implementing the TSWQS, the Implementation Procedures (IPs), which are approved by the EPA.[26] The TSWQS and IPs are used in reviewing permit applications.

III. DRAFT PERMIT AND FACILITY

The Draft Permit would authorize discharge from the Facility of treated domestic wastewater at a daily average flow not to exceed 0.06 million gallons per day (MGD) in the Interim I Phase, 0.12 MGD in the Interim II Phase, and 0.18 MGD in the Final Phase. The Facility, which has not been constructed, will be located approximately 2,800 feet southeast of the intersection of County Road 320 and State Highway 181 North in Wilson County, Texas. The Facility would serve the Richter Ranch subdivision.[27]

The Facility would operate as a membrane bioreactor (MBR) wastewater treatment system, which combines conventional biological activated sludge

[26] Rule 307.2(e).

[27] Appl. Ex. 1 at 130, 132, 135-36, 240.

processes with membrane filtration.[28] Treatment units in the Interim I Phase will include a mechanical auger screen, an anoxic aerobic tank, an aeration tank, an MBR basin, an aerobic digester, and a chlorine contact chamber. Interim II Phase treatment units will include two mechanical auger screens, two anoxic aerobic tanks, two aeration tanks, two MBR basins, two aerobic digesters, and two chlorine contact chambers. Treatment units in the Final Phase will include three mechanical auger screens, three anoxic aerobic tanks, three aeration tanks, three MBR basins, three aerobic digesters, and three chlorine contact chambers.[29]

The Facility would be an activated sludge process plant operated in the conventional mode. Sludge generated from the Facility would be hauled by a registered transporter. The Draft Permit authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.[30]

The Draft Permit stated that the treated effluent will be discharged to Sandpit Creek then to the San Antonio River in Segment No. 1911 of the San Antonio River Basin. The unclassified receiving water use is limited aquatic life for Sandpit Creek. The designated uses for Segment No. 1911 are primary contact recreation and high aquatic life use (ALU). The ED preliminarily found that the

[28] Appl. Ex. 1 at 239.

[29] Appl. Ex. 1 at 130.

[30] Appl. Ex. 1 at 130, 132.

effluent limitations in the Draft Permit will maintain and protect the existing instream uses.[31]

In accordance with Rule 307.5 and the IPs, an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review preliminarily determined that existing water quality uses will not be impaired by this permit action, and numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review preliminarily determined that no significant degradation of water quality is expected in the San Antonio River, which has been identified as having high ALU, and that existing uses will be maintained and protected.[32] The Facility will not be in the Coastal Management Program boundary.[33]

Effluent limitations for the conventional effluent parameters (that is, Five-Day Biochemical Oxygen Demand or Five-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), Ammonia Nitrogen (NH_3-N), etc.) are based on stream standards and waste load allocations for water-quality limited streams as established in the TSWQS and the State of Texas Water Quality Management Plan (WQMP). ED's staff (Staff) reviewed the effluent limitations in the Draft Permit for consistency with the WQMP.[34]

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[31] Appl. Ex. 1 at 114, 131, 135, 176, 267-68.

[32] Appl. Ex. 1 at 131, 175, 200.

[33] Appl. Ex. 1 at 132, 170.

[34] Appl. Ex. 1 at 131, 176, 201. The proposed effluent limitations are not contained in the approved WQMP. However, these limits will be included in the next WQMP update. Appl. Ex. 1 at 131.

The effluent limitations in all phases of the Draft Permit, based on a 30-day average, are 5.0 milligrams per liter (mg/L) $CBOD_5$, 5.0 mg/L total suspended solids (TSS), 2.0 mg/L NH_3-N, 63 colony forming units (CFU) or most probable number (MPN) of *E. coli* per 100 milliliters (ml), and 5.0 mg/L minimum dissolved oxygen (DO). The effluent shall contain a total chlorine residual of at least 1.0 mg/L and shall not exceed a total chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes based on peak flow.[35] The ED preliminarily found that the end-of-pipe compliance with pH limits between 6.0 and 9.0 standard units reasonably assures instream compliance with the TSWQS for pH when the discharge authorized is from a minor facility, and included a prohibition of discharge of floating solids or visible foam.[36]

The ED also preliminarily found that the discharge from the Facility is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination was based on the United States Fish and Wildlife Service's biological opinion on the State of Texas authorization of the TPDES.[37]

Segment No. 1911 is currently listed on the State's inventory of impaired and threatened waters (the 2020 Clean Water Act section 303(d) list). The listings are for impaired fish community from just upstream of the confluence with Sixmile Creek to the upper end of the segment. Segment No. 1911 is also listed for impaired

[35] Appl. Ex. 1 at 132, 136-38, 176, 201.

[36] Appl. Ex. 1 at 131, 136-38, 176, 201.

[37] Appl. Ex. 1 at 131, 177, 202.

macrobenthic community from just upstream of the confluence with Sixmile Creek to just upstream of the confluence with San Pedro Creek. The Facility will purportedly be discharging into a segment which is located downstream from the impaired segments and will, therefore, not contribute to the impairment of the segment.[38]

Total Maximum Daily Load (TMDL) Project No. 34D has been approved for Segment No. 1911. On August 8, 2007, TCEQ adopted TMDLs for bacteria in the San Antonio Area, Project No. 34D. There are several municipal point sources in the watershed. The TMDL calculation relies on a 63 CFU/100 ml waste load allocation for the wastewater treatment facility. Effluent limits for these facilities should be set at 63 CFU/100 ml.[39] Consequently, a concentration-based effluent limitation for *E. coli* of 63 CFU or MPN per 100 ml is included in the Draft Permit.[40]

The ED preliminarily determined that the Draft Permit fully complies with all statutory and regulatory requirements, including the TSWQS, ensuring that the proposed discharge is protective of human health, water quality, animal and aquatic life, and the environment. Further, the ED preliminarily found that, if the surface water quality is protected, groundwater quality in the vicinity will not be impacted by the discharge. Thus, the limits of the Draft Permit are intended to maintain the

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[38] Appl. Ex. 1 at 131, 176, 201.

[39] Appl. Ex. 1 at 131-32. The EPA approved the TMDL on April 21, 2009. This document describes a project developed to address water quality impairments related to bacteria for three streams located in and around the City of San Antonio: Salado Creek, Segment No. 1910; Walzem Creek, Segment No. 1910A; and the Upper San Antonio River, Segment No. 1911.

[40] Appl. Ex. 1 at 131-32, 176-77, 201-02.

existing uses, preclude degradation of the surface waters, and protect against degradation of groundwater.[41]

Applicant is required to ensure that the Facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. The design criteria for chemical disinfection by chlorine must be observed; and the Draft Permit requires the treated effluent to be disinfected prior to discharge in a manner conducive to protect both the public health and aquatic life.[42]

The TSWQS require that discharges not cause surface waters to be toxic to animal life. The ED preliminarily determined that the effluent limits of the Draft Permit will protect the uses and quality of the waterbodies in the route of the proposed discharge for the benefit of the animals that interact with those waterbodies.[43]

The Facility will be located above the 100-year flood plain. For additional protection, the Draft Permit requires Applicant to provide protection for the Facility against a 100-year flood event.[44] In addition, for nuisance of odor control, Applicant is required to comply with the requirements of Rule 309.13(e).[45]

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[41] Appl. Ex. 1 at 130, 177, 180, 207.

[42] Appl. Ex. 1 at 149, 181, 206.

[43] Appl. Ex. 1 at 186, 211.

[44] Appl. Ex. 1 at 132, 170, 185-86, 210-11, 263. TCEQ has no statutory authority to consider flooding or its effects in the wastewater permitting process. *See* 30 Tex. Admin. Code ch. 309, subch. B.

[45] Appl. Ex. 1 at 132, 170.

IV. DISCUSSION

The Commission remanded this matter to SOAH for a contested case hearing on the following issues:

> (A) whether the Draft Permit is adequately protective of water quality, including the protection of surface water, groundwater, and animals in accordance with applicable regulations including the TSWQS;
>
> (B) whether the discharge route is adequately characterized in accordance with Rule 309.12; and
>
> (C) whether the Draft Permit is protective of the requester's use and enjoyment of its property in accordance with the TSWQS.[46]

Additionally, the Commission requested that the hearing on the merits include, but not be limited to, determining whether Sandpit Creek flows into the San Antonio River or terminates on Protestant's property, as "the nature of the watercourse and where it terminates inform whether the discharge's effect on surface water quality was adequately evaluated."[47]

At the hearing on the merits, Protestant had 25 exhibits admitted, which included the prefiled testimony of James R. Freasier, Jr., Jennifer Kincaid, James L. Machin, and Dr. Jordan E. Furnans.[48] Applicant had 62 exhibits admitted,

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[46] Interim Remand Order.

[47] Interim Remand Order.

[48] Prot. Exs. 1-24, 26.

which included the prefiled testimony of Brady Braggs, Lauren Crone, Kaveh Khorzad, Dr. John S. Grounds, III, Daniel W. Ryan, Paul T. Price, and Dr. James Miertschin.[49] The ED had 13 exhibits admitted, which included the prefiled testimony of Charles "Brad" Caston, Deba Dutta, and Jenna Lueg.[50] OPIC offered no testimony or exhibits.

A. SANDPIT CREEK DOES NOT FLOW TO THE SAN ANTONIO RIVER

Sandpit Creek is an intermittent stream and, as such, frequently has no flow in it.[51] The Application describes the proposed discharge route in two ways—narratively and visually. The narrative description states that, from the Facility, effluent will be discharged into Sandpit Creek and then flow south to the San Antonio River. The Application further represents that Sandpit Creek flows into the San Antonio River approximately 1.1 miles past the proposed discharge point.[52]

For the visual representation of the proposed discharge route, the Application included a 2010 United States Geological Survey (USGS) map, on which Applicant drew a blue line (blue line) to show the proposed discharge route:[53]

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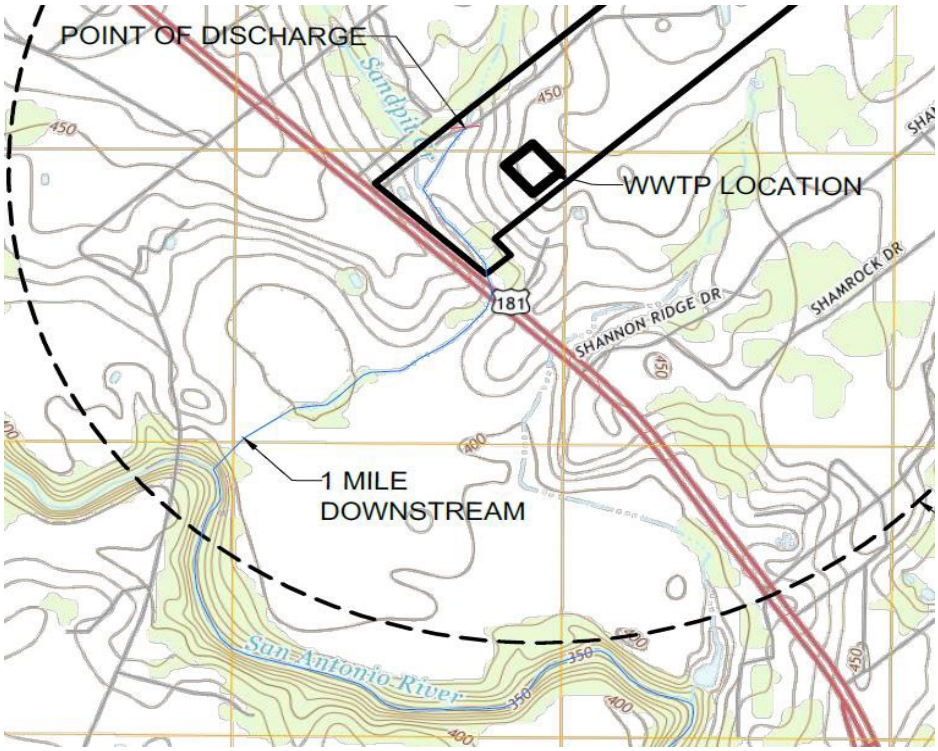
[49] Appl. Exs. 1-49, 52-64.

[50] ED Exs. BC-1 through BC-5; JL-1 through JL-5; DD-1 through DD-3.

[51] Appl. Ex. 22 (Ryan Dir.) at 440; Tr. Vol. 1 at 174. Mr. Price and Dr. Furnans categorized Sandpit Creek as an ephemeral stream, which means that it flows only in response to stormwater runoff. Appl. Ex. 31 (Price Dir.) at 575; Prot. Ex. 18 (Furnans Dir.) at 294-95.

[52] Appl. Ex. 1 at 227, 268.

[53] Appl. Ex. 55 (Ryan Rebuttal (Reb.)) at 706. According to Mr. Ryan, the 2010 USGS map was the most current one available when the Application was prepared in March 2022.



Based on the information submitted in the Application, Staff completed administrative and technical review of the Application and prepared the Draft Permit with the discharge route described as "to Sandpit Creek, thence to the Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin."[54] However, based on the site visit in June 2024, Staff opined that Sandpit Creek does not have a surface connection to the San Antonio River, but instead "the creek's surface connection ends in a field."[55]

[54] Appl. Ex. 1 at 135.

[55] ED Ex. BC-5 at 358.

1. Applicant's Evidence and Position

Applicant's witness Mr. Ryan explained that the 2010 USGS map depicted Sandpit Creek flowing from the Facility through Applicant's Bella Ranch site for 0.4 miles, then under State Highway 181, then approximately 0.5 additional miles through the Property to the impoundment,[56] and then "generally" south and *southwest* along the fence line between the Property and a neighbor's property, to Segment No. 1911 of the San Antonio River Basin.[57] However, Applicant conceded that the last stretch of the Application's proposed discharge route from the impoundment to the San Antonio River was erroneous and does not exist.[58] Instead, Mr. Ryan offered an updated discharge route below the impoundment, indicating that the effluent will flow approximately 0.5 miles onto the Property to a low point, which was created by a man-made embankment, before flowing "generally" *southeast* through the Property for 0.9 miles before connecting to the San Antonio River.[59] Mr. Ryan stated that the distance between the originally depicted confluence with the San Antonio River and the revised confluence location is approximately one mile, and that the total length of the route before connecting to the San Antonio River is approximately 1.8 miles, instead of the 1.1-mile distance listed in the Application.[60] Mr. Ryan included a purple line on the 2022 USGS map (purple line) to depict the revised discharge route:[61]

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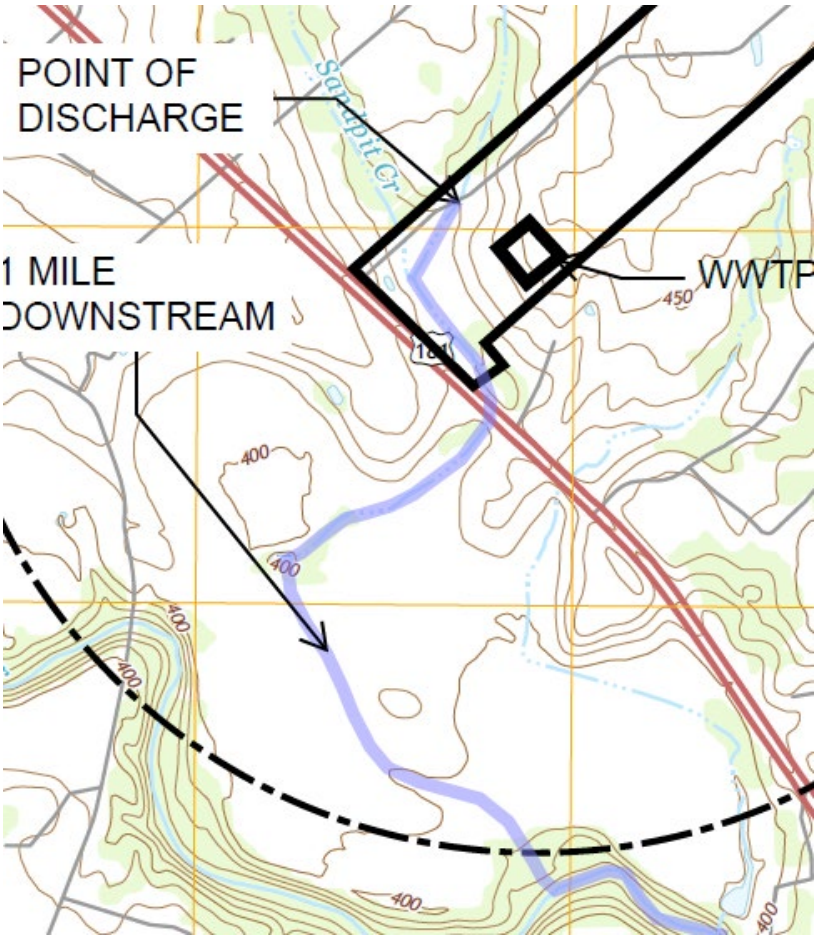
[56] The impoundment is also referred to as a pond or a pool by witnesses. A photo of the impoundment is Applicant's Exhibit 48.

[57] Appl. Ex. 22 (Ryan Dir.) at 431-32 (emphasis added); Appl. Ex. 55 (Ryan Reb.) at 706; ED Ex. BC-1 (Caston Dir.) at 309. The neighboring property was described as belonging to a Mr. Ybarra.

[58] Appl. Closing Br. at 15.



Mr. Ryan opined that this revision is not a substantial difference and does not change Sandpit Creek's ultimate destination, the San Antonio River.[62] He testified that the description of the discharge route in the Draft Permit remains accurate—the

[59] Appl. Ex. 22 (Ryan Dir.) at 432 (emphasis added); Appl. Ex. 55 (Ryan Reb.) at 707 (emphasis added).

[60] Appl. Ex. 22 (Ryan Dir.) at 432; Appl. Ex. 55 (Ryan Reb.) at 707.

[61] Appl. Ex. 55 (Ryan Reb.) at 708; Appl. Ex. 56.

[62] Applicant's witness Dr. Miertschin called this a "minor and correctable error." App. Ex. 60 (Miertschin Reb.) at 735. Mr. Caston did not agree that it was a minor error. Tr. Vol. 2 at 157-58.

treated effluent will be discharged to Sandpit Creek, then to the San Antonio River in Segment No. 1911 of the San Antonio River Basin.[63]

Applicant argues that the following evidence demonstrates that Sandpit Creek is connected hydraulically and hydrologically to the San Antonio River:[64]

a) FEMA flood map and HEC-RAS model. Applicant asserts that Federal Emergency Management Agency (FEMA) flood maps show a connection between Sandpit Creek and the San Antonio River.[65] The Application included a November 26, 2010 FEMA Flood Map.[66] Dr. Grounds evaluated the connectivity between Sandpit Creek and the San Antonio River using FEMA mapping and opined that "there is no doubt" that Sandpit Creek is connected hydraulically and hydrologically to the San Antonio River.[67] Mr. Ryan stated that the purple line matches the route on the FEMA map.[68]

Applicant also argues that the United States Army Corps of Engineers Hydraulic Engineering Center River Analysis System (HEC-RAS) model shows

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[63] Appl. Ex. 22 (Ryan Dir.) at 432, 437.

[64] Applicant's witness Dr. Grounds explained that a hydraulic connection is a defined and contiguous flow path from a source to an outfall and a hydrologic connection is where rainfall runoff within the watershed will have a path overland and into the creek channel to where it will enter into the river. Appl. Ex. 13 (Grounds Dir.) at 381.

[65] Appl. Reply Br. at 3. Dr. Grounds testified that FEMA studies do more than simply identify flood risks—they have multiple uses, and local jurisdictions (e.g., the San Antonio River Authority (SARA)) use them as the best source of hydrology and hydraulics to identify impacts on watersheds. Appl. Ex. 13 (Grounds Dir.) at 377-78; Tr. Vol. 1 at 125.

[66] Appl. Ex. 1 at 298; Appl. Ex. 17.

[67] Appl. Ex. 13 (Grounds Dir.) at 382, 384.

[68] Appl. Ex. 55 (Ryan Reb.) at 708; Appl. Ex. 56; Appl. Ex. 20.

Sandpit Creek's large floodplain and water surfaces connect with the San Antonio River.[69] Dr. Grounds testified that SARA Draft Flood Zones "clearly" show continuous, hydraulic connection between Sandpit Creek and the San Antonio River.[70]

b) Local soils.[71] Applicant's witness Mr. Price testified that Sandpit Creek's channel on the Property was undeveloped, "at best a swale leading to the small impoundment at the remnant railroad embankment."[72] He noted no erosional features or flow lines at any point on the reaches of Sandpit Creek. However, he explained that the lack of channel development in Sandpit Creek reflects the porous nature of the local soils that produce little runoff and a channel bottom that drains even more rapidly, so that significant streamflow is sustained only in the most extreme precipitation events.[73]

c) TxDOT's culverts. Applicant argues that Texas Department of Transportation (TxDOT) information shows that State Highway 181 upstream of the Property has four culverts to pass the flows from Sandpit Creek through the

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[69] Appl. Reply Br. at 3; Appl. Ex. 13 (Grounds Dir.) at 378-80; Appl. Exs. 15, 16, 19, 20.

[70] Appl. Ex. 13 (Grounds Dir.) at 380-81; Appl. Ex. 21.

[71] Appl. Ex. 28.

[72] Appl. Ex. 31 (Price Dir.) at 580; Appl. Ex. 35.

[73] Appl. Ex. 31 (Price Dir.) at 582. Mr. Freasier also confirmed that most of the water is taken up by the soils in both Sandpit Creek and the Property. Appl. Ex. 37 at 634. Mr. Caston, however, guessed that soil permeability could not be the only factor since there was a channel upstream of the pond. He said he would not assume that the soils would change that much in a close geographic area. Tr. Vol. 2 at 186.

Property and toward the San Antonio River.[74] Mr. Ryan explained that TxDOT placed the culverts because of the size of the upstream drainage area that is more than 7,200 acres and will always produce a flow of water. The runoff during a rain event from an area this size can produce a large amount of flow in Sandpit Creek. The culvert was originally installed in the mid-1930's as a part of the construction of State Highway 181. According to Mr. Ryan, even at that time, there was an understanding of the magnitude of the upstream drainage area and the need for conveyance, which has not changed.[75]

d) 7,200 acres upstream. Applicant argues that Sandpit Creek drains 7,200 acres upstream, and rainfall enters Sandpit Creek and flows to the San Antonio River across the Property.[76] Mr. Ryan stated that the drainage area to Applicant's property is approximately 7,200 acres in size, which is sufficient to require special flood hazard areas for the waterway.[77] He stated that the drainage area represents a permanent source of water that will always produce a flow of water. According to Mr. Ryan, this much water does not simply disappear in a small depression on the Property, but "actually flows" to the San Antonio River.[78]

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[74] Appl. Reply Br. at 3; Appl. Ex. 27.

[75] Appl. Ex. 22 (Ryan Dir.) at 453-54. ED's witness Mr. Caston also testified that the TxDOT culvert plans were sized for significant flooding events. Tr. Vol. 2 at 181.

[76] Appl. Reply Br. at 4.

[77] Appl. Ex. 22 (Ryan Dir.) at 438-39.

[78] Appl. Ex. 22 (Ryan Dir.) at 436, 440, 455; Appl. Ex. 26.

Mr. Price explained that the existence of the 7,200-acre drainage basin above the Property, and the fact that little to no water during annual rainfall reaches the Property, indicates that Sandpit Creek is a losing stream, meaning a stream in which steady state flow measurements decrease at successive downstream locations. He added that "losing reaches" are commonly observed in streams crossing the Edwards Aquifer recharge zone, where water drains into the subsurface, cavernous limestone of the aquifer. In Sandpit Creek, stream water drains into the underlying highly transmissive sands.[79]

e) Stantec Report.[80] Applicant argues that Protestant's own Stantec Report shows that Sandpit Creek flows to the San Antonio River.[81] The report concluded that, "a vast majority of the [Property] is in the normal pool area. A prolonged rain event will fill the normal pool area along the northwest property line and pool the 16.5-acre stock pond below the elevation of 404 feet, along with other areas of the [Property] below the elevation of 404 feet. Water at elevation 404 feet will then discharge across the [Property] to the southeast until it reaches the San Antonio River."[82]

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[79] Appl. Ex. 31 (Price Dir.) at 582-83.

[80] Appl. Ex. 30. The report is dated October 6, 2023. Its purpose was to document the existing drainage conditions of the Property during a normal pooling event. Appl. Ex. 30 at 552, 554.

[81] Appl. Reply Br. at 4.

[82] Appl. Ex. 30 at 555. Mr. Price testified that the Stantec Report presents an unsourced topographic map of the Property and that he could not attest to the accuracy of the report. Appl. Ex. 31 (Price Dir.) at 587. ED's witness Mr. Caston testified that, based on the site visit and the USGS topographic map, he did not agree with the report's conclusions. Tr. Vol. 2 at 186.

f) Protestant's topographic map. Applicant argues that Protestant's own exhibit shows Sandpit Creek's connection to the San Antonio River.[83] Protestant's witness Dr. Furnans submitted a topographic map of the Property and vicinity, demonstrating his prediction of potential discharge paths from the impoundment to the San Antonio River.[84]

g) Mr. Freasier's statements. Applicant argues that Mr. Freasier admitted to witnessing flows from the Property to the San Antonio River on at least two occasions during major flood events in 1998 and 2002.[85] Moreover, Applicant's witness Mr. Baggs testified that during the Property visit in August 2022, Mr. Frasier showed where the water drains in a field on the Property before it "tops over" to the San Antonio River. Mr. Baggs visited the Property again in June 2024, and stated that Mr. Freasier showed where water from the Property enters the San Antonio River—in the southern portion and at the eastern corner of the Property.[86] Applicant's witness Ms. Crone testified that Mr. Freasier told her that he has seen the water from the man-made impoundment follow the abandoned railway berm, around the hill, then to the eastern boundary of the Property to the San Antonio River.[87] Mr. Caston

[83] Appl. Reply Br. at 4.

[84] Prot. Ex. 18 at 310, Fig. 4.

[85] Appl. Ex. 4 at 337; Appl. Reply Br. at 4; Appl. Ex. 5 at 340. Mr. Freasier is Protestant's managing partner and resides on the Property. Prot. Ex. 1 at 2, 12; Tr. Vol. 1 at 17. Mr. Frasier, however, clarified that during these two flooding events, the water in Sandpit Creek did not flow to the San Antonio River. Prot. Ex. 1 (Freasier Dir.) at 6.

[86] Appl. Ex. 2 (Baggs Dir.) at 329-30.

[87] Appl. Ex. 8 (Crone Dir.) at 352.

testified that Mr. Freasier showed two spots at the southeast and the east sides of the Property where there might be runoff from the Property.[88]

h) Historical USGS map. Applicant argues that a 1954 USGS map shows the discharge route before the embankment was constructed, which diverted flows from their original route from south/southwest to southeast.[89] Mr. Ryan testified that the Application matched the route as depicted on the 1954 USGS map and its 1980 revision.[90] He also stated that the topography of the Property has changed since 1954; however, maps from 1936 and 1954 depict a "clear connection" and water flowing from Sandpit Creek into the San Antonio River before the impoundment was constructed sometime in the late 1950s or early 1960s.[91]

2. ED's Evidence and Position

The ED argues that the Draft Permit should not be issued because the proposed discharge route is not accurate, as Sandpit Creek does not have a surface connection to the San Antonio River.[92] The ED further states that, because this case is under SOAH jurisdiction, she cannot complete technical review or make changes to the Draft Permit. The ED also notes that Staff may not perform a new technical review with the information Applicant submitted at the hearing because the

[88] Tr. Vol. 2 at 160, 205-06; Tr. Vol. 3 at 30. Mr. Caston clarified that there were little erosional cuts in that area, but there were no channels to connect those cuts to Sandpit Creek.

[89] Appl. Reply Br. at 4; Appl. Ex. 49; Appl. Ex. 22 (Ryan Dir.) at 447.

[90] Appl. Ex. 55 (Ryan Reb.) at 706-08.

[91] Tr. Vol. 1 at 230, 238. Dr. Furnans agreed that there have been changes to the topography since 1954. Tr. Vol. 1 at 47.

[92] *See* ED Closing Br., ED Reply Br.

Application has not been remanded to the ED and Applicant has not revised the Application.[93]

ED's witnesses Messrs. Caston and Dutta testified that it is TCEQ's policy not to issue TPDES permits if a proposed discharge route has been identified incorrectly.[94] Mr. Caston stated that TPDES permits are issued for discharges to "surface water in the state" and that TSWQS only apply to the "surface water in the state."[95] Moreover, in his experience, TPDES permits are issued when there is a continuous discharge route to a classified segment.[96] He added that it is not permissible for TPDES permits to discharge "to the side of a hill or in a field."[97]

Mr. Caston determined, after visiting the Property and reviewing approximately 50-60 years of USGS maps and approximately 20 years of Google Earth historical aerial images, that: the proposed discharge route description is inaccurate because there is no surface water connection between Sandpit Creek and

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[93] ED Closing Br. at 5-6.

[94] Tr. Vol. 2 at 21, 136.

[95] Tr. Vol. 2 at 192-94; Tr. Vol. 3 at 38-39. Mr. Caston testified that he has reviewed about 2,000 permits while working at TCEQ and all discharges were to surface waters. Tr. Vol. 2 at 136-37. "Surface water in the state" is defined as "[l]akes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state as defined in the Texas Water Code [section] 26.001, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems that are authorized by state or federal law, regulation, or permit, and that are created for the purpose of waste treatment are not considered to be water in the state." Rule 307.3(a)(71).

[96] Tr. Vol. 2 at 195. Mr. Caston stated that there does not have to be water in the receiving steam for "surface water connection." Tr. Vol. 2 at 198.

[97] Tr. Vol. 3 at 39. Ms. Lueg testified that a continuous watercourse is not necessary for a discharge route to playa lakes that do not reach a segment. ED Ex. JL-1 (Lueg Dir.) at 374. No party claimed that the impoundment is a playa lake.

the San Antonio River; there is no visible or "obvious" stream channel south of the impoundment that hydraulically connects the pond or Sandpit Creek to the San Antonio River; and Sandpit Creek terminates in the pond.[98] He opined that the correct description of the discharge route should be "to Sandpit Creek and then . . . full stop."[99]

Mr. Caston explained that multiple years of USGS maps show Sandpit Creek ending at the pond, which has a mapped topographic depression surrounding it.[100] Specifically, he determined that the 1973 USGS map, which he opined is the most definitive and reliable, as well as the 2019 USGS map show that Sandpit Creek ends in the depression in the field/the pond.[101] Mr. Caston reviewed the 1954 USGS map and stated that it is a much smaller scale map showing a much larger area, and it has significantly less detail. He stated that Staff would use maps that were approximately ten times more detailed in scale. Moreover, Sandpit Creek is not labeled on the map, though he stated it could be inferred using reference points. Mr. Caston noted that where Sandpit Creek is depicted on the map is "almost . . . very close" to the Property's fence line, so the map is, in his opinion, "inaccurate" because the stream does not flow southwest of the pond along that fence line.[102]

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[98] ED Ex. BC-1 (Caston Dir.) at 303-04, 306, 308-09; Tr. Vol. 2 at 137, 140-42, 211. *See also* ED Ex. BC-5 (July 15, 2024 Interoffice Memorandum prepared by Peter Schaefer of the TCEQ Standards Team stating that Sandpit Creek's surface connection ends in a field). Mr. Caston interpreted "in the field" to mean "in a pond in a field." Tr. Vol. 2 at 197.

[99] Tr. Vol. 3 at 26.

[100] Tr. Vol. 3 at 15, 23, 45, 47, 56.

[101] Tr. Vol. 3 at 47-48.

[102] Tr. Vol. 3 at 12-13.

According to Mr. Caston, Google Earth images show Sandpit Creek's flow ending at the pond, except for the instances where the water fills up the pond and then spills over the railroad right-of-way and/or disperses in the field. Even in those circumstances, however, Mr. Caston stated there was no stream from the pond and that he did not see the water "go any further."[103]

During the site visit in June 2024, Mr. Caston visually confirmed that there was a wide channel starting near the outfall and going to the culvert on the highway. He could still see the channel until Sandpit Creek entered the pond. Mr. Caston stated that there was a cut through the berm on the south side of the pond where, in a high flow event, "it would probably cut through," but there was nothing "remotely similar in size to the other parts of Sandpit Creek's channel" observed upstream of the pond.[104]

According to Mr. Caston, bed and banks are not necessarily used to identify a creek. Mr. Caston testified that, to identify a creek, he looks for a channel or "a type of depression, something that looks like a stream."[105] He emphasized that "there has to be a waterway" to properly support a discharge.[106] He added that it is not a "hard and fast" definition but something that is based on experience and best professional

[103] Tr. Vol. 2 at 205; Tr. Vol. 3 at 14, 23, 30.

[104] Tr. Vol. 2 at 140-41, 185.

[105] Tr. Vol. 2 at 140; Tr. Vol. 3 at 26.

[106] Tr. Vol. 3 at 39.

judgment.[107] Mr. Caston further testified that there is no "surface water in the state" to carry the proposed discharge beyond the impoundment and that any water spilling out from the pond would be flowing onto private property. He testified that such discharge contradicts TCEQ's established practices.[108] Mr. Dutta confirmed that it is not allowed the use private property to convey wastewater.[109]

Mr. Caston testified that that primary sources relied on by Staff when reviewing discharge routes are the USGS topographic maps and aerial images.[110] The ED notes that the Instructions for Domestic Technical Report 1.1 clearly state that applicants are required to submit USGS quadrangle maps showing the location of the facility and the discharge points.[111] Mr. Caston stated that Staff does not rely on FEMA maps, HEC-RAS models, precipitation data, or soil data for the discharge route.[112] He added that FEMA maps' primary use is defining where floods may occur or where flood hazards are, yet they are less accurate and detailed in identifying base flow and base flow drainages.[113]

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[107] Tr. Vol. 2 at 140.

[108] Tr. Vol. 3 at 37-39.

[109] ED Ex. DD-1 (Dutta Dir.) at 5; Tr. Vol. 2 at 19-20. *See* Appl. Ex. 1 at 113 ("The issuance of this permit does not grant to the permittee the right to use private property for conveyance of wastewater along the discharge route described in this permit.").

[110] Tr. Vol. 2 at 177.

[111] ED Closing Br. at 8.

[112] Tr. Vol. 2 at 161, 177, 209; Tr. Vol. 3 at 10, 63-64. Mr. Caston explained that, in TPDES permit applications, FEMA maps are only used to determine if the wastewater treatment plants or the sludge ponds are in the 100-year floodplain. He was not aware of any rule that prohibits the use of the FEMA technology. Tr. Vol. 2 at 177. Mr. Dutta also stated that FEMA maps are used to verify whether treatment plants will be above 100-year floodplain. Tr. Vol. 2 at 57-58.

[113] Tr. Vol. 2 at 140; Tr. Vol. 3 at 63-64.

ED's witness Ms. Lueg opined that there is no connection between Sandpit Creek and the San Antonio River. However, in extreme circumstances, when the Property and the San Antonio River are flooding, she stated that the water would flow downhill and eventually go to the San Antonio River "some way or somehow." She stated that runoff or disbursed water is not a waterbody. She added that neither runoff nor a stock pond that does not connect to other waterbodies are water in the state.[114]

Ms. Lueg further testified that Staff reviews the downstream characteristics under normal conditions, not flood events; and under normal conditions, Sandpit Creek does not connect with the San Antonio River.[115] Mr. Caston also stated that most witnesses had testified about water flow during high flow or flood conditions, but Staff is mainly concerned with what is happening at the base flow or current conditions.[116]

3. Protestant's Evidence and Position

Protestant relies on the federal standard in arguing that the Commission is obligated to apply the continuous surface connection definition to its consideration

[114] Tr. Vol. 3 at 75, 77-78, 84-85, 90. Mr. Caston also testified that runoff is not "surface water in the state." Tr. Vol. 3 at 30.

[115] Tr. Vol. 3 at 91-92.

[116] Tr. Vol. 2 at 211-12; Tr. Vol. 3 at 15-16. Mr. Ryan also stated that TCEQ does not consider flooding in the context of wastewater permit applications. Tr. Vol. 3 at 149.

of TPDES permits, including to the definition of water in the state.[117] Based on this standard, Protestant argues that, because Sandpit Creek does not have a *continuous surface connection* to the San Antonio River, the Draft Permit cannot be issued.[118] Protestant argues that: the definitive endpoint of the proposed discharge route is the impoundment; Sandpit Creek does not connect to the San Antonio River; and the Commission lacks the jurisdiction to issue the Draft Permit.[119]

Mr. Freasier has lived on the Property since 2013. He testified that Sandpit Creek goes directly through the Property and ends in a pool on the adjacent property. He stated that Sandpit Creek has been dry for decades and he has never seen Sandpit Creek steadily flow. He opined that Sandpit Creek has never had a direct path that terminates at the San Antonio River. He explained that there is a "sink depression" just across the Property line where rain gathers and pools to create standing water, but that water never makes it to the San Antonio River.[120] Mr. Freasier testified that he has never seen water flow from the Property to the San Antonio River.[121]

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[117] Prot. Closing Br. at 8-10. Protestant cites to a United States Supreme Court decision where the court clarified the definition of "waters of the United States" under the Clean Water Act as "relatively permanent body of water connected to traditional interstate navigable waters" that has a "continuous surface connection with that water, making it difficult to determine where the 'water' ends, and the 'wetland' begins." *Sackett v. EPA*, 598 U. S. 651, 678 (2023).

[118] Prot. Closing Br. at 10 (emphasis added); Prot. Reply Br. at 4.

[119] Prot. Closing Br. at 15, 17.

[120] Prot. Ex. 1 (Freasier Dir.) at 4-5, 7.

[121] Tr. Vol. 1 at 20-21.

Protestant's witness Mr. Machin stated that historic and current USGS and TxDOT maps do not show a connection between Sandpit Creek and the San Antonio River. He stated that, if the pond is full and overflows, the elevations to the southeast and northeast are lower than the San Antonio River, and water will pool there. He was not aware of any TPDES permits that had been issued that would allow discharge to a pond on private property.[122]

Dr. Furnans also testified that Sandpit Creek does not connect to the San Antonio River.[123] He explained that, because Sandpit Creek does not currently contain flow, it is not "immediately obvious" where Sandpit Creek is located or where the proposed discharge will travel. He visited the Property and testified that he could "vaguely" identify the pathway of Sandpit Creek from the intersection with the highway on the upstream end of the Property to the downstream end of Sandpit Creek at the pond. Based on the topography of the area and hydrological flow patterns, Dr. Furnans stated that the proposed discharge will accumulate within the pond and travel downgradient across the Property surface.[124]

Dr. Furnans predicted a "worst-case scenario" of the effect of continuous flow of the proposed discharge on the Property.[125] He opined that effluent would flow south to the end of Sandpit Creek, where it will accumulate in the pond forming a lake and, once the lake is full, flow southeast and northeast across the Property, with

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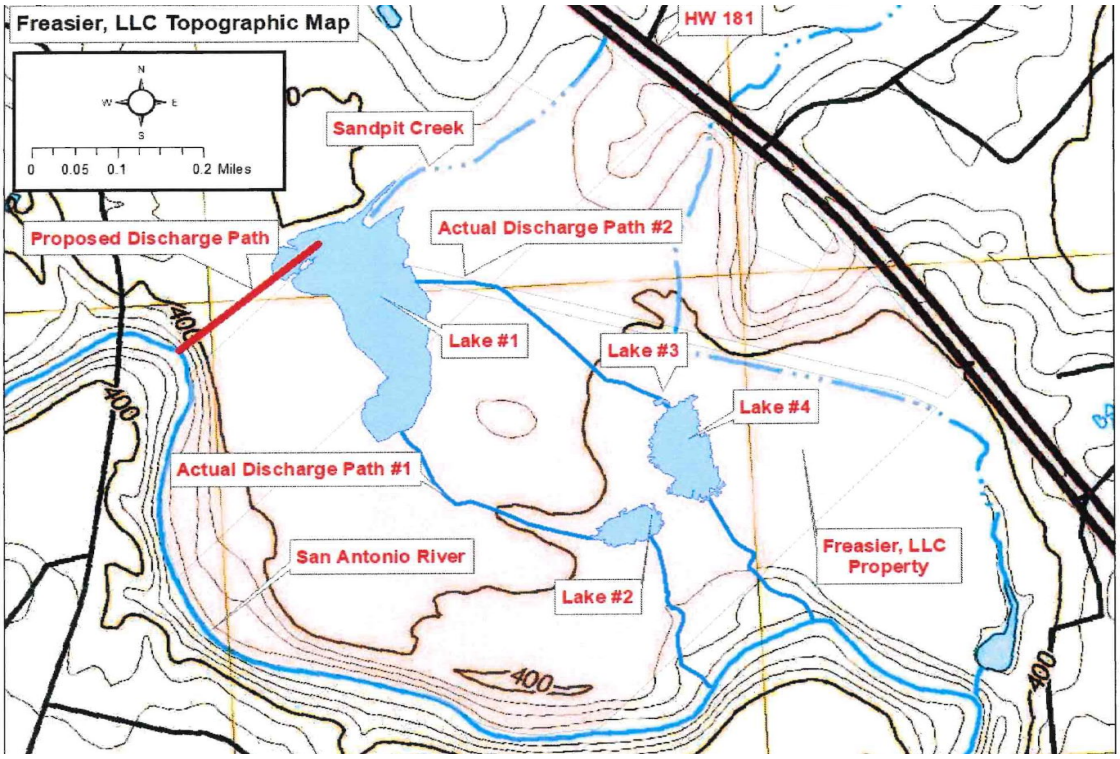
[122] Prot. Ex. 11 (Machin Dir.) at 59-60.

[123] Prot. Ex. 18 (Furnans Dir.) at 302; Tr. Vol. 1 at 44.

[124] Prot. Ex. 18 (Furnans Dir.) at 294, 302, 311.

[125] Prot. Ex. 18 (Furnans Dir.) at 296, 303.

each drainage path creating a river across the Property. The southeast river will inundate another smaller depression, creating another lake from which the river outflow will eventually reach the San Antonio River. The northeast river will create two additional lakes, and their outflow will also eventually reach the San Antonio River:[126]



Dr. Furnans testified that he considered evaporation loss in his prediction but did not consider seepage loss into the subsurface. He noted that, upon commencement of any discharge, the water would be quickly absorbed by the sandy soil on the Property; however, eventually, the soil will become saturated, and all discharges will be conveyed downgradient along the drainage paths indicated by the

[126] Prot. Ex. 18 (Furnans Dir.) at 304-06, Fig. 4.

natural topography.[127] He stated that if seepage losses had been formally considered, there would be less inundation on the Property.[128]

4. Applicant's Reply

Applicant argues that "water of the United States" is not the legal standard in Texas for wastewater discharges.[129] Under federal law, the National Pollutant Discharge Elimination System program requires permits for the discharge from any wastewater treatment plant into "water of the United States."[130] The Texas Legislature directed the Commission to issue permits "into or adjacent to water in the state," which includes more than just "water of the United States" or navigable waters.[131]

Applicant notes that the ED has taken multiple positions at odds with the statutory definition of water in the state, including that the discharge must be to a "continuous watercourse," a "continuous channel," a "visible stream channel," "obvious channel," "beds and banks," "wholly within surface waters in the state," and a waterbody with a "surface water connection."[132] Applicant asserts that none of these standards are found in the applicable statute, TCEQ rules, or case law.

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[127] Prot. Ex. 18 (Furnans Dir.) at 305; Tr. Vol. 1 at 39-40, 44.

[128] Tr. Vol. 1 at 40-41.

[129] Appl. Reply Br. at 5-9.

[130] 40 C.F.R. § 122.1(b)(1).

[131] Appl. Closing Br. at 3; Tex. Water Code § 26.027(a).

[132] Appl. Closing Br. at 4-5, 9; ED Ex. BC-5; ED Ex. BC-1 (Caston Dir.) at 303-04, 306-08; ED Ex. DD-1 (Dutta Dir.) at 5, 10; Tr. Vol. 2 at 61.

Applicant further argues that no regulation or statute requires that the watercourse be continuous or visible or that the discharge flow continuously through a channel, surface water, or beds and banks.[133]

Applicant argues that, under Texas Water Code section 26.001(5) and Rule 307.3(a)(71), as well as *Hoeft v. Short*, 273 S.W. 785 (Tex. 1925) and *Domel v. City of Georgetown,* 6 S.W.3d 349 (Tex. App.—Austin 1999, pet. denied), Sandpit Creek is a watercourse and falls within the definition of water in the state even in the absence of bed and banks.[134] Specifically, Applicant notes that Sandpit Creek is predominantly a dry creek; Mr. Freasier has seen flow on two occasions; the lack of flow in Sandpit Creek is attributable to the sandy soils in the area; and Sandpit Creek is considered a losing stream that loses water when it drains into the underlying highly transmissive sands.[135] Applicant also states that Sandpit Creek has a permanent source of supply—it drains an area of approximately 7,200 acres and is designated as a flood hazard area.[136]

Furthermore, Applicant notes that the ED's "new interpretation" of water in the state conflicts with the ED's prior position in a similar case.[137] In the exceptions to a proposal for decision in the Application of DHJB Development, LLC (DHJB),

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[133] Appl. Closing Br. at 5, 9-10.

[134] Appl. Closing Br. at 8.

[135] Appl. Closing Br. at 7-8; Appl. Ex. 22 (Ryan Dir.) at 444-45.

[136] Appl. Closing Br. at 8; App. Ex. 22 (Ryan Dir.) at 438-39.

[137] Appl. Closing Br. at 9.

the ED stated that "[t]he term 'watercourse' is used in the definition of 'water in the state'; however, the term 'water in the state' encompasses more than a watercourse . . . ."[138] In *DHJB*, the tributary did not have a defined bed and banks for a channel, yet slope and vegetation patterns indicated that water flowed in a general direction; however, those were considered more like swales than a defined stream.[139] The Commission, in issuing a permit in *DHJB*, stated "[t]he discharge route is more than a wide valley or mere surface drainage and similar conditions will produce a flow of water that will recur with some degree of regularity . . . ."[140] Here, Applicant argues, the ED has taken the opposite position and contrived there must be a continuous channel, a visible channel, or a bed and banks, which is not the Commission's standard, the standard the ED has used in the past, or the legal standard under which the Draft Permit must be evaluated.[141]

Moreover, Applicant argues that the ED bases her position that Sandpit Creek does not flow southeast to the San Antonio River on Mr. Caston's single site visit and visual observations of Sandpit Creek.[142] While Dr. Grounds did not entirely discount the value of field observations, he explained that they do not provide sufficient detail of topography to determine hydraulic connection, watershed divides, or channel

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[138] Appl. Ex. 29 at 526-27.

[139] Appl. Ex. 29 at 527-28.

[140] Appl. Closing Br at 46-59 (Commission, *Order Granting the Application by DHJB Development, LLC for an Amendment to TPDES Permit WQ0014975001*, SOAH Docket No. 582-14-3427, TCEQ Docket No. 2013-2228-MWD (Sept. 15, 2015)).

[141] Appl. Closing Br. at 10.

[142] Appl. Closing Br. at 16-17.

geometry.[143] According to Dr. Grounds, Sandpit Creek's flow path is so wide, with a bottom width of 200-300 feet, it would not have been discernible to Mr. Caston by visual observation, especially in a very flat field.[144] Dr. Grounds stated that Sandpit Creek's well-defined channel is essentially "wiped out" by the movement and meandering of the San Antonio River as it traverses back and forth, making it impossible for any person standing in a field to see the flow path with the naked eye. Dr. Grounds explained that the San Antonio River "dominates" Sandpit Creek so that the river is "backing up" into the stream.[145] Applicant argues that it is "pointless" to focus on "the connection point," per se, between the creek and the river—the connection is where the waters commingle within the floodplain.[146]

Mr. Ryan opined that Mr. Caston's opinion that Sandpit Creek ends in a small impoundment is not supported by the scientific evidence in this case. He stated that relying only on the USGS map is at odds with a science- and evidence-based approach for identifying the discharge route.[147] In Mr. Ryan's experience, FEMA maps have been acceptable authoritative sources.[148] He testified that TCEQ's instructions do not state that FEMA maps cannot be relied on, and he was not aware of any rule or Commission policy that prohibits the use of FEMA maps to assist in

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[143] App. Ex. 13 (Ground Dir.) at 383.

[144] App. Ex. 19 (bottom right hand corner graph at Station 1449 shows the Sandpit Creek channel at 300 feet over flat surface of less than 1 foot height difference); Tr. Vol. 2 at 140 (Mr. Caston testifying that he looks for a channel when looking at a creek).

[145] Tr. Vol. 1. at 143, 155, 157, 159.

[146] Appl. Closing Br. at 18.

[147] Appl. Ex. 55 (Ryan Reb.) at 710, 714-15.

[148] Appl. Ex. 22 (Ryan Dir.) at 434.

determining and delineating the discharge route. He noted that TCEQ's webpage directs applicants to several mapping resources, including flood maps from FEMA. Moreover, Mr. Ryan testified, TCEQ's instructions, webpage, and rules do not state that the USGS map is the sole, authoritative source for determining a discharge route.[149]

In response to Dr. Furnans's prediction about the lakes, Mr. Price testified that Dr. Furnans's model completely ignored the high rates of infiltration in the soils underlaying Sandpit Creek, and instead assumed that, once saturated, the stream channel and the San Antonio River alluvium would be impervious to additional infiltration, essentially treating the Property as "a bathtub without a drain." He opined that it is highly unlikely that Dr. Furnans's models are accurate in predicting the creation of four lakes on the Property.[150] Dr. Miertschin also opined that Dr. Furnans's extent of water coverage is exaggerated because it fails to include the saturated hydraulic permeability of the soils, which would lead to considerable loss of water to the shallow soils.[151]

Applicant relies on *Domel* in arguing that TCEQ has the authority to issue permits for discharges into or adjacent to water in the state, even if that water flows over private property, and even if the course of the water shifts over time either

[149] Appl. Ex. 55 (Ryan Reb.) at 710; Appl. Ex. 58 at 723.

[150] Appl. Ex. 31 (Price Dir.) at 583.

[151] Appl. Ex. 38 (Miertschin Dir.) at 658.

naturally or otherwise.[152] According to Applicant, Sandpit Creek has changed its course through man-made alterations to the topography and the natural tendency of watercourses to change, but flow occurs in Sandpit Creek and the watercourse connects to the San Antonio River both hydraulically and hydrologically.[153] Applicant argues that Protestant's and ED's witnesses admitted that the water flows from Sandpit Creek to the San Antonio River: Dr. Furnans testified that discharged water will "eventually" flow downstream to the San Antonio River and his analysis confirmed that the water will find its way there by a pathway moving southeast across the Property; and Ms. Lueg testified that water would flow from Sandpit Creek to the San Antonio River in "extreme circumstances."[154]

5. ED's Reply

The ED reiterates that she does not support the issuance of the Draft Permit because the proposed discharge route does not exist as described in the Application and the Draft Permit was prepared based on the information contained in the Application.[155]

The ED argues that the three cases Applicant uses to support its claim that Sandpit Creek is a watercourse are distinguishable from this case. The ED

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[152] Appl. Reply Br. at 21-22; *Domel*, 6 S.W.3d at 359, 360 ("[T]he State's right to use a watercourse for transport is sufficiently established to be unquestioned." "The State's Usage Right is the Same Whether the Flow of Water is 'Natural' or 'Man–Made'").

[153] Appl. Reply Br. at 22.

[154] Appl. Closing Br. at 20; Tr. Vol. 3 at 77-78, 85; Prot. Ex. 18 (Furnans Dir.) at 14-16; Appl. Ex. 38 (Miertschin Dir.) at 659.

[155] ED Reply Br. at 2.

differentiates *Domel* based on its procedural posture, noting that the court there reviewed the evidence in the light most favorable to the applicant because it was decided on summary judgment. Applicant has no such benefit under the Texas Government Code section 2003.047(i) framework that governs this proceeding.[156] The ED further asserts that Sandpit Creek is not the same as the creek in *Hoefs*, which ran for a day or two after a big rain.[157] Here, Mr. Freasier has only observed water gather in Sandpit Creek during flood events in 1998 and 2002.[158] The ED argues that twice in four years versus a few days after every big rain is "quite a difference."[159]

The ED further notes that the Texas Supreme Court, in *Hoefs*, clarified that a permanent source of supply—one of the court's enumerated criteria for watercourses—correlates to whether the creek could be used as a practical source for irrigation.[160] The ED argues that, while TxDOT and FEMA have identified Sandpit Creek as the path that floodwaters would flow down, it is untenable to claim that a landowner could practicably irrigate their land only with flows from flood events. Therefore, the ED argues that neither the proposed discharge route in the Application nor the route in Applicant's rebuttal case is a watercourse.[161]

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[156] ED Reply Br. 3-5.

[157] *Hoefs*, 273 S.W. at 785.

[158] Prot. Ex. 1 (Freasier Dir.) at 6.

[159] ED Reply Br. at 5-6.

[160] *Hoefs*, 273 S.W. at 786-87.

[161] ED Reply Br. at 6.

Moreover, the ED states that in *DHJB*, there were recent USGS maps showing the tributary as a broken line of dots, which denoted an intermittent stream, and ground inspection corroborated the existence of the creek. Here, the only USGS map showing the connection is from 1954, which is 70 years old, and the site visit confirmed the lack of surface connection between Sandpit Creek and the San Antonio River.[162]

6. Protestant's Reply

Protestant notes that Applicant's own witnesses conceded that there is no connection between Sandpit Creek and the San Antonio River.[163] Mr. Ryan acknowledged that the 2022 USGS map does not show Sandpit Creek connecting to the San Antonio River "in any direction."[164] Ms. Crone testified that "topography is so slight in this area . . . it's hard to see on-site" when discussing the discharge route.[165] Dr. Grounds testified that the San Antonio River and Sandpit Creek connect in a 100-year flood event—"it's all under water during a 100-year event."[166] Dr. Miertschin stated that "[w]hile it may be correct that under existing normal low-flow runoff conditions, there is not a continuously-flowing water connection directly to the San Antonio River, it is certainly correct that given sufficient runoff flow moving through Sandpit Creek there is a connection to the

[162] ED Reply Br. at 6-7.

[163] Prot. Closing Br. at 13.

[164] Tr. Vol. 3 at 143-44.

[165] Tr. Vol. 1 at 87.

[166] Tr. Vol. 1 at 162.

San Antonio River."[167] Protestant argues that permitting based on "exceptional circumstances" does not align with TCEQ's practice, and the topography of the Property changed since the 1950s. Therefore, a 100-year flood event does not reflect the present, normal condition of the watercourses, nor do maps from 1954 represent the current state of the creek.[168]

Protestant further argues that water overflowing the impoundment is not water in the state and the proposed discharge route is not a watercourse.[169] Protestant argues that this case is different from *Domel*, where a tributary was determined to be a watercourse because: it had sufficient carrying capacity to contain the discharge; the Domels did not allege that the applicant's discharge would cause flooding on their land; and the discharge was into a stream with well-defined bed and banks suitable for a receiving stream.[170] Here, Dr. Furnans testified that the discharge will overflow Sandpit Creek, proving that it lacks the necessary carrying capacity, and Sandpit Creek does not have well-defined banks south of the impoundment.[171] Moreover, Protestant notes that *Domel*: (1) categorizes surface water into two types, diffuse surface water or water in a watercourse; and (2) found that diffuse surface water belongs to the owner of the land on which it gathers, so long as it remains on the land and prior to its passage into a natural watercourse.[172] Protestant argues that

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[167] Appl. Ex. 60 (Miertschin Reb.) at 731.

[168] Prot. Closing Br. at 14; Prot. Reply Br. at 18-19.

[169] Prot. Reply Br. at 2, 5, 7.

[170] *Domel,* 6 S.W.3d at 350-52.

[171] Prot. Reply Br. at 6; Prot. Ex. 18 (Furnans Dir.) at 304-05.

[172] *Domel*, 6 S.W.3d at 353 (citing *Turner v. Big Lake Oil Co.*, 96 S.W.2d 221, 228 (1936)).

the proposed discharge that would flow past the impoundment is "nothing more than diffuse water."[173]

Protestant further argues that the Commission is not bound to its prior permits and that citing a single TCEQ order granting a TPDES permit does not allow the Applicant to create a binding standard or argue that the ED's position is inconsistent with such a standard.[174] Protestant argues that each application is unique, and the ED's positions must be evaluated based on the specific facts and circumstances at hand.[175]

7. OPIC's Evidence and Position

OPIC argues that the Draft Permit should be denied based on the absence of an accurate discharge route.[176]

8. Analysis

The Interim Remand Order specifically requested that the ALJs determine whether Sandpit Creek connects to the San Antonio River or terminates on the Property because "the nature of the watercourse and where it terminates informs

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[173] Prot. Reply Br. at 6.

[174] Prot. Reply Br. at 8; *Texas State Bd. of Pharmacy v. Witcher*, 447 S.W.3d 520, 534 (Tex. App.—Austin 2014, pet. granted), order withdrawn (Apr. 1, 2016) (stating that, although an agency is not bound to follow its decisions in contested cases in the same way that a court is bound by precedent, an agency is required by courts to explain its reasoning when it appears to the reviewing court that an agency has departed from its earlier administrative policy or there exists an apparent inconsistency in agency determinations).

[175] Prot. Reply Br. at 8.

[176] *See* OPIC Closing Br.

whether the discharge's effect on surface water quality was adequately evaluated."[177] It is undisputed that Sandpit Creek is an intermittent creek and constitutes water in the state. No party contested the description of the discharge route from the outfall via Sandpit Creek to the impoundment adjacent to the Property. The proposed discharge route below the impoundment, on the other hand, is a central, highly contested issue in this case.

The ED's witnesses testified that it is TCEQ's policy not to issue TPDES permits if a proposed discharge route has been identified incorrectly.[178] Applicant conceded that the visual representation of the discharge route submitted in the Application and depicted as the blue line on the 2010 USGS map is incorrect and does not exist. Applicant, however, did not revise the Application but, instead, offered a revised discharge route at the hearing depicted as the purple line on the 2022 USGS map.[179] Applicant now asserts that the effluent would flow via Sandpit Creek southeast, not southwest, of the impoundment for 0.9 miles through the Property before connecting to the San Antonio River approximately one mile from the originally depicted confluence location. Applicant argues that the narrative description of the discharge route in the Application and the Draft Permit remains valid because the effluent will flow from the outfall to Sandpit Creek and then to the San Antonio River in Segment No. 1911 of the San Antonio River Basin.

[177] Interim Remand Order.

[178] Tr. Vol. 2 at 21, 136.

[179] Appl. Ex. 56.

Protestant, the ED, and OPIC argue that the Draft Permit should not be issued because (1) the discharge route represented in the Application is incorrect, and (2) Sandpit Creek ends in the impoundment and does not flow to the San Antonio River. Protestant also asserts that the discharged effluent passing over the Property from the impoundment is not water in a watercourse but diffuse surface water.

The preponderance of the evidence shows that Sandpit Creek used to flow to the San Antonio River as depicted by the blue line in the Application—southwest along the fence line to the San Antonio River. Although Mr. Caston stated that the 1954 USGS map is a much smaller scale and less detailed map and questioned its accuracy, Mr. Ryan testified that the 1936 and 1954 USGS maps depict a "clear connection" and water flowing from Sandpit Creek to the San Antonio River.[180] Mr. Ryan's testimony was not controverted. However, it is undisputed that there have been changes to the topography of the area since the 1950s, including the construction of the man-made impoundment adjacent to the Property. The evidence shows that the impoundment hindered the course of Sandpit Creek, which no longer flows to the San Antonio River as depicted on the historical USGS maps. Applicant argues that Sandpit Creek changed its route and now connects to the river southeast from the impoundment.

Because the parties' arguments reflect disagreement as to what constitutes a creek, the ALJs begin with addressing the meaning of the term. In common usage,

[180] Tr. Vol. 1 at 230, 238; Tr. Vol. 3 at 12-13.

creek means a "small stream, often a shallow or intermittent tributary to a river," or a "channel or stream running through a salt marsh."[181] "Stream" is defined as a "flow of water in a channel or bed, as a brook, rivulet, or small river."[182] Mr. Caston stated that there is no "hard and fast" definition that Staff uses for the term "creek," but the definition he provided, based on his experience and best professional judgment, closely matches the common usage.[183] He stated that, to identify a creek, he looks for a channel or "a type of depression, something that looks like a stream."[184] Applicant focuses its argument on the fact that Sandpit Creek is a watercourse even in the absence of bed and banks; however, as Mr. Caston testified, bed and banks are not necessarily used to identify a creek.[185]

Based on the common usage and understanding of the term "creek," the ALJs conclude that the preponderance of the credible evidence proves that Sandpit Creek ends at the impoundment and does not connect to the San Antonio River. The preponderant evidence shows that there is a Sandpit Creek channel upstream of the impoundment but no channel past the impoundment. During the site visit, Mr. Caston observed Sandpit Creek's wide channel starting near the outfall at the

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[181] *Creek*, The American Heritage Dictionary of the English Language, https://ahdictionary.com/word/search.html?q=Creek (last visited Jan. 2, 2025). USGS Water Science Glossary defines creek as a natural stream of water normally smaller than and often tributary to a river. https://www.usgs.gov/special-topics/water-science-school/science/water-science-glossary#C (last visited Jan. 2, 2025). Words and phrases in Texas law "shall be read in context and construed according to the rules of grammar and common usage." Tex. Gov't Code § 311.011.

[182] *Stream*, The American Heritage Dictionary of the English Language, https://ahdictionary.com/word/search.html?q=stream (last visited Jan. 2, 2025).

[183] Tr. Vol. 2 at 140.

[184] Tr. Vol. 2 at 140; Tr. Vol. 3 at 26.

[185] Tr. Vol. 2 at 140.

Facility and going to the culvert on the highway and entering the impoundment.[186] He did not observe any stream channel south of the impoundment.[187] Mr. Caston noted little erosional cuts at the southeast and the east sides of the Property; however, he testified that there were no channels to connect those cuts to Sandpit Creek.[188] Applicant witness Mr. Price also mentioned the lack of channel below the impoundment. Mr. Price opined that the channel below the impoundment was "undeveloped" due to the porous nature of the local soils that take up the water.[189] However, as Mr. Caston testified, the nature of the soils cannot explain the lack of channel past the impoundment when there is a well-defined channel upstream of the impoundment.[190] Applicant did not offer any evidence to explain how the soils caused differing channel development upstream and downstream in such close geographic proximity.

The ALJs further find that the preponderance of the evidence shows that Sandpit Creek is not a watercourse past the impoundment. In *Hoefs*, the Texas Supreme Court held that for a stream to be a natural watercourse, it must have a defined bed and banks, a current of water, and a permanent source of supply.[191] The Court found that the creek in *Hoefs* had a substantial existence, with a well-defined channel, with banks and bed, and flowing water in times of rainfall. Also, the denuded

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[186] Tr. Vol. 2 at 140-41, 185.

[187] ED Ex. BC-1 (Caston Dir.) at 303-04, 306, 308-09; Tr. Vol. 2 at 137, 140-42, 211.

[188] Tr. Vol. 2 at 160, 205-06; Tr. Vol. 3 at 30.

[189] Appl. Ex. 31 (Price Dir.) at 580.

[190] Tr. Vol. 2 at 186.

[191] *Hoefs*, 273 S.W. at 787.

condition of the creek, absence of soil and vegetation, and the presence of boulders and gravel "show[ed] without question the long persistence of a current where the channel [was] now located."[192] There was also a depression on each side of the draw and the banks were higher than either side. The court further held that the creek was of such substantial, stable, and permanent character that it was easily recognized, and sufficient rainfall produced a flow of water in the channel.[193]

However, the court recognized that the well-defined channel, bed, and banks could be slight, imperceptible, or absent in some instances and still be a watercourse. But "there must be something more than mere surface drainage over the entire face of a tract of land, occasioned by unusual freshets or other extraordinary causes."[194] Contrary to the creek in *Hoefs*, Sandpit Creek does not have any channel, bed, or banks past the impoundment. The Property is covered with soil and vegetation, and only has "little erosional cuts" that are not connected to the creek.[195] No witnesses testified that Sandpit Creek was of "such substantial, stable, and permanent character that it was easily recognized" past the impoundment.[196] The evidence, instead, showed that the Property floods and the water drains through the Property to the San Antonio River in major flood events, as described more in detail below.

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[192] *Hoefs*, 273 S.W. at 786.

[193] *Hoefs*, 273 S.W. at 786-87.

[194] *Hoefs*, 273 S.W. at 787.

[195] Tr. Vol. 2 at 160, 205-06; Tr. Vol. 3 at 30.

[196] *Hoefs,* 273 S.W. at 786.

Moreover, the court in *Hoefs* held that the creek there had a current of water because it flowed after it rained from "'a day or two' to 'a good while,' and the water sometimes [stood] in holes for as long as two weeks."[197] Here, Mr. Freasier represented that he has seen flow in Sandpit Creek on at least two occasions during major flood events in 1998 and 2002.[198] The ALJs agree with the ED that twice in four years versus a few days after every big rain is a substantial difference. Finally, the *Hoefs* court clarified that a permanent source of supply correlates to whether the creek could be used as a practical source for irrigation.[199] Here, no evidence was presented that Sandpit Creek, an intermittent creek, could be used for irrigation. Therefore, Applicant failed to prove that Sandpit Creek meets the three elements of the *Hoefs* test and is a watercourse past the impoundment.

Sandpit Creek is also distinguishable from the tributary in *Domel*, which had a channel with well-defined bed and banks and was clearly visible on the aerial photographs as a continuous stream or river bed with defined boundaries meandering through the surrounding farmland.[200] Sandpit Creek is also different from the tributary in *DHJB*, which did not have a defined bed and banks but had slope and vegetation patterns indicating that water flowed in a general direction, and had

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[197] *Hoefs*, 273 S.W. at 785.

[198] Appl. Ex. 4 at 337.

[199] *Hoefs*, 273 S.W. at 786-87.

[200] *Domel*, 6 S.W.3d at 354, 356. In *Domel*, landowners, the Domels, sued the City of Georgetown claiming that the discharge of effluent from a wastewater treatment plant would travel through a non-navigable unnamed tributary of Mankins Creek across their property and would significantly reduce the value of their land. The Austin Court of Appeals held that, under Texas law, the state has a right superior to private landowners to use a watercourse for the transport of state-owned water, which includes treated effluent that has been discharged into a watercourse. *Domel*, 6 S.W.3d 350-51, 356.

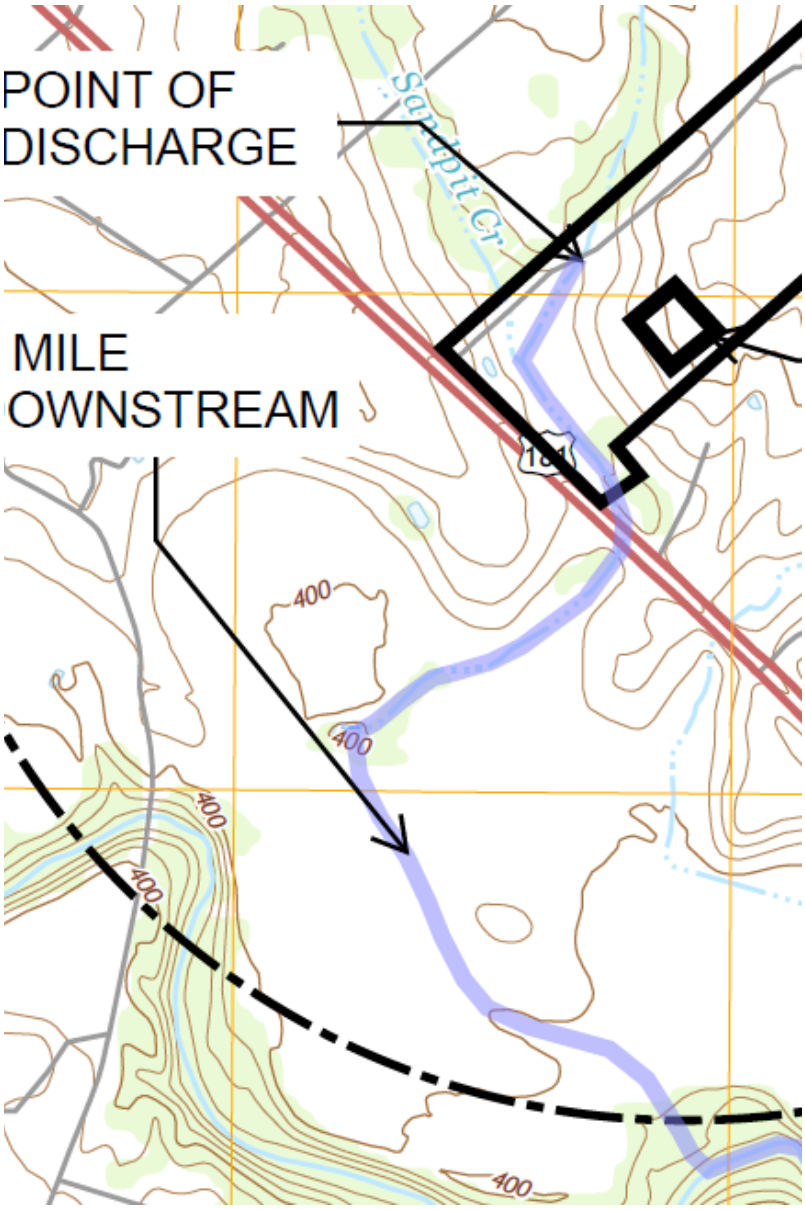
regular water flow during rainfall events and for short duration thereafter. A recent USGS map showed the tributary in *DHJB* as an intermittent stream and a site visit confirmed the existence of a watercourse.[201] Again, Sandpit Creek does not have any channel past the impoundment, flow after regular rain events, or slope and vegetation patterns indicating a direction of the water flow.

Moreover, the most recent USGS map in the record shows that Sandpit Creek ends in the impoundment. Staff relies on USGS topographic maps as the primary source in reviewing the discharge routes in TPDES applications.[202] The 2022 USGS map is the one Applicant used to depict the revised discharge route as the purple line; yet the 2022 USGS map, itself, shows Sandpit Creek as a blue dotted line that does not extend past the impoundment (although it is hard to see, as it is overlapped by the purple line):[203]

[201] Appl. Closing Br at 39, 42-43 (Commission, *Order Granting the Application by DHJB Development, LLC for an Amendment to TPDES Permit WQ0014975001*, SOAH Docket No. 582-14-3427, TCEQ Docket No. 2013-2228-MWD (Sept. 15, 2015)).

[202] Tr. Vol. 2 at 177; ED Closing Br. at 8.

[203] Appl. Ex. 56.



Applicant's witness Mr. Ryan acknowledged that the 2022 USGS map does not show Sandpit Creek connecting to the San Antonio River "in any direction."[204] The 2010 USGS map included in the Application also does not show Sandpit Creek extending past the impoundment.[205] Mr. Caston credibly testified that multiple years

[204] Tr. Vol. 3 at 143-44.

[205] Appl. Ex. 1 at 273.

of USGS maps, including 1973 and 2019 maps, show a mapped topographic depression surrounding the pond and Sandpit Creek ending at the pond.[206]

TCEQ has no statutory authority to consider flooding or its effects in the wastewater permitting process.[207] Staff reviews the downstream characteristics under normal conditions, not flood events.[208] Applicant, however, offered extensive evidence of flood maps and flood models to argue that Sandpit Creek connects to the San Antonio River via the revised discharge route because it follows the FEMA identified flood flow. Applicant also presented evidence of the 7,200 acres upstream of the Property and TxDOT's culverts to argue that Sandpit Creek drains the 7,200 acres upstream and a flow of floodwater will pass through the culverts onto the Property and then to the San Antonio River via the creek. The ALJs do not find this evidence persuasive by a preponderance of the evidence to show that Sandpit Creek flows through the Property and into the San Antonio River.

The evidence instead shows that FEMA identified the area where the Facility and the Property are located to have a high risk of flooding, and the water will follow the topography of the Property southeast towards the river. As Ms. Lueg testified, when the Property and the San Antonio River are flooding, the water could flow downhill and eventually go to the river "someway or somehow."[209] However, that does not mean that the water will flow via Sandpit Creek. The ALJs find Applicant's

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[206] Tr. Vol. 3 at 15, 23, 45, 47-48, 56.

[207] *See* 30 Tex. Admin. Code ch. 309, subch. B.

[208] Tr. Vol. 2 at 211-12; Tr. Vol. 3 at 15-16, 91-92, 149.

[209] Tr. Vol. 3 at 77-78, 85.

witnesses' testimony that, based on FEMA information, Sandpit Creek is connected hydraulically and hydrologically to the San Antonio River unpersuasive due to the lack of the creek channel past the impoundment.

Moreover, Mr. Caston testified that Staff does not rely on FEMA maps in reviewing discharge routes.[210] In TPDES permit applications, Staff uses FEMA maps only to determine if the wastewater treatment plants are in the 100-year floodplain.[211] Applicant's witness Mr. Ryan argued that FEMA maps have been acceptable authoritative sources in identifying the discharge route.[212] Mr. Caston, however, explained that FEMA maps are less accurate and detailed in identifying base flow and base flow drainages.[213]

Furthermore, Applicant misinterprets the conclusions in the Stantec Report as well as Mr. Freasier's testimony, in arguing that both showed connections between the creek and the river. The Stantec Report concluded that, in a prolonged rain event, water would flow southeast through the Property until it reaches the river. Again, it shows the flow of the water during rain events; it does not state that Sandpit Creek connects to the San Antonio River. Instead, it states that Sandpit Creek "collects in the pond."[214] Admittedly, Mr. Freasier's testimony is inconsistent—first, he stated that he observed water flowing from the Property to the San Antonio River on two

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[210] Tr. Vol. 2 at 161, 177, 209; Tr. Vol. 3 at 10, 63-64.

[211] Tr. Vol. 2 at 57-58, 177.

[212] Appl. Ex. 22 (Ryan Dir.) at 434, 710.

[213] Tr. Vol. 2 at 140; Tr. Vol. 3 at 63-64.

[214] Appl. Ex. 30 at 554-55.

occasions in 1998 and 2002,[215] only to later state that he never saw water flow there.[216] But Mr. Freasier never stated that he observed Sandpit Creek flow into the San Antonio River.

Finally, Applicant argues that Dr. Furnans's topographic map of the Property shows Sandpit Creek's connection to the San Antonio River.[217] Dr. Furnans presented a map depicting his prediction of the "worst-case scenario" of the effect of continuous flow of the proposed discharge on the Property, which demonstrated potential paths of water flow from the impoundment to the river via the Property.[218] At no point did Dr. Furnans testify that the creek connects to the river. Rather, he testified that, based on the topography of the area and hydrological flow patterns, the proposed discharge will accumulate within the impoundment and travel downgradient across the land surface.[219]

In addition to the USGS maps, Staff relies on Google Earth historical aerial images in reviewing the discharge routes in TPDES applications.[220] Approximately 20 years of Google Earth historical aerial images show that Sandpit Creek's flow ends at the pond except for the instances where the water fills up the pond and then

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[215] Appl. Ex. 4 at 337; Appl. Ex. 5 at 340.

[216] Tr. Vol. 1 at 20-21.

[217] Appl. Reply Br. at 4.

[218] Prot. Ex. 18 at 310, Fig. 4.

[219] Prot. Ex. 18 (Furnans Dir.) at 294, 302, 311.

[220] Tr. Vol. 2 at 177.

spills over in the field. But, even in those instances, there was no stream from the pond, as Mr. Caston testified.[221]

Applicant contends that it is "pointless" to focus on "the connection point," per se, between the creek and the river—the connection is where the waters commingle within the floodplain.[222] The ALJs do not agree. The Commission is authorized to issue permits for the discharge of waste or pollutants *into or adjacent to water in the state.*[223] No evidence was presented that comingled waters in the floodplain is the standard for issuance of TPDES permits. The Interim Remand Order remanded this case to SOAH with a clear directive to determine whether Sandpit Creek connects to the San Antonio River or terminates on the Property. The ALJs conclude that the preponderance of the credible evidence shows that Sandpit Creek does not connect to the San Antonio River and, instead, terminates in the impoundment adjacent to the Property. Because the proposed discharge route identified in the Application and the Draft Permit is incorrect, the Draft Permit should not be issued.

The ALJs further find that the parties' arguments about whether the revised discharge route constitutes water in the state, a watercourse, or diffuse surface water were not the issues referred to SOAH for a contested case hearing. Even though the parties provided evidence for these arguments, the ALJs decline to consider these issues because they have concluded that Sandpit Creek does not connect to the

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[221] Tr. Vol. 2 at 205; Tr. Vol. 3 at 14, 23, 30.

[222] Appl. Closing Br. at 18.

[223] Tex. Water Code § 26.027(a) (emphasis added).

San Antonio River and the proposed discharge route in the Application and Draft Permit is incorrect.[224]

B. PUBLIC NOTICE

1. Evidence and Positions

The issue of public notice was raised by Protestant and the ED. Protestant argues that TCEQ has not approved public notice to the revised discharge route, which is at least one mile different from the route proposed in the Application. Protestant asserts that, because Applicant has not updated the Application and the nearby landowner list based on the changed route, TCEQ has not properly evaluated who may be affected by the proposed project.[225] The ED argues that, until the Application is revised with the accurate depiction of the discharge route, she cannot confirm that no additional landowners would be entitled to mailed notice.[226] In addition, Ms. Lueg opined that the public notice was wrong because the discharge route was depicted incorrectly in the Application.[227]

Applicant argues that no additional party would receive notice for the revised discharge route because it does not affect any new landowners. According to Applicant, because the narrative description of the route in the Notice of Receipt of Application and Intent to Obtain Permit, the Notice of Application, and the

[224] Tex. Gov't Code § 2003.047(f).

[225] Prot. Reply Br. at 22-23.

[226] ED Closing Br. at 10.

[227] Tr. Vol. 3 at 76.

Draft Permit all describe the discharge route similarly, no additional party would have received notice. Mr. Ryan testified that, even with the revised route, every landowner who was entitled to notice has received it and Eugene Walls, who was mentioned at the hearing to own a property adjacent to Protestant's, would not be entitled to mailed notice because his property is 1.8 miles from the discharge point.[228] Moreover, Applicant argues that a claim of deficient notice cannot be raised on behalf of third parties.[229] Applicant notes that no one presented any evidence that Mr. Walls or any other third party was entitled to written notice and did not receive it.[230]

2. Analysis

The public notice requirements for permit applications filed with TCEQ are established in 30 Texas Administrative Code chapter 39. The Commission requires notice to be provided only to landowners located along the discharge route within one mile downstream of the discharge point.[231] Applicant has not updated the Application with the revised discharge route and has not updated the nearby landowner list based on the changed route. However, the ALJs agree with Applicant that Protestant lacks standing to challenge other people's possible lack of notice.[232] Protestant presented no evidence that someone entitled to receive notice did not

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[228] Appl. Closing Br. at 23; Appl. Ex. 55 (Ryan Reb.) at 708-09; Appl. Ex. 57 at 719-20; Prot. Ex. 26.

[229] Appl. Closing Br. at 24; *McDaniel v. Tex. Nat. Res. Conservation Comm'n.*, 982 S.W.2d 650, 654 (Tex. App.—Austin 1998, pet. denied); *Tex. Comm'n on Envtl. Quality v. Denbury Onshore, LLC,* No. 03-11-00891-CV, 2014 WL 3055912, at *10 (Tex. App.—Austin July 3, 2014, no pet., mem. op.).

[230] Appl. Closing Br. at 24.

[231] Appl. Ex. 57 at 719; Tr. Vol. 2 at 148.

[232] *McDaniel*, 982 S.W.2dat 654.

receive it and Protestant has not challenged its own notice; therefore, the ALJs conclude that notice was provided properly.

C. WATER QUALITY (REFERRED ISSUE A)

The Facility's proposed discharge is subject to the TSWQS. The TSWQS divide the state's surface water bodies into classified and unclassified segments. Classified segments have designated segment numbers and include rivers, bays, estuaries, lakes, and larger tributaries that are assigned specific uses and associated water quality criteria to protect those uses based on data collected by TCEQ.[233] Unclassified segments are the remaining waterbodies, which can include smaller tributaries, intermittent streams, smaller impoundments, and wetlands that do not have specific uses or criteria assigned to them but have presumed uses and criteria under the TSWQS. Depending on the use associated with the waterbody, criteria for specific parameters may apply, such as levels of DO to be maintained to support ALU or bacteria limits to support contact recreation, in addition to general narrative criteria that apply to all waterbodies.[234]

The narrative criteria provide that water must not be toxic to humans from ingestion of water or aquatic organisms, skin contact, or recreating in the water; and that the proposed discharge may not cause excessive growth of aquatic vegetation that impairs a use.[235] Surface waters must be maintained in an aesthetically attractive

[233] Appl. Ex. 38 (Miertschin Dir.) at 644; ED Ex. JL-1 (Lueg Dir.) at 364.

[234] Appl. Ex. 38 (Miertschin Dir.) at 644.

[235] Rules 307.4(b)(7), (d), (e), .6(b)(3).

condition; and nutrients from permitted discharges must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use.[236]

The TSWQS require proposed wastewater discharges that would increase pollution of water in the state to undergo an antidegradation review.[237] TCEQ antidegradation reviews ensure that the existing water quality uses, including ALUs, will be maintained in accordance with Rule 307.4 and the IPs.[238] The IPs ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.[239]

Tier 1 antidegradation review ensures that existing uses and water quality sufficient to protect the existing uses are maintained. A Tier 2 antidegradation review ensures that no activities subject to regulatory action causing degradation of waters that exceed fishable/swimmable quality are allowed unless it can be shown that the lowering of water quality is necessary for important economic or social development; and generally applies to water bodies that have an existing, designated, or presumed

[236] Rules 307.4(b)(4), (e).

[237] Rule 307.5; ED Ex. JL-1 (Lueg Dir.) at 367. Antidegradation implementation procedures for TPDES permits are described in the IPs. Rule 307.5(c)(1).

[238] ED Ex. JL-1 (Lueg Dir.) at 366; Rule 307.5; *see also* Tex. Water Code § 26.003.

[239] Rules 307.4(b)(7), (d), (e), .6(b)(3); Ex. ED JL-1 (Lueg Dir.) at 366-67.

uses of primary and secondary contact recreation and intermediate, high, or exceptional aquatic life waters.[240]

Staff employ modeling protocols to predict the impacts of the proposed wastewater discharge on DO levels in the receiving waters to generate water quality based effluent limits for DO, $CBOD_5$, and if necessary, NH_3-N, while a standard effluent set also includes a limit for TSS. The $CBOD_5$ and NH_3-N parameters represent a constituent that exerts an oxygen demand, which has the effect of reducing DO. TSS represents suspended material that may include organic material that would exert an oxygen demand, so it is typically controlled to prevent contributions to oxygen demand and reduce the quantity of visible solids in the effluent.[241]

DO content of the water is an important parameter from the standpoint of aquatic life, including fish and other organisms that require specific levels of DO to survive. The TSWQS require that DO concentrations be sufficient to support existing, designated, presumed, and attainable aquatic life uses.[242] Staff usually employ the QUAL-TX model to simulate the full permitted wastewater discharge volume under critical conditions, which translates to low flow and high temperature

[240]ED Ex. JL-1 (Lueg Dir.) at 367-68. Parameters of concern in a Tier 2 review include DO, TDS, pH, temperature, toxic pollutants, bacteria, nutrients, taste, odor, suspended solids, turbidity, foam, froth, oil, and grease.

[241] Appl. Ex. 38 (Miertschin Dir.) at 645, 650, 656.

[242] Rule 307.4(h)(1). The TSWQS also require that vegetative and physical components of the aquatic environment must be maintained or mitigated to protect ALUs; and that existing, designated, presumed, and attainable uses of aquatic recreation be maintained. Rule 307.4(i), (j)(1).

in the receiving stream. Staff then uses the model to simulate average DO concentrations below the proposed discharge point.[243]

In addition, Staff ensure general narrative criteria are met; may include limits for nutrients (total nitrogen (TN) and total phosphorous (TP)), if warranted; and will apply the Commission's antidegradation policy to determine if any additional permit provisions are needed. TCEQ has also historically established a chlorine residual requirement for control of bacteria or an actual bacteria limitation with other means of disinfection.[244]

1. Applicant's Evidence and Position

Applicant alleges that it is the only party—beyond evidence admitted in the Administrative Record—to address whether the Draft Permit adequately protects water quality, including surface water, groundwater, and animals in accordance with the TSWQS, with every other party simply alleging this issue cannot be determined without further technical review.[245]

Dr. Miertschin, Mr. Ryan, and Mr. Price testified that they agreed with Staff's conclusion that the Draft Permit's effluents limits and additional conditions complied with the TSWQS and WQMP and would maintain the DO criteria of 3 mg/L in Sandpit Creek, including the impoundment, and 5 mg/L for the

[243] Appl. Ex. 38 (Miertschin Dir.) at 650.

[244] Appl. Ex. 38 (Miertschin Dir.) at 645, 648.

[245] Appl. Closing Br. at 12.

San Antonio River. Dr. Miertschin and Mr. Price further stated that TCEQ's modeling was conducted in accordance with normal procedures and protocols and adequately represented the proposed receiving stream, as it included Sandpit Creek as a flowing stream, the impoundment or "on-channel pond," and a segment going to the San Antonio River.[246]

Dr. Miertschin recreated Staff's QUAL-TX modeling analysis of Sandpit Creek and obtained identical results, which he said confirmed that the 3.0 mg/L DO criterion for Sandpit Creek would be maintained.[247] While Mr. Price agreed that the DO criterion would be supported, he asserted that the "intermittent" Sandpit Creek should instead be considered an ephemeral stream—one that only flows during and immediately after a rainfall event—for which the appropriate ALU would be minimal ALU and the DO standard would be 2.0 mg/L, as it would not experience frequent enough inundation to develop significant ALUs.[248] Dr. Miertschin stated that Sandpit Creek can be classified as both ephemeral and intermittent, and that the categorization did not affect his analysis.[249] Regardless,

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[246] Appl. Ex. 22 (Ryan Dir.) at 431, 441, 450, 452; Appl. Ex. 31 at 574, 578; Appl. Ex. 38 (Miertschin Dir.) at 650-51.

[247] Appl. Ex. 38 (Miertschin Dir.) at 651, 655-56; Appl. Exs. 44-46. Assuming the discharge did not reach Segment No. 1911, an impaired water body, Mr. Ryan stated that the coliform limit would likely change to "the usual 126 CFU rather than the 63 CFU which is required due to the TMDL. . . for the basin." Appl. Ex. 22 (Ryan Dir.) at 431, 442-43.

[248] Appl. Closing Br. at 14; Appl. Ex. 31 (Price Dir.) at 575, 579. Mr. Price testified that "evidence of even ephemeral aquatic habitat was absent throughout the channel of Sandpit Creek except for the dessicated [sic] bottom of the small (<1/4 acre) impoundment at the railroad embankment". Appl. Ex. 31 (Price Dir.) at 581. Dr. Miertschin also testified that it was not unusual for Sandpit Creek to have an assigned DO of 3.0 mg/L, since the impoundment is historically dry except for a handful of days a year. Appl. Ex. 38 (Miertschin Dir.) at 657-58. Protestant argues that Mr. Price is not a modeler and was not presented as an expert in water quality, so his opinions on water quality standards and predicting impacts of DO should be given little weight. Prot. Reply Br. at 12-13.

[249] Appl. Ex. 38 (Miertschin Dir.) at 638-40, 647.

Applicant argues that the ED's modeling showed the DO would satisfy the TSWQS criterion of 3.0 mg/L DO by the time the effluent reaches the impoundment.[250] Dr. Miertschin noted that his analysis assumed the worst-case, critical conditions in the receiving stream, including high temperature, low streamflow, and full permitted discharge volume of 0.18 MGD.[251]

Applicant also alleges that the Draft Permit remains protective under the TSWQS despite evidence indicating that the revised discharge route differs from that mapped in the Application.[252] Although he conceded that the Application's discharge route mapping was not correct, Dr. Miertschin opined that water from the impoundment would nevertheless travel to the San Antonio River when its levels were high enough from stormwater runoff.[253] Because the DO standard (set at 3.0 mg/L by TCEQ) was compliant by the time the effluent enters the small impoundment, Dr. Miertschin reasoned that Staff could have stopped the model coverage at that point. He explained that any continued modeling further downstream would still comply with the 3.0 mg/L criterion for Sandpit Creek and, therefore, satisfy the more stringent criterion of 5.0 mg/L for the San Antonio River—regardless of Sandpit Creek's exact entry point.[254] Mr. Ryan similarly believed that the Draft Permit remains compliant with the TSWQS despite the

[250] Appl. Closing Br. at 12-13.

[251] Appl. Ex. 38 (Miertschin Dir.) at 651.

[252] Appl. Closing Br. at 12-13.

[253] Appl. Ex. 38 (Miertschin Dir.) at 652.

[254] Appl. Ex. 38 (Miertschin Dir.) at 653. Dr. Miertschin also opined that the $CBOD_5$ and NH_3-N limits were protective of ALU despite the revision to the discharge route below the impoundment. Appl. Ex. 38 at 656.

allegation of a lack of connection; and that none of the effluent criteria, water quality modeling, standards, or permit language would be required to change even if such a connection was indeed lacking.[255]

Moreover, both Dr. Miertschin and Mr. Ryan opined that no further modeling was required in order to analyze Dr. Furnans's purported lakes or depressions, because the same effluent criteria would apply to that scenario and the DO is already well within the TSWQS of 3.0 mg/L DO for intermittent streams upon entering the impoundment.[256] Consequently, Mr. Ryan believed that the ED could use dimensional criteria to evaluate the pond (including depth, area, shape, and outlet type), though it would be unlikely to result in any changes to effluent criteria proposed in the permit.[257] Mr. Price, likewise, did not believe that additional technical analysis was required, because the initial discharge route presented a worst-case scenario with discharge going to classified Segment No. 1911 from an intermittent, unclassified tributary, compared to the revised route of "an ephemeral stream terminating in an internal drainage located on an alluvial river terrace."[258] Dr. Miertschin, moreover, noted that TCEQ's IPs have a playa lakes policy, which

[255] Appl. Ex. 22 (Ryan Dir.) at 441-43, 449-50, 453.

[256] Appl. Ex. 22 (Ryan Dir.) at 450; Appl. Ex. 38 (Miertschin Dir.) at 654.

[257] Appl. Ex. 22 (Ryan Dir.) at 450-51.

[258] Appl. Ex. 31 (Price Dir.) at 578-79.

recognizes that some discharges might be directed into a lake that has no outlet, and that the impoundment may be hydraulically similar.[259]

According to Applicant, neither the ED nor Protestant provided any credible support for why further technical review would be necessary or why more accurate information about the flow path below the impoundment would affect technical reviews. Applicant further alleges that the change below the impoundment did not affect the ALU as determined by the IPs, which would set Sandpit Creek as "limited" or "minimal." Applicant notes that Ms. Lueg and Mr. Caston never changed or withdrew their ALU designation based on the revised discharge route, nor did any party substantiate a need for further nutrient screen, as the lack of aquatic life in the intermittent/ephemeral stream that flows into a typically dry impoundment does not warrant a phosphorous limit.[260] The ED, according to Applicant, had not availed herself of the additional information provided by Applicant and Protestant and gave no plausible reason for ignoring this information.[261]

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[259] Appl. Ex. 38 (Miertschin Dir.) at 649; Appl. Ex. 42 at 210. Dr. Miertschin confirmed at the hearing that he was not saying the impoundment was a playa lake—water bodies typically found in west Texas where the source of water or runoff goes to a low point and sits without an outlet—but that TCEQ could treat it as being analogous and perform a water quality review under similar parameters. Tr. Vol. 1 at 258-59, 261-62, 264-65. He was nevertheless unaware of any TPDES permitting cases where discharge terminates in a feature similar to the impoundment, which he claims will store and not release water except under high inflow from stormwater runoff. Appl. Ex. 38 (Miertschin Dir.) at 654.

[260] Appl. Closing Br. at 14; Appl. Ex. 60 (Miertschin Reb.) at 735; Tr. Vol. 3 at 80-81, 87.

[261] Appl. Closing Br. at 14-15.

2. ED's Evidence and Position

The ED argues that she could not determine whether the Draft Permit is adequately protective of water quality because the proposed discharge route in the Application is not accurate.[262] The ED further alleges that the Draft Permit should not be issued until the ED completes a technical review of the additional information produced at the hearing, that was not previously included in the Application.[263]

Mr. Dutta, who prepared the Draft Permit, testified that the application for a municipal wastewater discharge permit requires an applicant to describe the proposed discharge route.[264] The ED emphasized that the Draft Permit was prepared using information provided in the Application, including maps showing a southwesterly connection between Sandpit Creek and the San Antonio River past the impoundment.[265]

Messrs. Dutta and Caston testified that, if the discharge route description in a TPDES application is incorrect, Staff cannot perform a technical review or draft a permit, and the applicant would be required to revise the application with a correct route depiction.[266] Mr. Caston explained that, in those cases, applicants usually resubmit a new USGS topographic map and updated and edited versions of pages in

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[262] ED Closing Br. at 3, 10.

[263] ED Reply Br. at 2.

[264] ED Ex. DD-1 (Dutta Dir.) at 3-4, 9; Tr. Vol. 2 at 26.

[265] ED Closing Br. at 3; Appl. Ex 1 at 59, 68; ED Ex.DD-1 (Dutta Dir.) at 9-10; Tr. Vol. 2 at 148.

[266] Tr. Vol. 2 at 21, 155. Mr. Caston confirmed TCEQ would not issue a permit if the actual discharge route is not the same as that in the application.

the application regarding the discharge route. The application would then go through a new technical review.[267] Mr. Caston opined that Applicant should have updated the Application with the revised discharge route so Staff could perform a new technical review and determine if any additional limits or monitoring requirements were needed.[268] Mr. Caston was not aware of any TPDES permits where the discharge would flow in an undefined or disbursed path across someone's property, which further emphasized the need for an accurate and thorough technical review in this case.[269] Although Mr. Caston conceded that TCEQ has a playa lake policy for discharge routes that end in dead-end lakes, as mentioned by Dr. Miertschin, Mr. Caston did not believe the impoundment at the end of Sandpit Creek would qualify, noting that playa lakes typically occur in the High Plains of West Texas.[270]

Mr. Dutta testified that he could not state that the Draft Permit complied with all applicable requirements because the discharge route description is incorrect.[271] He represented that Staff's technical review is also inaccurate to the extent it relied on the Application's description of the proposed discharge route, and new effluent

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[267] Tr. Vol. 2 at 135; Tr. Vol. 3 at 24. Mr. Dutta testified that it was "common practice" for the ED to revise draft permits based on new information received after an application is submitted and a draft permit is prepared. Tr. Vol. 2 at 13. Mr. Caston, similarly, stated "there have been a lot of times where we've had to . . . re-review a whole application because of a change in discharge route . . . ." Tr. Vol. 2 at 135.

[268] Tr. Vol. 2 at 135-36; Tr. Vol. 3 at 24-25, 35-36.

[269] Tr. Vol. 2 at 138, 159-60, 195; Tr. Vol. 3 at 34-35. Mr. Caston said the only analogous situation he could think of involved applications where it appears that the point of discharge is not a surface water in the state, and TCEQ has told the applicant it either cannot be permitted or that they would have to dig a channel down to the first area of surface water of the state and move their outfall. Tr. Vol. 3 at 35-36, 39. He indicated that this situation was even more unique because it is not happening at the point of discharge but almost a mile downstream from the outfall. Tr. Vol. 3 at 38-39.

[270] Tr. Vol. 2 at 138; Tr. Vol. 3 at 61-62.

[271] ED Ex. DD-1 (Dutta Dir.) at 10; Tr. Vol. 2 at 53-56.

limits may need to be developed to be protective of water quality.[272] He added that the actual flow path must be modeled—regardless of the path that the effluent ultimately takes—to confirm whether the Draft Permit complies with all regulations.[273] He could not, however, point to a specific standard of DO, TSS, $CBOD_5$, or NH_3-N that had been violated.[274]

Mr. Caston and Ms. Lueg, likewise, testified that the Draft Permit is not protective of water quality, surface water, groundwater, aquatic life, and uses of the receiving waters; and that it is necessary to obtain a correct discharge route from the Applicant to complete all technical reviews and draft an appropriate permit.[275] Mr. Caston explained that flow status of receiving waters and assignment of uses to receiving waters and associated criteria to protect those uses depend on the proposed discharge route.[276] These determinations, meanwhile, form the basis for all subsequent technical reviews, which reference and build on earlier determinations.[277] The resulting recommendations regarding applicable technical screenings and reviews, including nutrient, pH, DO, and dissolved solids screenings, are then used

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[272] ED Ex. DD-1 (Dutta Dir.) at 11; Tr. Vol. 2 at 72-73.

[273] ED Ex DD-1 (Dutta Dir.) at 5, 6; Tr. Vol. 2 at 39-40, 41.

[274] Tr. Vol. 2 at 56. Mr. Dutta testified, however, that he does not have anything to do with setting the DO limits on the Draft Permit, which he obtained from the modeler memorandum. Tr. Vol. 2 at 114.

[275] ED Ex. BC-1 (Caston Dir.) at 309, 310; Tr. Vol. 2 at 133, 141-42, 146, 147; ED Ex. JL-1 (Lueg Dir.) at 372-74, 376.

[276] ED Ex. BC-1 (Caston Dir.) at 304, 310-11; Tr. Vol. 2 at 150-51.

[277] ED Ex. BC-1 (Caston Dir.) at 299, 304, 311. Mr. Cason testified that this includes the Critical Conditions Review; DO Modeling review; and, if applicable, the Whole Effluent Toxicity or Biomonitoring review and the TexTox screening of toxics by the permit writer. Mr. Caston testified that some of these reviews were not applicable to the Application but noted that the DO review could be inaccurate if the discharge route is not accurately described. ED Ex. BC-1 (Caston Dir.) at 304, 311; Tr. Vol. 2 at 152-53.

in drafting permit terms and determining appropriate effluent limitations.[278] Because the technical review of the Application was based on an inaccurate discharge route, which was then used in the Draft Permit, Mr. Caston testified that it called the validity of all technical reviews involving water quality into question and cast doubt on the protectiveness of the Draft Permit.[279] In addition, Mr. Caston stated that a permit like this, which could result in "dispersed flow" after water overflows from the impoundment into uncontained, unchanneled spillover, had never been issued to his knowledge; and he indicated this permit would likely require conversations with TCEQ management to determine if it was something that could even be permitted.[280]

Ms. Lueg determined that Sandpit Creek receives a limited ALU, which is 3.0 mg/L, under the IPs for an intermittent stream with perennial pools.[281] Mr. Caston agreed with Ms. Lueg's assessment, noting that while there may have been years with minimal or no water in the pond, his review of Google Earth historic aerial images showed water was present most years.[282] Mr. Caston testified that the IPs require Staff to assess flow status and whether there is a perennial pool based on existing and critical conditions, or summer low flow conditions, though Staff tend to be a "little more conservative" when determining flow status.[283] At the hearing,

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[278] ED Ex. BC-1 at 304; Tr. Vol. 2 at 148, 152-53.

[279] ED Ex. BC-1 (Caston Dir.) at 311; Tr. Vol. 2 at 149, 151, 161-62.

[280] Tr. Vol. 3 at 34-35.

[281] ED Ex. JL-1 (Lueg Dir.) at 364.

[282] Tr. Vol. 2 at 163-64, 189, 201-02; Tr. Vol. 3 at 39-40; Appl. Ex. 48; Prot. Ex. 21. Mr. Caston testified that, upon reviewing approximately 20 years of Google Earth historic images between 2005 and 2023, he saw approximately 19 dates when water was in the pond, and seven dates when the pond was dry or mostly dry. Tr. Vol. 3 at 13-14.

[283] Tr. Vol. 2 at 189, 190-91.

Ms. Lueg maintained that the pond was properly designated as a perennial pool, though she later stated she was "not sure."[284]

Ms. Lueg also performed a nutrient screen, which is based on factors such as the proposed discharge flow rates, instream dilution, substrate type, depth, stream type, shading, impoundments, water clarity, sensitivity to growth of aquatic vegetation, existing water quality concerns and impairments, and consistency with other permits in the area. After determining that a TP limit—which is typically needed to prevent violation of numerical nutrient criteria and preclude excessive growth of aquatic vegetation—was not warranted, she did not make any recommendations to the Draft Permit for TP. However, Ms. Lueg testified that, had she known that Sandpit Creek did not connect to Segment No. 1911 as described in the Application, she could have recommended a TP limit to protect the pond near the end of Sandpit Creek to preclude algae accumulation, as well as considering TN limits to protect drinking water uses.[285]

[284] Tr. Vol. 3 at 79-81; Appl. Ex. 48. Ms. Lueg testified that the ALU for a dry stock tank would be "minimal," with a DO criteria of 2.0 mg/L over a 24-hour period. Tr. Vol. 3 at 85-86.

[285] ED Ex. JL-1 (Lueg. Dir.) at 368-70, 373-75; ED Ex. JL-5.

3. OPIC's Position

OPIC posits that Applicant failed to meet its burden because the analysis required for the Draft Permit to ensure that the proposed discharge will not violate surface water quality standards cannot be based on an inaccurate discharge route.[286]

4. Protestant's Evidence and Position

Protestant argues that the Draft Permit is not adequately protective of water quality because the discharge route outlined in the Draft Permit—which formed the basis for all Staff's technical reviews and modeling—undisputably does not reflect the revised route, and all Staff reviews compound and rely on one another. As a result, Protestant claims, the Draft Permit should not be issued.[287]

Protestant disagrees with Applicant's claim that the updated discharge route is only a slight change or divergence from that in the Application.[288] Dr. Furnans testified that, because the discharge route was not properly characterized, impacts to water quality on the Property were not evaluated or addressed in the Draft Permit.[289] In his opinion, it is not possible for the Draft Permit to have considered impacts to the water features that will result from the hydrological flow of the proposed discharge because no hydrological analysis was conducted. Had a hydrological flow model been completed, Dr. Furnans stated that the ED would have seen that the

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[286] *See* OPIC Closing Br.

[287] Prot. Closing Br. at 27-31.

[288] Prot. Closing Br. at 29.

[289] Prot. Ex. 18 (Furnans Dir.) at 293, 298.

proposed discharge would create new features—namely, the four new lakes and two new rivers—to model and consider the impact of chemical constituent concentrations and compliance with the TSWQS. He opined that an incorrect discharge route results in incorrect and invalid modeling, which then yields erroneous and inappropriate effluent limits.[290]

In addition, Protestant argues that the Application will not meet Rule 307.4, which requires that aesthetic parameters of surface water must be maintained in an attractive condition. Protestant claims that the creation of four lakes on the Property will leave it extremely unattractive, and that there are concerns it will be a depository for effluent without the relevant water quality analysis of the lakes, rather than going to the San Antonio River.[291] Dr. Furnans opined that the lakes and pathways do not occur under existing conditions in response to natural storm events that cause residual runoff to travel down Sandpit Creek because the runoff is infrequent and the ground is not saturated in between those events. If there was continuous discharge from the Facility, however, Dr. Furnans stated that would cause the initial and continuous runoffs to form the lakes.[292]

Mr. Machin, meanwhile, testified that the ED's modeling was flawed and that the Draft Permit would not be protective of water quality and the uses of the receiving waters under the TSQWS.[293] According to Mr. Machin, Staff's

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[290] Prot. Ex. 18 (Dr. Furnans Dir.) at 299-300.

[291] Rule 307.4(b); Prot. Closing Br. at 30.

[292] Tr. Vol. 1 at 41-42.

[293] Prot. Ex. 11 (Machin Dir.) at 48-50, 53.

assumptions regarding the pond's depth were not accurate, and revisions should be made to the QUAL-TX model based on survey data collected by Mr. Freasier, which resulted in changes to various coefficients and values.[294] After he reran the model with those updated figures, Mr. Machin received a minimum DO in the pond of 4.67 mg/L, compared to the ED's finding of 5.11 mg/L, and an overall minimum DO of 4.82 mg/L.[295] He opined that the ED's modeling, therefore, overstated the predicted DO. Since surface water quality has not been proven to be protected, due to errors in the model, Mr. Machin found that the groundwater is not protected.[296] He further stated that low DO levels could possibly adversely impact animals by affecting fish in the pond; and he noted that DO levels below 5.0 mg/L can be harmful to fish such as bass, and that levels below 2.0 mg/L can kill bass "quickly." Nevertheless, he testified to seeing no fish when viewing a photograph of the dry pond.[297] Finally, Mr. Machin stated that the permanent pond and potential overflow on the Property could result in mosquito proliferation, which can be vectors for West Nile virus, Zika virus, Dengue fever, and Eastern and Western Equine Encephalitis, all of which have been detected in Texas.[298]

Mr. Machin testified that ALUs are determined under the IPs based on existing, rather than future, conditions, and that the ED's determination of a

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[294] Prot. Ex. 11 (Machin Dir.) at 54-55, 56-57; Tr. Vol. 1 at 182. Mr. Machin also alleged that the ED should have used a smaller computation element, as it would result in more accurate results for the pond, which the ED treated as a single computation element. Prot. Ex. 11 (Machin Dir.) at 55.

[295] Prot Ex. 11 (Machin Dir.) at 56-57; Prot. Ex. 16.

[296] Prot. Ex. 11 (Machin Dir.) at 57.

[297] Appl. Ex. 60 (Miertschin Reb.) at 735; Appl. Ex. 48; Tr. Vol. 1 at 176.

[298] Prot Ex. 11 (Machin Dir.) at 58.

3.0 mg/L DO standard was reasonable under existing conditions because the impoundment is not constantly full. However, he opined that continuous discharge under the Draft Permit will likely create a continuous flow of water that causes the pond to fill and become a permanent impoundment, which TCEQ generally considers to have a high ALU with a DO standard of 5.0 mg/L. He reasoned that, if a standard of 5.0 mg/L were applied in the revised modeling he performed, it would not be met. Mr. Machin nevertheless conceded that all of his DO results were above 3.0 mg/L.[299]

Ultimately, Protestant argues that the ED's modeling, which was based on a faulty route, is beside the point, and that the Application has not since been updated to allow for modeling on the revised discharge route.[300]

5. Applicant's Rebuttal and Reply

Applicant claimed that no party "seriously" addressed the water quality issue other than to question the characterization and connectivity of the discharge route.[301] Despite reiterating that his and the ED's modeling remained valid, Dr. Miertschin reran the ED's QUAL-TX model based on the 2022 USGS map, Stantec Report, and FEMA maps, and opined that the revised discharge route also showed no water quality impacts.[302] Dr. Miertschin's analysis purportedly adopted the ED's modeling

[299] Tr. Vol. 1 at 176-77, 187.

[300] Prot. Closing Br. at 31.

[301] Appl. Reply Br. at 17-18.

[302] Appl. Ex. 60 (Miertschin Reb.) at 732; Appl. Exs. 20, 30, 46, 56. Protestant argues that Dr. Miertschin's modeling of the revised discharge route remains insufficient. Prot. Reply Br. at 11.

approach to the greatest extent possible, while replacing the impoundment with Dr. Furnans's assumption that there would be an initial lake with a surface area of 16.7 acres on the Property—in other words, the "worst-case scenario from the standpoint of water quality"—and including a lower channel of Sandpit Creek that flows to the San Antonio River.[303] Dr. Miertschin indicated that he looked at it as if it was part of a steady-state low-flow path, and did not include any kind of runoff flow, as he did not believe it was an appropriate way to use QUAL-TX.[304]

Dr. Miertschin's modeling of the revised discharge route reportedly showed no indication of any DO "excursions." This, according to Dr. Miertschin, addresses the ED's concerns about lacking sufficient information to render an opinion about whether the Draft Permit is protective of water quality, as it shows that water quality will be maintained and no changes are required to ensure water quality standards are met, with projected DO showing compliance with the assigned criterion of 3.0 mg/L.[305]

Dr. Miertschin further opined that there was no need for a TP limit after re-running the model with the revised discharge route, because there was no existing aquatic life on the discharge route. He stated the need for such a limit is based upon an assessment performed according to the IPs, and that such limits are generally reserved for cases where stimulation of algal growth within an existing receiving

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[303] Appl. Ex. 60 (Miertschin Reb.) at 732-33; Appl. Ex 61. Dr. Miertschin also incorporated assumptions based on Dr. Furnans's estimate of stored water volume. Appl. Ex. 60 (Miertschin Reb.) at 733; Appl. Ex. 61.

[304] Tr. Vol. 3 at 174.

[305] Appl. Ex. 60 (Miertschin Reb.) at 734-35; Appl. Exs. 62-64. Dr. Miertschin stated that the DO never drops below 5.0 mg/L and would be compliant with a higher DO criterion.

stream is a possibility, which is not the case where discharge is to a dry stream that flows into a typically dry pond. Despite this, Dr. Miertschin confirmed the DO of above 5.0 mg/L would protect any aquatic life that could survive in the dry shallow impoundment.[306]

Mr. Ryan testified he was unaware of any rule, policy, or technical reason prohibiting the ED from considering additional and more accurate information developed during the contested case hearing, noting that Dr. Miertschin had already performed modeling showing no impact on surface water quality. He also alleged that he provided a USGS map depicting the revised discharge route that should satisfy the ED's need for an updated USGS map with the "more precise" discharge route.[307] According to Mr. Ryan, the revised route does not result in a change to any substantive term, provision, requirement, or limiting parameter in the Draft Permit; will maintain the permitted quality of method of disposal; is not a material change in the pattern or place of the discharge; and will not cause or relax any standard that would potentially deteriorate water quality.[308]

Notably, to Mr. Ryan, the soils, geology, and lack of perennial pools remain the same, as does the location of where the discharge route enters the San Antonio River—Segment No. 1911. Dr. Miertschin's water quality modeling, moreover, indicates to Mr. Ryan that instream water quality criteria will be met along either

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[306] Appl. Ex. 60 (Miertschin Reb.) at 735; Appl. Ex. 48; Tr. Vol. 1 at 176. Mr. Ryan also disputed Mr. Machin's concerns about low DO levels potentially affecting fish in the pond, testifying that the pond is actually dry much of the year. Appl. Ex. 22 (Ryan Dir.) at 456.

[307] Appl. Ex. 55 (Ryan Reb.) at 708-09; Appl. Ex. 56.

[308] Appl. Ex. 55 (Ryan Reb.) at 709.

discharge route, and effluent limits in the Draft Permit are also very stringent and protective of the intermittent stream such that no change to any parameter in the Draft Permit would be required. Mr. Ryan ultimately faults the ED with unnecessarily emphasizing an inaccuracy on a single page over substance and failing to perform a technical review that could be done.[309]

Mr. Price also disagreed with Mr. Machin's changes to the QUAL-TX model assumptions, stating that the changes to the elevation measurements were an "arbitrary choice of which data to use," and that the maximum pond depth assumed in the model required an impermeable substrate, which did not exist on the Property.[310] Despite Mr. Machin's changes, Dr. Miertschin and Mr. Price noted that all of Mr. Machin's results were well above 3.0 mg/L.[311]

In addition, Mr. Ryan claimed that Mr. Machin's testimony improperly relies Dr. Furnans's water balances, which are fundamentally flawed because they ignore all precipitation and upstream releases of water other than the permitted discharge; ignore the permeable soil condition present along the Property and discharge route; and assume the only losses would be evaporative losses.[312] Mr. Ryan and Dr. Miertschin testified that failing to consider rainfall ignores a significant input in

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[309] Appl. Ex. 55 (Ryan Reb.) at 712.

[310] Appl. Ex. 31 (Price Dir.) at 586.

[311] Tr. Vol. 1 at 260-61; Appl. Ex. 31 (Price Dir.) at 586. Dr. Miertschin further stated that assuming a smaller computational element size for the impoundment was not consistent with TCEQ's protocols for uncalibrated model application to an unclassified stream, though he later testified that it was not incorrect to use a finer computational element than the default. Appl. Ex. 38 (Miertschin Dir.) at 658. Tr. Vol. 1 at 257-58.

[312] Appl. Ex. 22 (Ryan Dir.) at 457; Tr. Vol. 1 at 227-28.

a case like this, where rainfall purportedly generates volumes many orders of magnitude greater than the minor discharge produced under the Draft Permit, and ignores that Dr. Furnans's lakes and pathways might occur under existing conditions in response to large storm events.[313] Mr. Ryan conceded that any precipitation falling into the watershed would only increase the water content of the soil and could lead to more runoff flowing onto and filling depressions on the Property.[314] He and Mr. Price maintained, however, that if the receiving soils became saturated, they would still continue passing flow into the soil horizon and then laterally along the surface of the underground confining layer the San Antonio River as part of the local groundwater flow.[315] Mr. Ryan, Dr. Miertschin, and Mr. Price further criticized Dr. Furnans's assumption of an impermeable or saturated substrate around each of the predicted lakes, arguing this not supported by the record, saturated soil hydraulic permeability, and/or the Natural Resources Conservation Service (NRCS) soil data regarding soil absorption rate.[316]

In Dr. Miertschin's opinion, this likely means Dr. Furnans's model overstated the volume of water present in the impoundment and would make his projected water coverage much smaller.[317] In addition, he argued that Dr. Furnans's claim that the

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[313] Appl. Ex. 22 at 457; Appl. Ex. 38 (Miertschin Dir.) at 659, 661.

[314] Tr. Vol. 1 at 217.

[315] Tr. Vol. 1 at 214-15, 219-20, 229-30, 238-40; Appl. Ex. 31 (Price Dir.) at 584. Mr. Ryan testified that the proposed discharge would not even reach the Property at full buildout due to sufficient hydraulic conductivity and absorption in the bed of Sandpit Creek between the Facility and the Property's low point. Tr. Vol. 1 at 219-20, 233. Mr. Price, similarly, testified that treated discharge would seldom, if ever, reach the San Antonio River in undiluted form due to the ephemeral nature of Sandpit Creek. Appl. Ex. 31 (Price Dir.) at 579.

[316] Tr. Vol. 1 at 218-19; Appl. Ex. 31 (Price Dir.) at 586-87; Appl. Ex. 38 (Miertschin Dir.) at 658-59; Tr. Vol. 1 at 247-48.

[317] Appl. Ex. 38 (Miertschin Dir.) at 658, 661.

revised discharge route had not been properly modeled by Staff using the lake features was, essentially, irrelevant because any modeling of the lakes would show instream DO maintained the applicable standard by the time effluent reached the impoundment, making the Draft Permit compliant and any additional modeling unnecessary.[318] Messrs. Ryan and Price agreed that the Draft Permit was adequately protective under the TSWQS regardless of whether the discharge route terminates in the impoundment or flows to the San Antonio River under certain rainfall conditions.[319]

Applicant argues that no party cited a statute or rule that requires it to amend the Application when only a portion of one page of the Application has changed.[320] Applicant claims that its revision of the discharge flow path is permissible as a minor amendment.[321] In addition, Applicant alleges that Protestant's "new argument" regarding Rule 307.4 is merely a reframing of continued concerns about flooding, as well as contradiction of Protestant's argument that there is no continuous surface flow in Sandpit Creek. According to Applicant, the Property will always receive upstream drainage and will always be in the floodplain, regardless of Applicant's purportedly negligible discharge.[322]

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[318] Appl. Ex. 38 (Miertschin Dir.) at 660, 638-40, 642, 661.

[319] Appl. Ex. 22 (Ryan Dir.) at 441-43, 449; Appl. Ex. 31 (Price Dir.) at 576-77, 584, 588; Appl. Closing Br. at 12. Mr. Price also testified that the 2022 Standards Memo's determination that there would be no effect on federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat would not change despite the route issue, as there are no species of critical concern in the watershed. Appl. Ex. 31 (Price Dir.) at 577-78.

[320] Appl. Reply Br. at 9.

[321] Rule 305.62(c)(2); Appl. Reply Br. at 13.

[322] Appl. Reply Br. at 16, 18; Appl. Ex. 22 (Ryan Dir.) at 446.

Applicant also argues there is no justification for a TP limit in the Draft Permit if Sandpit Creek never flows to the river as claimed by the ED, and that no TP limit is necessary under the IPs because there is no ALU based on Mr. Freasier's testimony and Mr. Caston's photograph, which show that the existing impoundment is a dry, shallow stock tank.[323]

Claiming that there is no evidence that revising the discharge route has any water quality impact, and that its own evidence is largely uncontroverted, Applicant alleges it has met its burden by a preponderance of the evidence.[324]

6. Analysis

The ALJs are tasked with determining whether the Draft Permit is adequately protective of water quality in accordance with applicable regulations, including the TSWQS. Having already determined that Sandpit Creek terminates at the impoundment and does not connect to the San Antonio River, and that the proposed discharge route in the Application does not exist, the ALJs also find that Applicant failed to meet its burden to show that the Draft Permit is adequately protective of water quality.

It is undisputed that the ED's technical review and Draft Permit were prepared based on the discharge route included in the Application, which depicted Sandpit Creek flowing southwest through the Property from the impoundment

[323] Appl. Reply Br. at 18-19; Tr. Vol. 1 at 28; Appl. Ex. 48.

[324] Appl. Reply Br. at 14, 16-19.

before connecting to the San Antonio River. It is also undisputed that the Application's depicted discharge route does not exist.

The preponderant evidence indicated that the proposed discharge route in a TPDES application is a fundamental underpinning of the ED's technical review. Indeed, the discharge route is the central pillar on which all subsequent technical reviews and permitting decisions rely and are based. As Mr. Caston and Ms. Lueg testified, the discharge route informs the identification of the receiving waters, which have certain assigned or presumptive uses and associated criteria; these further form the basis for nutrient, pH, DO, and dissolved solids screenings, DO modeling review, and critical conditions review, among others, which are used to convey specific recommendations by the standards reviewer and assist Staff in drafting permit terms protective of water quality.[325]

Given the ED's iterative review process and the domino effect that results when a faulty discharge route is provided, Messrs. Caston and Dutta credibly testified that TPDES applications cannot be accurately reviewed, and accurate permits cannot be drafted, when an application's discharge route is inaccurate.[326] Applicants, moreover, must amend or update their applications with the corrected discharge route for a new technical review.

[325] ED Ex. BC-1 (Caston Dir.) at 299, 304, 311; Tr. Vol. 2 at 148, 152-53.

[326] Tr. Vol. 2 at 21; Tr. Vol. 2 at 155.

Applicant argues that the Draft Permit nonetheless remains protective because the "minor and correctible" difference in the discharge route does not result in a change to any substantive term, provision, requirement, or limiting parameter in the Draft Permit; will maintain the permitted quality of method of disposal; is not a material change in the pattern or place of the discharge; and will not cause or relax any standard that would potentially deteriorate water quality. In support, Applicant argues that the evidence shows the TSWQS are satisfied in both 1) the ED's DO modeling, which was prepared using the Application's discharge route but shows that the DO is within the 3.0 mg/L criterion by the time the discharge enters the impoundment; and 2) Dr. Miertschin's modeling of the revised discharge route using inputs from the ED and Dr. Furnans. These arguments are flawed for several reasons.

First, Applicant failed to controvert the ED's evidence regarding the technical review process and the necessity of reviewing accurate discharge routes. The reliance on an inaccurate discharge route in the Application and Draft Permit calls the validity of all technical reviews involving water quality into question and casts doubt on the protectiveness of the Draft Permit. Because the Application's discharge route does not exist, Staff's technical review did not adequately evaluate the proposed discharge's effect on surface water quality.

Second, the preponderant evidence indicates that technical review of a discharge route ending in the impoundment cannot be extrapolated from the ED's technical review of the Application's discharge route that would have continued to Segment No. 1911—and the ALJs decline to engage in a hypothetical analysis based

on a route that does not exist. As Mr. Caston testified, the difference between the two routes was not minor in nature and would fundamentally change the described sequence of the discharge route or receiving water. The difference is especially stark considering Applicant's own witness, Dr. Miertschin, suggested that discharge to Sandpit Creek without joining the river was more akin to—yet still did not qualify as—discharge to a dead-end playa lake. Mr. Caston, moreover, likened the discharge route in this case to instances where applicants had either been refused a permit or had been required to dig a channel and/or move the outfall to ensure that the discharge remained in surface waters of the state for the entirety of the route.[327] Describing Applicant's proposed discharge as uncontained and unchanneled spillover, or "dispersed flow" from an overflowing impoundment onto the Property, Mr. Caston cautioned that no such permit had previously been issued in the 2,000-plus applications he has reviewed.[328] The same concerns would, similarly, apply to Applicant's revised route, as modeled by Dr. Miertschin using Dr. Furnans's inputs. For these reasons, technical review of any revised route was essential to ensure compliance with applicable regulations and statutes.

In addition, while the ALJs decline to opine on whether a route ending in the impoundment would be protective of water quality—as it, like Applicant's revised route, was not the subject of the Application and Draft Permit—the preponderant evidence suggests that Staff would have at least considered additional draft permit provisions had they been aware of the lack of a connection between Sandpit Creek

[327] Tr. Vol. 3 at 35-36, 39.

[328] Tr. Vol. 2 at 136-37; Tr. Vol. 3 at 34-35.

and the San Antonio River. For example, Ms. Lueg credibly testified that, in those circumstances, she could have recommended a TP limit to protect the impoundment to preclude algae accumulation, as well as considered TN limits to protect drinking water uses.[329] Although Applicant argues that a TP limit is not necessary because there was no existing aquatic life in Sandpit Creek, Ms. Lueg and Mr. Caston testified that Sandpit Creek receives a limited ALU under the IPs for an intermittent stream with perennial pools. That determination, moreover, was supported by Mr. Caston's review of Google Earth historic aerial images showing water was present in the pond most years, as well as Ms. Lueg and Mr. Caston's observations of algae growth in the area.[330]

This is not to suggest that a route ending in the impoundment is otherwise protective under the TSWQS but for TP and/or TN limits. As indicated previously, no such route has undergone the requisite technical review by Staff, and the ALJs decline to review any route not included in the Application. Ms. Lueg's references to TP and TN limits nevertheless provide concrete examples of concerns that could arise, and that would require further vetting and evaluation, in response to discharge routes that were never submitted for technical review.

Regarding Applicant's contention that the ED should have performed another technical review based on new discharge route information raised by Applicant during the hearing, the evidence indicates that, in cases where a discharge route is

[329] ED Ex. JL-1 (Lueg. Dir.) at 368-70, 373-75; ED Ex. JL-5.

[330] ED Ex. JL-1 (Lueg Dir.) at 374-75.

inaccurate, a subsequent technical review occurs after the applicant submits a revised application with the updated route. Here, Applicant conceded that its original discharge route was inaccurate but declined to amend the Application and submit it to the ED for review. Instead, Applicant chose to urge its position that the discrepancy was "minor and correctible"[331] in a contested case hearing. As authorized by Texas Water Code section 5.228(c), the ED participated in the hearing by providing information to complete the Administrative Record and to support her position as developed in the underlying proceeding, including her position—ultimately upheld by the ALJs—that Sandpit Creek did not connect to the San Antonio River. Applicant has cited no authority that would require the ED to perform real-time technical review during a contested case proceeding of Applicant's position that an alternative route not included in the Application would also be protective.

As recognized by the Commission, the nature of the watercourse between Sandpit Creek and the San Antonio River informs whether the effect on surface water quality was adequately evaluated.[332] Given that the creek and the river are not connected as represented in the Application, the ALJs conclude that Applicant did not prove that the Draft Permit is adequately protective of water quality, including the protection of surface water, groundwater, and animals in accordance with applicable regulations.

[331] App. Ex. 60 (Miertschin Reb.) at 735.

[332] Interim Remand Order.

D. DISCHARGE ROUTE AND RULE 309.12 (REFERRED ISSUE B)

The Commission's rules in Chapter 309, Subchapter B, of the Texas Administrative Code establish minimum standards for the location of domestic wastewater treatment facilities.[333] The location of the facilities must minimize possible contamination of ground and surface waters and minimize the possibility of exposing the public to nuisance conditions. A permit may not be issued for a facility to be in an area determined to be unsuitable or inappropriate, unless the design, construction, and operational features of the facility will mitigate the unsuitable site characteristics.[334]

Rule 309.12 is titled "Site Selection to Protect Water in the State" and states that TCEQ may not issue a permit unless it finds that *the proposed site*, when evaluated in light of the proposed design, construction or operational features, minimizes possible contamination of water in the state.[335] In making this determination, the Commission may consider the following factors: (1) active geologic processes; (2) groundwater conditions such as groundwater flow rate, groundwater quality, length of flow path to points of discharge, and aquifer recharge or discharge conditions; (3) soil conditions such as stratigraphic profile and complexity, hydraulic conductivity of strata, and separation distance from the facility to the aquifer and points of discharge to surface water in the state; and (4) climatological conditions.[336]

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[333] Rule 309.10(a).

[334] Rule 309.10(b).

[335] Rule 309.12 (emphasis added).

[336] Rule 309.12.

1. Applicant's Evidence and Position

Applicant argues that Mr. Khorzad properly analyzed the factors in Rule 309.12 and explained how each factor was met in relation to the Facility site, not the discharge route.[337] Mr. Khorzad opined that the proposed site is "ideal" for the protection of the Carrizo-Wilcox Aquifer. He identified no active geological processes and defined the subsurface geological characteristics.[338] He explained that the proposed site, the Property, and Sandpit Creek sit atop the Reklaw Formation, which is a confining layer comprised of clay that acts as an aquitard, or barrier to flow.[339] He stated that there are no known faults in the area.[340] In addition, he testified that the discharge water has no pathway to the Carrizo-Wilcox Aquifer, which is the only known aquifer in the area. The Reklaw Formation, according to Mr. Khorzad, prevents any discharge water from reaching the Carrizo-Wilcox Aquifer; therefore, the discharge water cannot affect groundwater conditions in the aquifer.[341]

Messrs. Ryan and Price testified about soil conditions.[342] They stated that the NRCS soils report for Wilson County shows two types of soils—Zavala Fine Sandy

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[337] Appl. Reply Br. at 23; Tr. Vol. 1 at 108-09. Mr. Khorzad testified that he did not evaluate the discharge route for contamination. Tr. Vol. 1 at 109.

[338] Appl. Ex. 10 (Khorzad Dir.) at 362-63.

[339] Appl. Ex. 10 (Khorzad Dir.) at 363; Appl. Ex. 12 (a geologic map Mr. Khorzad prepared to show the location of the proposed site and the Property in relation to the geologic units located at the land surface); Tr. Vol. 1 at 105, 110. Mr. Khorzad explained that an aquitard protects aquifers in the sense that it limits or blocks the flow of water from one source, for example the ground surface, to an aquifer located below the aquitard. Appl. Ex. 10 (Khorzad Dir.) at 364.

[340] Appl. Ex. 10 (Khorzad Dir.) at 363; Tr. Vol. 1 at 112, 118.

[341] Appl. Ex. 10 (Khorzad Dir.) at 363-65; Tr. Vol. 1 at 112.

[342] Appl. Closing Br. at 21.

Loam, located primarily along the channel for the discharge route, and Atco Loam, located on the Property. Mr. Ryan explained that Zavala Fine Sandy Loam is well-drained soil with negligible runoff and Atco Loam is well-drained soil with minimal runoff. He stated both sets of soil are well-drained and likely to absorb the flow from the discharge.[343] Mr. Ryan added that the soil along the discharge route is so permeable that it is likely Mr. Freasier will see little, if any, flow actually reach the Property. According to Mr. Ryan, calculated at the Final Phase, the entire discharge flow over 24 hours would be absorbed by the soil in approximately ten hours. He opined that unless all the flow is discharged in a ten-hour or less period, none of it would reach the Property. He clarified, however, that the maximum permitted flow of the Facility would never be discharged in a ten-hour period because wastewater flows follow a 24-hour pattern.[344] Mr. Ryan also considered climatological conditions and opined that there are no weather-related conditions that would allow for flooding or other events that would pose a specific or unique contamination threat to water quality.[345]

[343] Appl. Ex. 22 (Ryan Dir.) at 445; Appl. Ex. 31 (Price Dir.) at 582; App. Ex. 28; Tr. Vol. 1 at 212.

[344] Appl. Ex. 22 (Ryan Dir.) at 441-42.

[345] Appl. Ex. 22 (Ryan Dir.) at 445. Mr. Khorzad testified that, in terms of groundwater protection, climatological conditions are not important factors given the location of the site and formation with respect to the discharge water impacting the Carrizo-Wilcox Aquifer. Appl. Ex. 10 (Khorzad Dir.) at 366.

2. ED's and OPIC's Positions

The ED and OPIC did not present any evidence on this issue but argue that, because the discharge route was depicted incorrectly, the discharge route is not adequately characterized in accordance with Rule 309.12.[346]

3. Protestant's Evidence and Position

Protestant argues that the discharge route outlined in the Application and the Draft Permit is flawed, regardless of Rule 309.12; however, when applying Rule 309.12's criteria, Protestant claims the absence of a proper soil analysis renders the route improperly characterized.[347]

Dr. Furnans testified that the main factors to be considered are the separation distance from the Facility to surface water in the state, as well as the stratigraphic profile and soil conditions. He stated that there is about one-fifth of a mile distance between the end of Sandpit Creek and the San Antonio River, and that Staff reviewed the Application and analyzed water quality based on an incorrect depiction of the discharge route. Dr. Furnans further explained the critical role soil conditions play in determining the discharge route's impact. If the soils are highly permeable, according to Dr. Furnans, water will not flow to the San Antonio River, as it would likely infiltrate the ground. On the other hand, if the soils have low permeability and saturate quickly, runoff or flooding could become a serious concern for the

[346] ED Closing Br. at 11; OPIC Closing Br. at 13.

[347] Prot. Closing Br. at 19; Prot. Reply Br. at 13.

Property.[348] Protestant notes that Applicant did not conduct any soil studies for the Application.[349] Mr. Ryan, meanwhile, relied on NRCS data for Wilson County generally, but not for the soils on the Property.[350] Mr. Khorzad also admitted that he has never been to the site, nor has he sampled the soils, stating, "that's not our expertise."[351] Mr. Price likewise admitted that he did not sample any of the soils.[352]

4. Applicant's Reply

Applicant argues that Dr. Furnans misquoted and misapplied Rule 309.12. Specifically, Applicant argues Dr. Furnans's position that the separation distance from the Facility to surface water in the state, stratigraphic profile, and soil conditions are the main factors to consider is not supported by Rule 309.12. Rule 309.12 regulates the proposed site and speaks to the separation distance from "the facility to the aquifer" and from "the point of discharge to surface water in the state."[353] Applicant argues that Mr. Khorzad fully addressed the separation distance between the Facility to the aquifer, and the aquitard protected the aquifer. Additionally, Applicant states that there is no separation distance between the point of discharge and water in the state, Sandpit Creek.[354] Mr. Khorzad opined that the separation distance from the Facility to the aquifer and points of discharge to surface water in

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[348] Prot. Ex. 18 (Furnans Dir.) at 305.

[349] Prot. Closing Br. at 19.

[350] Tr. Vol. 1 at 215-16.

[351] Tr. Vol. 1 at 107, 114.

[352] Tr. Vol. 1 at 248.

[353] Appl. Closing Br. at 21-22; Appl. Reply Br. at 24; Rule 309.12.

[354] Appl. Closing Br. at 22.

the state are not relevant factors when considering impacts to the Carrizo-Wilcox Aquifer, given the location of the site and the presence of the Reklaw Formation beneath it.[355]

Applicant also notes that Protestant cites to no rule or instruction requiring a prerequisite soil study as an application requirement. Applicant argues that Messrs. Price and Ryan testified on soil conditions both at the Facility site and the Property. The significance of their testimony is that the underlying sandy soils are porous, well drained, and likely to absorb flow.[356]

5. Protestant's Reply

Protestant argues that Dr. Furnans did not misapply or misread Rule 309.12 and that his testimony properly emphasizes the role soils play in assessing the characteristics of the discharge route. Protestant states that Dr. Furnans's testimony can be applied to the siting of the Facility; however, that was not the issue referred to SOAH. The issue is whether the route is adequately characterized. According to Protestant, using the factors in Rule 309.12, along with other relevant factors, the route is not adequately characterized. Protestant points out that the language in Rule 309.12 for the factors the Commission may consider is not exhaustive, and claims that additional factors, including Dr. Furnans's testimony, may be considered because the soil conditions upon which the discharge will travel are highly relevant. Because Applicant "chose" not to conduct any soil studies, Protestant argues that

[355] Appl. Ex. 10 (Khorzad Dir.) at 366.

[356] Appl. Reply Br. at 24.

Applicant did not meet its burden to show that the discharge route characterization complies with Rule 309.12.[357]

6. Analysis

Rule 309.12 prohibits the Commission from granting a permit unless it determines that a proposed site for a wastewater treatment plant minimizes the risk of water contamination.[358] It is undisputed that Rule 309.12 relates to the siting of the facility and does not relate to a discharge route.[359] However, the issue referred to SOAH on remand is whether *the discharge route* is adequately characterized in accordance with Rule 309.12.[360] To best address the issue as it was referred to SOAH, the ALJs analyze the discharge route using the purpose of and criteria listed in Rule 309.12.

The purpose of Rule 309.12 is to minimize possible contamination of water in the state.[361] As described above, the discharge route described in the Application and in the Draft Permit does not exist and Applicant did not prove that Sandpit Creek connects to the San Antonio River. Consequently, the ALJs have found that the Draft Permit is not protective of water quality, including surface water and groundwater, and, as such, it does not minimize contamination of water in the state.

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[357] Prot. Reply Br. at 20-22.

[358] Rule 309.12.

[359] Appl. Ex. 22 (Ryan Dir.) at 446; Tr. Vol. 2 at 81, 162.

[360] Interim Remand Order (emphasis added).

[361] Rule 209.12.

Applicant presented evidence to support its position that the proposed siting of the Facility is adequately characterized in accordance with Rule 309.12. However, the referred issue concerns the discharge route, not the Facility. The preponderant evidence shows that the Facility, the Property, and Sandpit Creek sit atop the Reklaw Formation, composed of clay, which ensures the protection of the Carrizo-Wilcox Aquifer as there are no viable pathways for the discharge water to enter the aquifer and affect groundwater conditions of the aquifer. However, Applicant did not provide evidence for groundwater flow rate, aquifer recharge, or discharge conditions.

Mr. Ryan testified that there are no weather-related conditions, and his testimony was not controverted. Applicant also provided evidence on the soil conditions in the area of the Facility and the Property showing that the soils are porous and permeable and could take up the flow of the discharge. Regardless, the Draft Permit was prepared based on the Application's discharge route, which does not exist. Applicant did not meet its burden to prove that the Draft Permit's discharge route is adequately characterized in accordance with Rule 309.12. Because the ALJs declined to analyze the revised discharge route proposed by Applicant at the hearing, the ALJs do not analyze whether the revised discharge route is adequately characterized in accordance with Rule 309.12.

E. USE AND ENJOYMENT OF PROPERTY (REFERRED ISSUE C)

1. Applicant's Evidence and Position

Applicant alleges that Protestant's "true concern" with the Draft Permit is not water quality but flooding. Applicant, however, argues that any proposed discharge flow is de minimis in comparison with the 7,200-acre drainage area upstream of the Property, and that the proposed discharge would neither increase the water surface elevation on, nor adversely impact, the Property.[362] Applicant further insists that any flooding or other impacts to the use and enjoyment of the Property must be considered solely in relation to the TSWQS; consequently, if the proposed discharge meets those standards, Applicant reasons, the discharge is necessarily protective of Protestant's use and enjoyment of the Property.[363] Applicant argues that the ED witnesses improperly withheld an opinion on Issue C when they stated that they did not know whether the Property would be affected, because the ED's own technical analysis and QUAL-TX model show that DO exceeds 5.0 mg/L by the time it enters the impoundment—well above the 3.0 mg/L that would be required based on limited ALU.[364]

Thus, there is credible water quality analysis, according to the Applicant, showing that the Draft Permit is protective of water quality in the impoundment, including applicable uses, in addition to evidence from Dr. Miertschin's modeling of

[362] Appl. Reply Br. at 24-27.

[363] Appl. Reply Br. at 27.

[364] Appl. Reply Br. at 27-28; ED Ex. DD-1 (Dutta Dir.) at 12; ED Ex. BC-1 (Caston Dir.); ED Ex. JL-1 (Lueg Dir.).

the revised discharge route showing that water quality was protected below the impoundment as well.[365] Dr. Miertschin and Mr. Ryan opined that, because water quality complies with the TSWQS under the Draft Permit, the treated effluent is protective of use and enjoyment of the Property, which would experience no adverse effects.[366]

After visiting the Property in June 2024, Mr. Price testified to being particularly struck by the location of Mr. Freasier's barns and animal enclosures in the "channel" downstream of the culverts, which indicated to Mr. Price a lack of frequent flows or flooding in that area.[367] Mr. Price indicated that if the 18,000-acre-feet of average annual rainfall over the Sandpit Creek drainage basin is not adversely affecting the Property through current flooding and ponding, it is unlikely that the proposed maximum discharge will inundate any significant area of the Property. Mr. Price testified that little to none of the rainfall reaches the Property because Sandpit Creek is a losing stream with water draining into the underlying highly transmissive sands, which tend to be well-drained with negligible runoff and ponding. He further opined that it is likely that channel loss below the discharge point will be sufficient to prevent undiluted effluent from reaching the Property in significant quantity.[368]

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[365] Appl. Reply Br. at 28; App. Ex. 60 (Miertschin Reb.) at 734.

[366] Appl. Ex. 22 (Ryan Dir.) at 442; Appl. Ex. 38 (Miertschin Dir.) at 660. Mr. Price similarly opined that surface water and groundwater are adequately protected by the Draft Permit's effluent limitations. Appl. Ex. 31 (Price Dir.) at 585.

[367] Appl. Ex. 31 (Price Dir.) at 580-81.

[368] Appl. Ex. 31 (Price Dir.) at 582-83, 585; Appl. Ex. 37 at 634.

2. Protestant's Evidence and Position

Protestant argues that TCEQ has no basis to determine whether the use and enjoyment of the Property will be protected without a technical review of the revised discharge route. The formation of several new lakes across the Property will, according to Protestant, have significant implications for both water quality and the ability to continue using the land as it has been used in the past.[369] Protestant further argues that the TSWQS general policy statement seeks to maintain the quality of water in the state consistent with operation of existing industries, and taking into consideration economic development of the state.[370] However, Protestant argues that its use of the Property for various businesses and economic and development will be negatively impacted under the Draft Permit.[371] In addition, Protestant asserts that, under the Draft Permit's terms, the Property's aesthetic parameters will not be maintained according to Rule 307.4(b)(4) and (5), which require that surface waters be maintained in an aesthetically attractive condition and discharges not cause substantial and persistent changes from ambient conditions of turbidity or color, respectively.[372]

Mr. Freasier testified to having several business interests at the Property, including cattle operations under Freasier Cattle Company; growing and harvesting

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[369] Prot. Closing Br. at 32. Protestant repeatedly argues that its concerns are not limited to flooding. Prot. Reply Br. at 23-24. Protestant notes, however, that Mr. Ryan confirmed that any more water would add to inundation on the Property during a peak event. Prot. Reply Br. at 24; Tr. Vol. 3 at 147.

[370] Rule 307.1.

[371] Prot. Reply Br. at 25; Rule 307.1.

[372] Rule 307.4(b)(4), (5); Prot. Closing Br. at 32-33.

hay and other row crops; and storing lights and poles for his business, F&W Electrical Contractors, Inc. (F&W Electrical).[373] The Property includes a livestock compound with cattle-working pens, a show barn with stalls, and a maternity ward.[374] The cattle operation takes up approximately 300 acres and consists of 50 head of cattle that were born and raised on site, which Mr. Freasier and his daughter, Ms. Kinkaid, described as "directly in the path of the proposed discharge."[375] The cattle operation includes improved pastureland for grazing and 200 acres dedicated to row crops and hay production.[376]

Moreover, Mr. Freasier's grandchildren raise livestock for competition on the Property, which is also used to host photo shoots and events for local organizations and individuals ranging from monthly 4-H meetings to wedding ceremonies.[377] Ms. Kinkaid testified that the children visit daily to care for their livestock, which are housed near Sandpit Creek. She further testified to the Property being used for safety training meetings; team building activities; wedding-related photo shoots; camps; graduation parties; family and class reunions; funeral receptions; wedding and baby showers; birthday parties; holiday events; and events for the Floresville Peanut Festival Association and junior cattle associations, which often

[373] Prot. Ex. 1 (Freasier Dir.) at 2, 3, 12; Prot. Ex. 6.

[374] Prot. Ex. 1 (Freasier Dir.) at 4.

[375] Prot. Ex. 1 (Freasier Dir.) at 12, 13; Prot. Ex. 7 (Kinkaid Dir.) at 29.

[376] Prot. Ex. 1 (Freasier Dir.) at 4.

[377] Prot. Ex. 1 (Freasier Dir.) at 12, 15; Prot. Ex. 7 (Kinkaid Dir.) at 29; Prot. Exs. 8-9.

incorporate enjoying fruits and produce from the resident garden and orchards and chickens from the Property's coop.[378]

Ms. Kinkaid testified that the unpleasant odor and increased mosquito population from the discharge would make such events "obsolete."[379] Mr. Freasier and Ms. Kinkaid also testified to being concerned that cattle would drink the wastewater or ingest affected forage, which could be detrimental to their health due to bacteria, *E. coli*, and emerging contaminants. They were further concerned that their grandchildren could be harmed by the discharge.[380] In addition, they testified that they would experience negative impacts to the use and enjoyment of the Property regardless of whether it was treated to the standards in the Draft Permit. According to Mr. Freasier, it would turn the Property into a wetland, making the Property inaccessible in some areas and "worthless to try to grow crops on it."[381] He and Ms. Kinkaid believed the predicted lakes would significantly reduce the acres of grassland required for grazing and hay production to feed the herd, which would require them to discontinue or relocate the cattle operation. They stated there is no other place on the Property with the necessary shade and proximity to the hay field where the cattle can be located, so approving the Draft Permit would require them to cease cattle operations.[382]

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[378] Prot. Ex. 7 (Kinkaid Dir.) at 27-29; Prot. Exs. 8-9.

[379] Prot. Ex. 7 (Kinkaid Dir.) at 33.

[380] Prot. Ex. 1 (Freasier Dir.) at 13; Prot. Ex. 7 (Kinkaid Dir.) at 30-31.

[381] Tr. Vol. 1 at 22-23, 35.

[382] Prot. Ex. 1 (Freasier Dir.) at 12, 13; Prot. Ex. 7 (Kinkaid Dir.) at 31.

As for F&W Electrical, Mr. Freasier and Ms. Kinkaid testified that it provides electrical services and lighting for a variety of industries, including lighting for airfields, sports complexes, traffic signalization, and highways.[383] Large poles and utility devices and equipment used by the company are stored in a laydown yard at the Property.[384] Mr. Freasier testified that they will not be able to store the company's material on the Property, as that area will be inundated with water from the proposed discharge.[385] Ms. Kinkaid, likewise, testified that the company could not store business materials in such proximity to a constant flow of wastewater and near the newly created lakes, which would pose a risk of chemicals decomposing and compromising the integrity of the materials.[386]

As described previously, Dr. Furnans predicted that the proposed discharge will, over time, pool on the Property and create four lakes and two rivers representing a total of 22 acres of land that will be so inundated that it is no longer usable for farming or agricultural purposes.[387] Mr. Freasier described similar inundation and water collecting on the Property after rain events in October 2016.[388] The new rivers, Dr. Furnans opines, will be barriers to access and cause the soil to be so saturated that the land will become soggy wetland that is difficult to traverse without bridges.[389]

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[383] Prot. Ex. 1 (Freasier Dir.) at 2, 14; Prot. Ex. 7 (Kinkaid Dir.) at 2, 29.

[384] Prot. Ex. 7 (Kinkaid Dir.) at 28, 34; Prot. Ex. 10.

[385] Prot. Ex. 1 (Freasier Dir.) at 14; Prot. Ex. 7 (Kinkaid Dir.) at 2.

[386] Prot. Ex. 7 (Kinkaid Dir.) at 34.

[387] Prot. Ex. 18 (Furnans Dir.) at 314.

[388] Prot. Ex. 1 (Freasier Dir.) at 10; Prot. Ex. 5.

[389] Prot. Ex. 18 (Furnans Dir.) at 314-15.

This will be especially true for the portion of the Property used for hay production, which he said would be difficult for farm equipment to access, as well as portions of the Property providing access to the San Antonio River for family and recreational activities.[390] Mr. Machin, meanwhile, testified that ponding and overflow onto the Property would result in mosquito proliferation and attract vectors carrying disease to the Property.[391]According to Mr. Freasier and Ms. Kinkaid, the resulting unpleasant odors, mosquito issues, and wastewater dumping would cause them to stop using the Property as an outdoor venue to host family gatherings, meetings, and community events.[392]

Dr. Furnans testified that Protestant has historically utilized the Property in recognition that Sandpit Creek rarely contains water, including in the placement of the barn and cattle pens as well as the F&W Electrical laydown yard adjacent to and around Sandpit Creek. He noted that these areas would be less usable if Sandpit Creek were to receive constant discharge flow and become a perennial rather than an ephemeral stream, as predicted; and that those facilities would need to be relocated, as they would be significantly impacted by the proposed discharge.[393] In Dr. Furnans's opinion, the hay field would also be less productive and more difficult

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[390] Prot. Ex. 18 (Furnans Dir.) at 315, 328. Dr. Furnans did not, however, believe Mr. Freasier's home on the Property would be directly impacted by the proposed discharge and resulting drainage features. Prot. Ex. 18 (Furnans Dir.) at 316-17.

[391] Prot. Closing Br. at 33, 36; Prot. Ex. 11 at 58.

[392] Prot. Ex. 1 (Freasier Dir.) at 14-15; Prot. Ex. 7 (Kinkaid Dir.) at 9, 33-34.

[393] Prot. Ex. 18 (Furnans Dir.) at 294-95, 316-17. Specifically, Dr. Furnans testified that the cattle production facilities, including pens and fenced-in pastureland, are currently located along the portion of the Property where Sandpit Creek will convey the discharge from Highway 181 to the Lake #1 area and that, when flowing, the discharge would result in a constant stream of wastewater running right through the current cattle pens. Prot. Ex. 18 (Furnans Dir.) at 315.

to farm, due to lakes and drainage paths created by the discharge. According to Dr. Furnans, the Draft Permit is not protective of the requester's use and enjoyment of their property in accordance with the TSWQS because of the inaccurate description of the discharge route, which he believes will inundate the Property instead of following the Draft Permit route to the San Antonio River.[394]

3. ED's Evidence and Position

The ED states that she could not determine whether the Draft Permit is protective of the requester's use and enjoyment of the Property according to the TSWQS, because the proposed discharge route in the Application is inaccurate.[395]

Like with Issue A, Mr. Dutta indicated that he could not state whether the Draft Permit is protective of the use and enjoyment of the Property under the TSWQS, nor that it includes all appropriate and necessary requirements.[396] Ms. Lueg described her belief that the Draft Permit did not include all appropriate and necessary requirements as previously found by the ED, given that it was prepared using an inaccurate discharge route.[397]

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[394] Prot. Ex. 18 (Furnans Dir.) at 299, 316-17.

[395] ED Closing Br. at 3, 10.

[396] ED Ex. DD-1 (Dutta Dir.) at 12.

[397] ED Ex. JL-1 (Lueg Dir.) at 376.

4. OPIC's Position

OPIC argues that Applicant has not met its burden to prove that the discharge will not interfere with the requester's use and enjoyment of the Property, because of the inaccurate discharge route in the Application and the Draft Permit.[398]

5. Applicant's Rebuttal and Reply

Applicant reiterates its claims that Protestant's argument is simply a "repackaging" of its concerns about flooding on the Property. Applicant argues that Dr. Miertschin, Mr. Price, and Mr. Ryan all refuted Dr. Furnans's prediction that the discharge would create four lakes and two rivers, in light of Dr. Furnans' failure to consider soil permeability and precipitation in his model, as well as the highly transmissive soils that will not cause standing water nor any nuisance by mosquitoes on the Property. Flooding concerns, moreover, are not part of TCEQ's jurisdiction and are untethered to water quality, according to Applicant. Because Issue C expressly asks whether the Draft Permit is protective in accordance with the TSWQS, and the discharge meets those standards, Applicant claims to have proven that the Draft Permit is protective of Protestant's use and enjoyment as required.[399]

6. Analysis

Having already determined that Applicant did not meet its burden by a preponderance of the evidence on Issue A, the ALJs find, for the same reasons, that

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[398] OPIC Closing Br. at 13-14.

[399] Appl. Reply Br. at 25-26.

Applicant did not meet its burden of proof on the issue of whether the Draft Permit is protective of the requester's use and enjoyment of its property in accordance with the TSWQS. As addressed previously, Staff performed a technical review and prepared the Draft Permit for a discharge route that does not exist. The ED's witnesses credibly testified that a discharge route must be adequately and correctly identified before a technical review can occur, as all subsequent technical decisions are based on the discharge route and earlier determinations that depend on the route being correct.[400]

Protestant's evidence indicates that the Property is used and enjoyed for a variety of purposes, including cattle operations and pastureland; growing and harvesting hay and other crops; storing lights, poles, and equipment; recreating on the San Antonio River; and hosting events for family, friends and the community. Some concerns expressed by Protestant regarding the proposed discharge relate to water quality and how it could affect cattle grazing on or people visiting and working the land. Other concerns, meanwhile, allege that Protestant's use and enjoyment of the Property would be negatively impacted regardless of whether effluent was treated to the Draft Permit's standards. Specifically, Protestant claims that the Property will be inundated to such an extent that the cattle pens, hay harvesting area, storage yard, and river access will be restricted or no longer usable. Protestant further alleges that the surface waters will not be aesthetically pleasing and will prevent Protestant from hosting events on the Property.

[400] ED Ex. BC-1 (Caston Dir.) at 299, 304, 311; Tr. Vol. 2 at 21, 148, 152-53, 155.

Staff, however, did not review the revised discharge route because the Application was never amended and submitted for additional technical review. Moreover, a technical review of the revised route cannot be extrapolated from the technical review of the nonexistent route. As explained above, the discharge's effect on surface water was not adequately evaluated, and Applicant has failed to meet its burden to show that the Draft Permit complies with the TSWQS. Thus, Protestant has not shown by a preponderance of the evidence that the Draft Permit is also protective of Protestant's use and enjoyment of the Property, in accordance with the TSWQS.

V. TRANSCRIPT COSTS

Rule 80.23(d) provides for the allocation of transcript costs among the parties, excluding the ED and OPIC. In allocating those costs, the Commission is to consider the following applicable factors in allocating reporting and transcription costs among the other parties:

- 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;
- the budgetary constraints of a state or federal administrative agency participating in the proceeding; and
- any other factor which is relevant to a just and reasonable assessment of costs.[401]

[401] Rule 80.23(d)(1).

The ALJs ordered the parties to arrange to have a court reporter attend the hearing and prepare a transcript, subject to an allocation of costs afterward. Applicant represented that the total of the reporting and transcription costs is $9,425.50.[402] Protestant's transcript costs are $1,835.00.[403] No party disputed either amount.

Applicant proposes that one-half of the total costs should be allocated to Applicant and one-half to Protestant.[404] Applicant observed that both Applicant and Protestant are limited liability companies and that Applicant is comprised of just a few individuals whose project would serve low-income families.[405] Applicant notes that Protestant "has hired two law firms, been represented by at least five attorneys, hired two expert consulting witnesses and their firms, filed a [purportedly] frivolous Motion for Summary Disposition, despite obvious genuine issues of material fact, and made an affirmative request for a transcript to the court reporting service."[406]

Protestant argues that the reporting and transcription costs should be allocated entirely to Applicant, stating that neither Protestant nor Mr. Freasier or his family members have the same financial ability as Applicant, who is a real estate development company. Moreover, Protestant notes that Applicant "prepared a faulty Application and failed to meet its burden in the remand hearing, resulting in a

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[402] Appl. Closing Br. at 28; Appl. Reply Br. at 26.

[403] Exhibit A to Protestant's Closing Brief.

[404] Appl. Closing Br. at 28; Appl. Reply Br. at 26.

[405] Appl. Reply Br. at 26.

[406] Appl. Reply Br. at 26.

continued financial burden on Protestant."[407] Protestant argues that splitting the costs equally is unfair and inappropriate given the nature of this remand. Protestant asserts that Applicant benefitted from having the transcript, with the hearing being delayed for two weeks so that Applicant could put on additional testimony after the prima facie presumption was successfully rebutted; and that this delay and rebuttal testimony increased Protestant's transcript costs by 28%.[408]

Applicant and Protestant were the primary participants at the hearing. They both benefited from the transcript and frequently cited to the transcript in their closing arguments, proposed findings of fact, and reply arguments. There is no direct evidence concerning the respective financial abilities of Applicant and Protestant to pay the transcript cost. However, Applicant, a real estate development company, is more likely to have the ability to pay than Protestant. Applicant is also the party seeking a benefit—a permit for its Facility. After considering the relevant factors, the ALJs determine that Protestant should be responsible for its costs of $1,835.00; and the remaining $7,590.50 should be paid by Applicant.

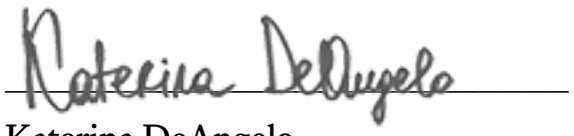
[407] Prot. Closing Br. at 37-38.

[408] Prot. Reply Br. at 27.

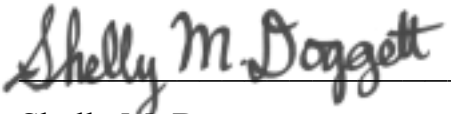
VI. CONCLUSION AND RECOMMENDATION

The Draft Permit does not comply with applicable statutory and regulatory requirements and should not be issued.

Signed February 3, 2025



Katerina DeAngelo,
Administrative Law Judge



Shelly M. Doggett,
Administrative Law Judge

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER
DENYING THE APPLICATION BY
HK REAL ESTATE DEVELOPMENT, LLC
FOR NEW TPDES PERMIT NO. WQ0016150001
IN WILSON COUNTY, TEXAS;
SOAH DOCKET NO. 582-23-21878;
TCEQ DOCKET NO. 2023-0385-MWD

On _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of HK Real Estate Development, LLC (Applicant) for a new Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016150001 in Wilson County, Texas. A Supplemental Proposal for Decision on Remand (Supplemental PFD on Remand) was issued by Katerina DeAngelo and Shelly M. Doggett, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH) and considered by the Commission.

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

I. FINDINGS OF FACT

Application

1. Applicant filed its application (Application) for a new TPDES permit with TCEQ on April 20, 2022.

2. The Application requested authorization to discharge treated domestic wastewater from a proposed plant site (Facility) to be located approximately 2,800 feet southeast of the intersection of County Road 320 and State Highway 181 North in Wilson County, Texas.

3. The Application represented that the treated effluent will be discharged from the Facility into Sandpit Creek, then to the Upper San Antonio River in Segment No. 1911 of the San Antonio River.

4. The unclassified receiving water use is limited aquatic life for Sandpit Creek. The designated uses for Segment No. 1911 are primary contact recreation and high aquatic life use.

5. TCEQ's Executive Director (ED) declared the Application administratively complete on June 27, 2022, and technically complete on August 25, 2022.

6. The ED prepared a draft permit (Draft Permit) based on the Application, including the proposed discharge route depicted and described therein, and made the Draft Permit available for public review and comment.

Facility and Draft Permit

7. The Draft Permit states that the treated effluent will be discharged to Sandpit Creek, then to the Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin.

8. The Draft Permit would authorize a discharge of treated domestic wastewater at a daily average flow not to exceed 0.06 million gallons per day (MGD) in the Interim I Phase, 0.12 MGD in the Interim II Phase, and 0.18 MGD in the Final Phase.

9. The Facility will operate as a membrane bioreactor (MBR) wastewater treatment system, which combines conventional biological activated sludge processes with membrane filtration.

10. Treatment units in the Interim I Phase will include a mechanical auger screen, an anoxic aerobic tank, an aeration tank, an MBR basin, an aerobic digester, and a chlorine contact chamber.

11. Treatment units in the Interim II Phase will include two mechanical auger screens, two anoxic aerobic tanks, two aeration tanks, two MBR basins, two aerobic digesters, and two chlorine contact chambers.

12. Treatment units in the Final Phase will include three mechanical auger screens, three anoxic aerobic tanks, three aeration tanks, three MBR basins, three aerobic digesters, and three chlorine contact chambers.

13. The Facility would be an activated sludge process plant operated in the conventional mode. Sludge generated from the Facility would be hauled by a registered transporter.

14. The effluent limitations in all phases, based on a 30-day average, are 5.0 milligrams per liter (mg/L) five-day carbonaceous biochemical oxygen demand, 5.0 mg/L total suspended solids, 2.0 mg/L ammonia-nitrogen, 63 colony forming units or most probable number of *E. coli* per 100 milliliters, and 5.0 mg/L minimum dissolved oxygen (DO).

15. The effluent is required to contain a total chlorine residual of at least 1.0 mg/L and shall not exceed a total chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes based on peak flow.

16. The ED's Tier 1 antidegradation review preliminarily determined that existing water quality uses would not be impaired by this permit action, and numerical and narrative criteria to protect existing uses would be maintained.

17. The ED's Tier 2 antidegradation review preliminarily determined that no significant degradation of water quality was expected in the San Antonio River, which has been identified as having high aquatic life uses, and that existing uses would be maintained and protected.

18. The ED preliminarily found that the end-of-pipe compliance with pH limits between 6.0 and 9.0 standard units reasonably assures instream compliance with the Texas Surface Water Quality Standards (TSWQS) for pH when the discharge authorized is from a minor facility.

19. The ED preliminarily found that the discharge from the Facility is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat.

20. The ED determined that a total phosphorous limit was not warranted.

21. Segment No. 1911 of the San Antonio River Basin is currently listed on the State's inventory of impaired and threatened waters. The listings are for the impaired fish community from just upstream of the confluence with Sixmile Creek to the upper end of the segment. Segment No. 1911 is also listed for impaired macrobenthic community from just upstream of the confluence with Sixmile Creek to just upstream of the confluence with San Pedro Creek.

22. The Facility would serve the Richter Ranch subdivision.

23. The Facility has not been constructed.

24. The Facility will be located above the 100-year flood plain.

25. The Draft Permit requires Applicant to provide protection for the Facility against a 100-year flood event.

Notice and Jurisdiction

26. The Notice of Receipt of the Application and Intent to Obtain a Water Quality Permit was published on July 6, 2022, in the *Wilson County News*, in English; and, on July 7, 2022, in *El Mundo* in Spanish.

27. The Notice of Application and Preliminary Decision was published on September 21, 2022, in the *Wilson County News*, in English; and on September 15, 2022, in *El Mundo*, in Spanish.

28. The comment period for the Application closed on October 21, 2022.

29. TCEQ received a timely hearing request from Freasier, LLC (Protestant) based upon issues raised during the public comment period.

30. TCEQ issued its Response to Comments on December 22, 2022.

31. By Interim Order, dated May 2, 2023, TCEQ granted Protestant's hearing request and referred the Application to the State Office of Administrative Hearings (SOAH) to consider the following six issues:

    A) Whether the Draft Permit is adequately protective of water quality, including the protection of surface water, groundwater, and animals in accordance with applicable regulations including the TSWQS;

    B) Whether the discharge route is adequately characterized in accordance with 30 Texas Administrative Code section 309.12;

    C) Whether the Draft Permit is protective of the requester's use and enjoyment of its property in accordance with the TSWQS;

    D) Whether the Facility, if it is located within a flood plain, is adequately protected from inundation as required by 30 Texas Administrative Code Chapter 309;

    E) Whether the Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code section 309.13; and

    F) Whether Applicant complied with the requirement to make a copy of the administratively complete application available for public viewing.

32. On August 23, 2023, notice of the preliminary hearing was published in English, in the *Wilson County News*; and, on August 24, 2023, notice of the preliminary hearing was published in Spanish, in *El Mundo*. The notices included the time, date, and place of the hearing, as well as the matters asserted, in accordance with the applicable statutes and rules.

Procedural History

33. On September 27, 2023, a preliminary hearing was convened via videoconference by SOAH ALJs DeAngelo and Doggett. The following appeared and were admitted as parties: Applicant, Protestant, the ED, and the TCEQ Office of Public Interest Counsel (OPIC).

34. Jurisdiction was noted by the ALJs and the Administrative Record, comprised of Applicant's Exhibit 1, was admitted.

35. On November 1, 2023, Applicant filed a Motion for Summary Disposition (Motion) and asserted that summary disposition should be granted pursuant to Texas Government Code section 2003.047(i-1)-(i-2) because no party presented any evidence to rebut the prima facie demonstration made by Applicant. Protestant filed a response to the Motion on November 15, 2023.

36. On December 1, 2023, the ALJs issued the Order Granting Motion for Summary Disposition, finding that there was no genuine issue as to any material fact, and that Applicant was entitled to summary disposition as a matter of law.

37. On January 12, 2024, the ALJs issued a Proposal for Decision on Summary Disposition (PFD on Summary Disposition) recommending that the summary disposition be granted and Application be approved.

38. On May 10, 2024, the Commission considered the PFD on Summary Disposition during an open meeting and remanded the matter to SOAH.

39. The Commission issued an Interim Order on May 17, 2024 (Interim Remand Order), remanding the case to SOAH on the following issues:

    A) Whether the Draft Permit is adequately protective of water quality, including the protection of surface water, groundwater, and animals in accordance with applicable regulations including the TSWQS;

    B) Whether the discharge route is adequately characterized in accordance with 30 Texas Administrative Code section 309.12; and

C) Whether the Draft Permit is protective of the requester's use and enjoyment of its property in accordance with the TSWQS.

40. The Interim Remand Order also stated, "The hearing on the merits on Issues A, B, and C shall include, but not be limited to, determining whether Sandpit Creek flows into the San Antonio River or terminates on Protestant's property, as the nature of the watercourse and where it terminates inform whether the discharge's effect on surface water quality was adequately evaluated."

41. Protestant's property consists of approximately 340 acres located at 4005 U.S. Highway 181 North in Floresville, Wilson County, Texas (Property).

42. After a site visit to the Facility and the Property in June 2024, the ED concluded that the discharge route provided in the Application is incorrect. The ED no longer supports the issuance of the Draft Permit.

43. On May 29, 2024, the ALJs convened a prehearing conference to discuss a procedural schedule, including the hearing on the merits. The parties submitted an agreed procedural schedule on May 30, 2024, which the ALJs adopted on May 31, 2024.

44. On June 3, 2024, the ALJs referred the matter to a SOAH mediator. However, settlement was not successful.

45. On August 12, 2024, Protestant filed a Motion for Summary Disposition and a Motion to Cancel the Hearing on the Merits.

46. On August 29, 2024, the ALJs convened a prehearing conference to discuss Protestant's Motion for Summary Disposition and other preliminary matters.

47. On September 19, 2024, Applicant filed its Response to Protestant's Motion for Summary Disposition, and in the alternative, a Motion for Certified Question.

48. On September 20, 2024, the ED filed her Brief to the ALJs.

49. On September 24, 2024, the ALJs denied Protestant's Motion for Summary Disposition and Applicant's Motion for Certified Question.

50. On September 30, October 1, and October 21, 2024, ALJs DeAngelo and Doggett convened a videoconference hearing on the merits.

51. Applicant was represented by attorneys Helen S. Gilbert, Randall B. Wilburn, and Kerrie Jo Qualtrough; Protestant was represented by attorneys Natasha J. Martin and Bobby M. Salehi; the ED was represented by attorneys Fernando Salazar Martinez and Michael T. Parr, II; and OPIC was represented by attorney Eli Martinez.

52. The record closed after submission of replies to closing briefs on December 4, 2024.

Sandpit Creek and San Antonio River

53. Sandpit Creek is an intermittent stream and, as such, frequently has no flow in it.

54. The Application represented that the treated effluent will be discharged from the Facility to Sandpit Creek on Applicant's property, then the effluent will flow under State Highway 181, approximately 0.5 miles onto the Property to a low point or impoundment adjacent to the Property, then flow southwest through Protestant's property before connecting to Segment No. 1911 of the San Antonio River.

55. The Application represented that Sandpit Creek flows into the San Antonio River approximately 1.1 miles past the proposed discharge point.

56. The Application accurately represented the discharge route from the Facility to the impoundment.

57. The Application's representation of the discharge route past the impoundment to the San Antonio River is incorrect.

58. Sandpit Creek has a wide channel starting near the Facility and going to the culvert on State Highway 181 and entering the impoundment.

59. Sandpit Creek ends in the impoundment adjacent to the Property.

60. Sandpit Creek does not connect to the San Antonio River.

61. Sandpit Creek used to flow to the San Antonio River as represented in the Application—southwest along the fence line to the San Antonio River.

62. The 1936 and 1954 United States Geological Survey (USGS) maps show Sandpit Creek connecting to the San Antonio River.

63. There have been changes to the topography of the Property and its vicinity since the 1950s, including the construction of the impoundment.

64. The impoundment hindered the course of Sandpit Creek.

65. There is no longer a Sandpit Creek channel past the impoundment.

66. There are no Sandpit Creek beds or banks past the impoundment.

67. There are no slope and vegetation patterns past the impoundment indicating a direction of water flow.

68. Sandpit Creek is not a watercourse past the impoundment.

69. The 1973, 2010, 2019, and 2022 USGS maps do not show Sandpit Creek connecting to the San Antonio River, but show Sandpit Creek ending at the impoundment or in a field on the Property.

70. Approximately 20 years of Google Earth historical aerial images show that Sandpit Creek's flow ends at the impoundment except for the instances where the water fills up the impoundment and then spills over into the field.

71. Sandpit Creek does not have a current of water that flows to the San Antonio River.

72. Sandpit Creek is not used for irrigation.

73. In heavy rain events, the Property floods and the water drains across the Property to the San Antonio River.

74. The Federal Emergency Management Agency identified the area where the Facility and Protestant's Property are located as having a high risk of flooding.

75. During the contested case hearing, Applicant provided a revised proposed discharge route representing that, from the impoundment, the effluent would flow generally southeast through the Property before connecting to Segment No. 1911 of the San Antonio River, not southwest as was depicted in the Application.

76. The distance between the originally depicted confluence with the San Antonio River and the revised confluence location to the southeast is approximately one mile.

77. The total length of the revised discharge route before connecting to the San Antonio River is approximately 1.8 miles.

78. Applicant did not update the Application with the revised proposed discharge route.

79. Commission staff did not perform an administrative or technical review of the revised proposed discharge route.

80. It is TCEQ's policy not to issue TPDES permits if a proposed discharge route has been identified incorrectly.

Issues A and C: Whether the Draft Permit is adequately protective of water quality, including the protection of surface water, groundwater, and animals in accordance with applicable regulations including the TSWQS and whether the Draft Permit is protective of the requester's use and enjoyment of its property in accordance with the TSWQS

81. The applicable water quality standards are the TSWQS in 30 Texas Administrative Code chapter 307. The TSWQS were developed to protect surface water quality consistent with human health, terrestrial and aquatic life, the environment, operation of existing industries, and taking into consideration economic development of the state.

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

83. The TCEQ has adopted standard procedures (IPs) to implement the TSWQS. The IPs are approved by the United States Environmental Protection Agency.

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

85. The TSWQS require that DO concentrations be sufficient to support existing, designated, presumed, and attainable aquatic life uses.

86. The TSWQS require that vegetative and physical components of the aquatic environment be maintained or mitigated to protect aquatic life uses.

87. The TSWQs require that surface waters be maintained in an aesthetically attractive condition.

88. The TSWQS require that nutrients from permitted discharges not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use.

89. The TSWQS require that existing, designated, presumed, and attainable uses of aquatic recreation be maintained.

90. The ED's policy is not to perform a technical review, including water quality analysis, if a proposed discharge route in a TPDES permit application has been identified incorrectly.

91. It is the ED's policy that, if an applicant has identified the proposed discharge route incorrectly in a TPDES permit application after technical review has been performed, the applicant must revise the application and submit a new USGS topographic map and updated and edited versions of pages in the application regarding the discharge route before undergoing another technical review.

92. A permit may not cause or contribute to a violation of applicable water quality standards.

93. The family home of Protestant's managing partner, James R. Freasier, Jr., is located on the Property, as well as a livestock compound with cattle pens, orchards, a chicken coop, and an equipment laydown yard for an electrical lighting business.

94. The Property is used for cattle operations and pastureland; growing and harvesting hay and other row crops; storing electrical and lighting equipment;

accessing the San Antonio River for recreational purposes; and hosting a variety of events for family, friends, and community organizations.

95. The ED conducted the TSWQS analysis on the discharge route described and depicted in the Application.

96. The ED concluded that the Draft Permit satisfied the TSWQS based on the discharge route described and depicted in the Application.

97. The technical review prepared for the discharge route in the Application, which does not exist, cannot be used to extrapolate a technical review of the revised discharge route.

98. The ED cannot complete the technical review of the Application until the Application is revised with an accurate discharge route.

Issue B: Whether the discharge route is adequately characterized in accordance with 30 Texas Administrative Code section 309.12

99. 30 Texas Administrative Code section 309.12 relates to the siting of a wastewater treatment plant.

100. 30 Texas Administrative Code section 309.12 requires minimization of possible contamination of water in the state and provides factors the Commission may use to determine whether to issue a permit.

101. The Commission directed SOAH to utilize factors in 30 Texas Administrative Code section 309.12 to determine whether the discharge route was adequately characterized.

102. The Facility, Protestant's Property, and Sandpit Creek sit atop the Reklaw Formation, which ensures the protection of the Carrizo-Wilcox Aquifer, the only known aquifer in the area.

103. There are no known faults in the area.

104. Soil in the area of the Facility and the Property is porous and permeable and could take up the flow of the discharge.

105. No evidence was provided for groundwater flow rate, aquifer recharge, or discharge conditions.

106. There are no weather-related conditions that would allow for flooding or other events that would pose a specific or unique contamination threat to water quality.

Issue D: Whether the Facility, if it is located within a flood plain, is adequately protected from inundation as required by 30 Texas Administrative Code Chapter 309

107. No party presented evidence rebutting the prima facie demonstration that the proposed location for the Facility is above the 100-year flood plan and that the Facility is adequately protected from inundation as required by 30 Texas Administrative Code Chapter 309.

Issue E: Whether the Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code section 309.13

108. No party presented evidence rebutting the prima facie demonstration that the Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code section 309.13.

Issue F: Whether the Applicant complied with the requirement to make a copy of the administratively complete application available for public viewing

109. No party presented evidence rebutting the prima facie demonstration that Applicant complied with the requirement to make a copy of the administratively complete application available for public viewing.

Transcription Costs

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

111. The total of the reporting and transcription costs is $9,425.50.

112. Protestant transcript costs are $1,835.

113. Applicant and Protestant were the primary participants at the hearing; and they both benefited from the transcript and frequently cited to the transcript in their closing arguments, proposed findings of fact, and reply arguments.

114. There is no direct evidence concerning the respective financial abilities of Applicant and Protestant to pay the transcript cost. Applicant, a real estate development company, however, is more likely to have the ability to pay than Protestant.

115. Applicant is the party seeking a benefit—a permit for the Facility.

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 proposal for decision in contested cases referred by the Commission under Texas Government Code section 2003.047.

3. Notice was provided in accordance with Texas Water Code sections 5.114 and 26.028; Texas Government Code sections 2001.051 and 2001.052; and 30 Texas Administrative Code sections 39.405 and 39.551.

4. The Application is subject to the requirements in Senate Bill 709, effective September 1, 2015. Tex. Gov't Code § 2003.047(i-1)-(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. Applicant has the burden of proof on the issues referred by the Commission. 30 Tex. Admin. Code § 80.17(a). However, the admission of the Administrative Record into evidence met Applicant's burden of proof, subject to rebuttal. 30 Tex. Admin. Code § 80.117(b).

7. 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, as compared to the Administrative Record, 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).

8. Even if the prima facie demonstration established by the Administrative Record is rebutted, the Applicant or ED may present additional evidence to be considered in determining whether Applicant met its burden of proof. *See* Tex. Gov't Code § 2003.047(i-3); 30 Tex. Admin. Code §§ 80.17(c)(3), .117(c)(3).

9. The standard of proof is by a preponderance of the evidence. *Granek v. Tex. State Bd. of Med. Examn'rs*, 172 S.W.3d 761, 777 (Tex. App.—Austin 2005, no pet.).

10. Water in the state is defined as "groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state." Tex. Water Code § 26.001(5).

11. Surface water in the state is defined as "[l]akes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state as defined in the Texas Water Code [section] 26.001, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems that are authorized by state or federal law, regulation, or permit, and that are created for the purpose of waste treatment are not considered to be water in the state." 30 Tex. Admin. Code § 307.3(a)(71).

12. Sandpit Creek is water in the state.

13. The entirety of the proposed discharge route in the Application is not water in the state because Sandpit Creek terminates in the impoundment and does not reach the San Antonio River.

14. The Draft Permit is not adequately protective of water quality, including the protection of surface water, groundwater, and animals in accordance with applicable regulations including the TSWQS.

15. TCEQ may not issue a permit unless it finds that the proposed site, when evaluated in light of the proposed design, construction or operational features, minimizes possible contamination of water in the state. In making this determination, the Commission may consider the following factors: (1) active geologic processes; (2) groundwater conditions such as groundwater flow rate, groundwater quality, length of flow path to points of discharge, and aquifer recharge or discharge conditions; (3) soil conditions such as stratigraphic profile and complexity, hydraulic conductivity of strata, and separation distance from the facility to the aquifer and points of discharge to surface water in the state; and (4) climatological conditions. 30 Tex. Admin. Code § 309.12.

16. The discharge route is not adequately characterized in accordance with 30 Texas Administrative Code section 309.12.

17. The Draft Permit is not protective of the requester's use and enjoyment of its property in accordance with the TSWQS.

18. The Facility is adequately protected from inundation as required by 30 Texas Administrative Code Chapter 309.

19. The Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code section 309.13.

20. Applicant made a copy of the administratively complete application available for public viewing in the county in which the Facility is located in accordance with 30 Texas Administrative Code section 39.405(g).

21. 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).

22. 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; the budgetary constraints of a state or federal administrative agency participating in the proceeding; and any other factor which is relevant to a just and reasonable assessment of the costs. 30 Tex. Admin. Code § 80.23(d)(1).

23. Considering the factors in 30 Texas Administrative Code section 80.23(d)(1), a reasonable assessment of hearing transcript costs against parties to the contested case proceeding is $1,835.00 to Protestant and $7,590.50 to Applicant.

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. Application of HK Real Estate Development, LLC for a new Texas Pollutant Discharge Elimination System Permit No. WQ0016150001 in Wilson County, Texas is denied.

2. Protestant Freasier, LLC must pay $1,835.00 of the reporting and transcription costs. HK Real Estate Development, LLC must pay $7,590.50 of the reporting and transcription costs.

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

4. All other motions, request 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 section 2001.144 and 30 Texas Administrative Code section 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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Brooke Paup, Chairman, For the Commission