

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

December 5, 2022

TO: All interested persons.

RE: Harris County Municipal Utility District No. 171  
TPDES Permit No. WQ0015264001

### **Decision of the Executive Director.**

The executive director has made a decision that the above-referenced permit application meets the requirements of applicable law. **This decision does not authorize construction or operation of any proposed facilities.** This decision will be considered by the commissioners at a regularly scheduled public meeting before any action is taken on this application unless all requests for contested case hearing or reconsideration have been withdrawn before that meeting.

Enclosed with this letter are instructions to view the Executive Director's Response to Public Comment (RTC) on the Internet. Individuals who would prefer a mailed copy of the RTC or are having trouble accessing the RTC on the website, should contact the Office of the Chief Clerk, by phone at (512) 239-3300 or by email at [chiefclk@tceq.texas.gov](mailto:chiefclk@tceq.texas.gov). A complete copy of the RTC (including the mailing list), complete application, draft permit and related documents, including public comments, are available for review at the TCEQ Central Office. Additionally, a copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at the Katy Branch Library, 5414 Franz Road, Katy, Texas.

If you disagree with the executive director's decision, and you believe you are an "affected person" as defined below, you may request a contested case hearing. In addition, anyone may request reconsideration of the executive director's decision. The procedures for the commission's evaluation of hearing requests/requests for reconsideration are located in 30 Texas Administrative Code Chapter 55, Subchapter F. A brief description of the procedures for these two requests follows.

### **How to Request a Contested Case Hearing.**

It is important that your request include all the information that supports your right to a contested case hearing. Your hearing request must demonstrate that you meet the applicable legal requirements to have your hearing request granted. The commission's consideration of your request will be based on the information you provide.

The request must include the following:

- (1) Your name, address, daytime telephone number, and, if possible, a fax number.
- (2) The name of the applicant, the permit number and other numbers listed above so that your request may be processed properly.
- (3) A statement clearly expressing that you are requesting a contested case hearing. For example, the following statement would be sufficient: "I request a contested case hearing."
- (4) If the request is made by a group or association, the request must identify:
  - (A) one person by name, address, daytime telephone number, and, if possible, the fax number, of the person who will be responsible for receiving all communications and documents for the group;
  - (B) the comments on the application submitted by the group that are the basis of the hearing request; and
  - (C) by name and physical address one or more members of the group that would otherwise have standing to request a hearing in their own right. The interests the group seeks to protect must relate to the organization's purpose. Neither the claim asserted nor the relief requested must require the participation of the individual members in the case.

Additionally, your request must demonstrate that you are an **"affected person."** An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Your request must describe how and why you would be adversely affected by the proposed facility or activity in a manner not common to the general public. For example, to the extent your request is based on these concerns, you should describe the likely impact on your health, safety, or uses of your property which may be adversely affected by the proposed facility or activities. To demonstrate that you have a personal justiciable interest, you must state, as specifically as you are able, your location and the distance between your location and the proposed facility or activities.

Your request must raise disputed issues of fact that are relevant and material to the commission's decision on this application that were raised **by you** during the public comment period. The request cannot be based solely on issues raised in comments that you have withdrawn.

To facilitate the commission's determination of the number and scope of issues to be referred to hearing, you should: 1) specify any of the executive director's responses to **your** comments that you dispute; 2) the factual basis of the dispute; and 3) list any disputed issues of law.

### **How to Request Reconsideration of the Executive Director's Decision.**

Unlike a request for a contested case hearing, anyone may request reconsideration of the executive director's decision. A request for reconsideration should contain your name, address, daytime phone number, and, if possible, your fax number. The request must state that you are requesting reconsideration of the executive director's decision, and must explain why you believe the decision should be reconsidered.

### **Deadline for Submitting Requests.**

A request for a contested case hearing or reconsideration of the executive director's decision must be **received by** the Chief Clerk's office no later than **30 calendar days** after the date of this letter. You may submit your request electronically at [www.tceq.texas.gov/agency/decisions/cc/comments.html](http://www.tceq.texas.gov/agency/decisions/cc/comments.html) or by mail to the following address:

Laurie Gharis, Chief Clerk  
TCEQ, MC-105  
P.O. Box 13087  
Austin, Texas 78711-3087

### **Processing of Requests.**

Timely requests for a contested case hearing or for reconsideration of the executive director's decision will be referred to the TCEQ's Alternative Dispute Resolution Program and set on the agenda of one of the commission's regularly scheduled meetings. Additional instructions explaining these procedures will be sent to the attached mailing list when this meeting has been scheduled.

### **How to Obtain Additional Information.**

If you have any questions or need additional information about the procedures described in this letter, please call the Public Education Program, toll free, at 1-800-687-4040.

Sincerely,



Laurie Gharis  
Chief Clerk

LG/erg

Enclosure

**EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT**  
**for**  
**Harris County Municipal Utility District No. 171**  
**TPDES Permit No. WQ0015264001**

The Executive Director has made the Response to Public Comment (RTC) for the application by Harris County Municipal Utility District No. 171 for TPDES Permit No. WQ0015264001 available for viewing on the Internet. You may view and print the document by visiting the TCEQ Commissioners' Integrated Database at the following link:  
<https://www.tceq.texas.gov/goto/cid>

In order to view the RTC at the link above, enter the TCEQ ID Number for this application (WQ0015264001) and click the "Search" button. The search results will display a link to the RTC.

Individuals who would prefer a mailed copy of the RTC or are having trouble accessing the RTC on the website, should contact the Office of the Chief Clerk, by phone at (512) 239-3300 or by email at [chiefclk@tceq.texas.gov](mailto:chiefclk@tceq.texas.gov).

**Additional Information**

For more information on the public participation process, you may contact the Office of the Public Interest Counsel at (512) 239-6363 or call the Public Education Program, toll free, at (800) 687-4040.

A complete copy of the RTC (including the mailing list), the complete application, the draft permit, and related documents, including comments, are available for review at the TCEQ Central Office in Austin, Texas. Additionally, a copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at the Katy Branch Library, 5414 Franz Road, Katy, Texas.

MAILING LIST  
for  
Harris County Municipal Utility District No. 171  
TPDES Permit No. WQ0015264001

FOR THE APPLICANT:

Kenyon Hunt, P.E., Senior Project Manager  
BGE, Inc.  
10777 Westheimer Road, Suite 400  
Houston, Texas 77042

Shiann Hernandez, P.E.  
BGE, Inc.  
10777 Westheimer Road, Suite 400  
Houston, Texas 77042

INTERESTED PERSONS:

James Donnelly  
23918 Stockdick School Road  
Katy, Texas 77493

Gregory Johnston  
23850 Stockdick School Road  
Katy, Texas 77493

Philip Evan Morris  
23934 Stockdick School Road  
Katy, Texas 77493

Christopher & Donnisha Spicer  
23910 Stockdick School Road  
Katy, Texas 77493

FOR THE EXECUTIVE DIRECTOR  
via electronic mail:

Ryan Vise, Deputy Director  
Texas Commission on Environmental  
Quality  
External Relations Division  
Public Education Program MC-108  
P.O. Box 13087  
Austin, Texas 78711-3087

Michael Parr, Staff Attorney  
Texas Commission on Environmental  
Quality  
Environmental Law Division MC-173  
P.O. Box 13087  
Austin, Texas 78711-3087

Adbur Rahim, Technical Staff  
Texas Commission on Environmental  
Quality  
Water Quality Division MC-148  
P.O. Box 13087  
Austin, Texas 78711-3087

FOR PUBLIC INTEREST COUNSEL  
via electronic mail:

Garrett T. Arthur, Attorney  
Texas Commission on Environmental  
Quality  
Public Interest Counsel MC-103  
P.O. Box 13087  
Austin, Texas 78711-3087

FOR THE CHIEF CLERK  
via electronic mail:

Laurie Gharis, Chief Clerk  
Texas Commission on Environmental  
Quality  
Office of Chief Clerk MC-105  
P.O. Box 13087  
Austin, Texas 78711-3087

TPDES PERMIT NO. WQ0015264001

APPLICATION BY	§	BEFORE
HARRIS COUNTY MUNICIPAL	§	THE TEXAS
UTILITY DISTRICT NO. 171 FOR	§	COMMISSION ON
TPDES PERMIT NO. WQ0015264001	§	ENVIRONMENTAL QUALITY

---

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

---

The Executive Director (ED) of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment on the application by Harris County Municipal Utility District No. 171 (**Applicant**) for a Major Amendment to Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0015264001, and on the ED's preliminary decision on the application. As required by Title 30 of the Texas Administrative Code (**30 TAC**) Section (§) 55.156, before a permit is issued, the ED prepares a response to all timely, relevant, and material, or significant comments. The Office of the Chief Clerk received timely comments from, James Donnelly, Gregory Johnston, Philip Morris, and Christopher and Donnisha Spicer (**the Spicers**). This response addresses all timely public comments received, whether withdrawn or not. For more information about this permit application or the wastewater permitting process, please call the TCEQ Public Education Program at 1-800 -687-4040. General information about the TCEQ can be found on the TCEQ web site at <http://www.tceq.texas.gov>.

**BACKGROUND**

The Applicant applied for a Major Amendment to its existing TPDES permit No. WQ0015264001 to authorize an increase in the flow of treated domestic wastewater (**effluent**) from a daily average flow in Interim Phase I of 0.25 million gallons per day (MGD), to an annual average flow not to exceed 1.0 MGD. From a daily average flow in Interim Phase II of 0.25 MGD, to an annual average flow not to exceed 2.0 MGD. From a daily average flow in Interim Phase III of 0.50 MGD, to an annual average daily flow of 2.9 MGD, and from an annual average flow in the Final Phase of 1.0 MGD, to an annual average flow of 3.0 MGD (**proposed discharge**).

DESCRIPTION OF FACILITY/DISCHARGE ROUTE

The Applicant's Wastewater Treatment Facility (WWTF), the Nash FM 529 WWTF (**529 facility**) serves the Applicant's service area, is located approximately 3,000 feet southwest of the intersection of Beckendorf Road and Peek Road, in Harris County, Texas 77493, and is an activated sludge process plant operated in the extended aeration mode. Treatment units in Interim Phase I include a bar screen, five aeration basins, three final clarifiers, five sludge digesters, five chlorine contact basins, and a dechlorination basin. Treatment units in Interim Phase II phase includes a bar screen, seven aeration basins, three final clarifiers, six sludge digesters, five chlorine contact basins, and a dechlorination basin. Treatment units in the Interim III phase will include a bar screen, eight aeration basins, four final clarifiers, eight sludge digesters, and six chlorine contact basins, and a dechlorination basin. Treatment units in the Final phase will include a bar screen, five aeration basins, two final clarifiers, four sludge digesters, two chlorine contact basins, and a dechlorination basin. The facility is operating in the Interim I phase. The discharge route for the proposed discharge is to a detention basin, then to

Harris County Flood Control District (**HCFC**D) ditch U101-00-00 (South Mayde Creek), then to Buffalo Bayou Above Tidal in Segment No. 1014 of the San Jacinto River Basin.

Sludge generated at the 529 facility is hauled by a registered transporter and disposed of at a TCEQ-authorized land application site, El Celoso Ranch, Permit No. WQ0004518000, in Waller County. The proposed permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, or wastewater treatment facility.

#### TECHNICAL REVIEW

The TCEQ has primary authority over water quality in Texas and also federal regulatory authority for the TPDES program, which controls discharges of pollutants into Texas surface waterbodies ("**water in the state**"). The Texas Water Code (TWC) § 26.027, authorizes the TCEQ to issue permits for discharges into water in the state, and the ED evaluates applications for discharge permits based on the information provided in the application and can recommend issuance or denial of an application based on its compliance with the TWC and TCEQ rules. Specifically, the ED's Technical Review evaluates impacts from the proposed discharge on the receiving waters, starting at the discharge point (detention basin), according to 30 TAC Chapter 307, the Texas Surface Water Quality Standards (TSWQS), and the TCEQ's *Implementation Procedures for the Texas Surface Water Quality Standards-June 2010 (IPs)*.

The unclassified receiving water uses, the designated uses, and the dissolved oxygen criterion for the receiving waters of the discharge route, according to Appendix A of 30 TAC § 307.10 (TSWQS), is limited aquatic life use and 3.0 mg/L Dissolved Oxygen (**DO**) for the detention basin; minimal aquatic life use and 2.0 mg/L DO for the South Mayde Creek HCFC D ditch; and primary contact recreation, limited aquatic life use, and 3.0 mg/L DO for Buffalo Bayou Above Tidal in Segment No. 1014. Through his Technical Review, the ED provides the proper effluent limitations (**limits**) to protect these uses.

The Technical Review process for surface water quality is conducted by staff in the ED's Water Quality Division (**WQD staff**) on the Standards Implementation Team (**Standards Team**), and WQD staff in the Water Quality Assessment Section (**Modeling Team**). With the goal of the Technical Review to maintain a level of water quality sufficient to protect the existing uses of the receiving surface waters, WQD staff reviewed the application in accordance with the TSWQS and TCEQ's IPs.

The first component of the ED's Technical Review involved WQD staff on the Standards Team reviewing the classifications, designations, and descriptions of the receiving surface waters for the proposed discharge. Along with other available information, reviewing the receiving waters for the proposed discharge allows the Standards Team to preliminarily determine the aquatic life uses in the area of the proposed discharge's possible impact and assign the corresponding Minimum DO criterion as stipulated at 30 TAC § 307.5 (TSWQS) and in the TCEQ's IPs. For Major Amendment applications for discharges, the Standards Team performs an antidegradation analysis of the proposed discharge, and per 30 TAC § 307.5 (TSWQS) and the TCEQ's IPs, an antidegradation review of the receiving waters was performed.

Correspondingly, the Tier 1 review determined that existing water quality uses will not be impaired by the proposed discharge. The Tier 1 review also determined that within the stream reach assessed, no water bodies with exceptional, high, or intermediate aquatic life uses were present, negating the need for a Tier 2 review.

Similarly, downstream of the proposed discharge, no significant degradation of water quality is expected in water bodies with exceptional, high, or intermediate aquatic life uses and existing uses will be maintained and protected. However, because the proposed discharge is directly to an unclassified water body, the Standards Team reviewed this permitting action in conformity with 30 TAC §§ 307.4(h) and (l) (TSWQS) and determined that for the detention basin, an unclassified waterbody, had a limited aquatic life use, with 3.0 mg/L Dissolved Oxygen (DO). The second tier of TCEQ's antidegradation policy generally applies to water bodies that have existing, designated, or presumed uses of intermediate, high, or exceptional aquatic life waters. Because the detention basin, an unclassified waterbody, has only a limited aquatic life use, a Tier 2 antidegradation review was not performed.

As with all determinations, reviews, or analyses related to the Technical review of the proposed permit, the above and below can be reexamined and subsequently modified upon receipt of new information or information that conflicts with the bases employed in the applicable review or analysis.

The second component of the ED's Technical Review involved WQD staff on the Modeling Team performing water quality modeling using a "Continuously Stirred Tank Reactor" (CSTR) model. CSTRs are widely used in WWTFs to reduce the organic matter and microorganism present in sludge by anaerobic digestion. CSTRs are used in ponds, impoundments, reservoirs, or portions of larger open water bodies when the geometry of the water body makes the use of other models questionable, because CSTRs have effective mixing and perform under steady-state with uniform properties. CSTRs are most commonly used in industrial processing, primarily in homogeneous liquid-phase flow reactions where constant agitation is required and involve a reaction tank in which reagents, reactants and often solvents flow into the reactor while the product of the reaction concurrently exits the tank. In this manner, the tank reactor is considered to be a valuable tool for continuous chemical processing.

In this context, the CSTR model is a standard analytical tool used for dissolved oxygen analyses at the TCEQ for the type of receiving waters in this case, and procedures for its use in the analysis of discharge applications have been established and are readily available.

The proposed permit's water quality-related effluent limits, established by WQD staff's CSTR modeling results, will maintain and protect the existing instream uses. Similarly, conventional effluent parameters such as DO, Five-day Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>), Total Suspended Solids (TSS), and Ammonia Nitrogen (NH<sub>3</sub>-N), 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.

Based on model results, the following effluent limits are predicted to be necessary to maintain the DO levels above the criterion stipulated by the Standards Implementation Team for the detention basin (3.0 mg/L DO):

<b>Interim I phase</b>	<b>(1.0 MGD):</b>	<b>10 mg/L CBOD<sub>5</sub>, 2 mg/L NH<sub>3</sub>-N, and 6 mg/L DO</b>
<b>Interim II phase</b>	<b>(2.0 MGD):</b>	<b>10 mg/L CBOD<sub>5</sub>, 2 mg/L NH<sub>3</sub>-N, and 6 mg/L DO</b>
<b>Interim III phase</b>	<b>(2.9 MGD):</b>	<b>7.0 mg/L CBOD<sub>5</sub>, 2 mg/L NH<sub>3</sub>-N, and 6 mg/L DO</b>
<b>Final Phase</b>	<b>(3.0 MGD):</b>	<b>5.0 mg/L CBOD<sub>5</sub>, 2 mg/L NH<sub>3</sub>-N, and 4 mg/L DO</b>

Coefficients and kinetics used in the model are a combination of site-specific, standardized default, and estimated values. The results of this evaluation can be



reexamined upon receipt of information that conflicts with the assumptions employed in this analysis.

In all phases of the proposed permit, the pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per week by grab sample. There must be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

Additionally, in all phases of the proposed permit, the effluent must contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and must be monitored daily by grab sample at each chlorine contact chamber. The Applicant must dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and must monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the ED.

The proposed permit's pretreatment requirements are based on TPDES regulations contained in 30 TAC Chapter 305, which references 40 Code of Federal Regulations (CFR) Part 403, "General Pretreatment Regulations for Existing and New Sources of Pollution" [rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798]. The permit includes specific requirements that establish responsibilities of local government, industry, and the public to implement the standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate the sewage sludge. This permit has appropriate pretreatment language for a facility of this size and complexity.

The discharge from the proposed permit is not expected to impact any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) biological opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES; September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. With respect to the presence of endangered or threatened species, the proposed permit does not require EPA's review.

### **Procedural Background**

The TCEQ received the application on August 25, 2021, and declared it administratively complete on November 18, 2021. The Applicant published the Notice of Receipt and Intent to Obtain a Water Quality Permit (NORI) in Harris County, Texas in English in the *Houston Chronicle* on December 4, 2021, and in Spanish in *Houston Chronicle dba La Voz* on December 8, 2021. The ED completed the technical review of the application on March 21, 2022, and prepared the proposed permit, which if approved, would establish the conditions under which the 529 facility must operate. The Applicant published the Notice of Application and Preliminary Decision (NAPD) in Chambers County, Texas in English in the *Houston Chronicle* on August 6, 2022, and in Spanish in *Houston Chronicle dba La Voz* on August 10, 2022. The public comment period ended on September 9, 2022. Because this application was received after September 1, 2015, and because it was declared administratively complete after September 1, 1999, it is subject to both the procedural requirements adopted pursuant

to House Bill 801, 76th Legislature, 1999, and the procedural requirements and rules implementing Senate Bill 709, 84<sup>th</sup> Legislature, 2015, which are implemented by the Commission in its rules in 30 TAC Chapters 39, 50, and 55.

The ED has determined that the proposed permit, if issued, meets all statutory and regulatory requirements and is protective of the environment, water quality, and human health. However, if you would like to file a complaint about the 529 facility concerning its compliance with the provisions of its permit or with TCEQ rules, you may contact the TCEQ Regional Office (Region 12) in Houston, TX at (713) 767-3500 or the statewide toll-free number at 1-888-777-3186 to address potential permit violations. In addition, complaints may be filed electronically by using the methods described above in the third subsection of Background Information (Access to Rules, Laws, and Records). If an inspection by the Regional Office finds that the Applicant is not complying with all the requirements of the permit, or that the 529 facility is out of compliance with TCEQ rules, enforcement actions may arise.

### Access to Rules, Laws and Records

- All administrative rules: Secretary of State Website: [www.sos.state.tx.us](http://www.sos.state.tx.us)
- TCEQ rules: Title 30 of the Texas Administrative Code: [www.sos.state.tx.us/tac/](http://www.sos.state.tx.us/tac/) (select TAC Viewer on the right, then Title 30 Environmental Quality)
- Texas statutes: [www.statutes.capitol.texas.gov](http://www.statutes.capitol.texas.gov)
- TCEQ website: [www.tceq.texas.gov](http://www.tceq.texas.gov) (for downloadable rules in WordPerfect or Adobe PDF formats, select “Rules, Policy, & Legislation,” then “Current TCEQ Rules,” then “Download TCEQ Rules”);
- Federal rules: Title 40 of the Code of Federal Regulations (C.F.R.)  
[http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl)
- Federal environmental laws: <http://www.epa.gov/lawsregs/>
- **Environmental or citizen complaints may be filed electronically at:**  
<https://www.tceq.texas.gov/assets/public/compliance/monops/complaints/complaints.html> (select “use our online form”) or by sending an email to the following address: [complaint@TCEO.texas.gov](mailto:complaint@TCEO.texas.gov)

Commission records for the 529 facility are available for viewing and copying at TCEQ’s main office in Austin, 12100 Park 35 Circle, Building F, 1st Floor (Office of Chief Clerk, for the current application until final action is taken). Some documents located at the Office of the Chief Clerk may also be located in the TCEQ Commissioners’ Integrated Database at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid). The permit application has been available for viewing and copying at the at Navasota Public Library located at 1411 East Washington Avenue, Navasota, Texas 77868, since publication of the NORI. The final permit application, proposed permit, statement of basis/technical summary, and the ED’s preliminary decision are now available for viewing and copying at the same location since publication of the NAPD.

## COMMENTS AND RESPONSES

### COMMENT 1:

The Spicers commented, expressing concerns about protecting the health and safety of their family from the greater risks from the increased discharge, which may attract pests and insects. The Spicers also commented, expressing concerns about well-water system protection and concerns about their farmed vegetation, which is a natural resource of food for their family.

## RESPONSE 1:

The health concerns of area residents, as well as those of the public, are considered in reviewing amendment applications for domestic wastewater discharge permits. The TCEQ takes the concerns and comments expressed by the public, relating to human health, water quality, and protecting the State's rivers and lakes, into consideration in deciding whether to issue a wastewater discharge permit.

Chapter 26 of the TWC and TCEQ's water quality are written for the protection of public health, aquatic life, and the environment. Accordingly, the stated policy of both the Water Code and the TSWQS is:

*to maintain the quality of water in the state consistent with the public health and enjoyment, the propagation and protection of terrestrial and aquatic life, and the operation of existing industries, taking into consideration the economic development of the state; to encourage and promote the development and use of regional and area-wide waste collection, treatment, and disposal systems to serve the waste disposal needs of the citizens of the state; and to require the use of all reasonable methods to implement this policy.<sup>1</sup>*

The proposed permit also requires the Applicant to "take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health."

WQD staff evaluated the application as an authorization to discharge treated wastewater into water in the State. Thus, the quality of the discharge and method of achieving that quality must follow the Federal Clean Water Act, TWC, and the TSWQS.

The TSWQS is a primary mechanism for the TCEQ to protect human health, surface and groundwater quality, aquatic life, the environment, and specifically, the designated uses of the receiving waters. The TSWQS require that discharges not cause surface waters to be toxic to aquatic life, terrestrial wildlife, livestock, or domestic animals, not degrade receiving waters, and not result in situations that impair existing, attainable, or designated uses. Likewise, the TPDES program mandates that discharges of treated effluent into water in the state from facilities regulated by TPDES permits meet the requirements of the TSWQS.

As specified in the methodologies from the TCEQ IPs, TPDES permits issued by the TCEQ must maintain water in the state to preclude adverse toxic effects on human health resulting from contact recreation, consumption of aquatic organisms, consumption of drinking water, or any combination of the three. Relatedly, municipal facilities typically do not have industrial contributors, and therefore, do not have toxins in their effluent. In addition, permits must prevent adverse toxic effects on aquatic life, terrestrial life, livestock, and domestic animals resulting from contact, consumption of aquatic organisms, consumption of water, or any combination of the three. The design of the proposed permit ensures these water quality standards will be supported.

WQD Staff drafted the proposed permit with provisions to ensure that the TSWQS will be maintained, ensuring the proposed discharge is protective of human health, aquatic life, livestock, domestic animals, and the environment. Likewise, the proposed permit's effluent limits will protect the uses and quality of the waterbodies in the route of the proposed discharge for the benefit of the aquatic life and terrestrial wildlife that

---

<sup>1</sup> Texas Water Code § 26.003 and 30 TAC § 307.1.

depend on it. WQD Staff determined that the proposed permit complies with the TSWQS, ensuring that the effluent discharged is protective of human health.

This is because the methodology outlined in the TCEQ IPs is designed to 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.

WQD Staff drafted the proposed permit to preclude significant degradation of water quality in the waterbodies in the route of the proposed discharge by including effluent limits and monitoring requirements designed to ensure protection of the waterbodies according to the TCEQ rules and procedures.

To achieve the goal of supporting a level of water quality sufficient to protect existing uses of waterbodies, the proposed permit contains several water quality-specific parameters or requirements that limit the potential impact of the discharge on the receiving waters of the discharge route.

The proposed permit requires the Applicant to “take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health.”

According to the TCEQ rules, the plans and specifications of the plant design must comply with 30 TAC Chapter 217, relating to “Design Criteria for Domestic Wastewater Systems.” The Applicant is required at all times to ensure that the 529 facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. Consequently, health impacts from pests should not occur. Nearby residents’ quality of life is protected by the fact that the Applicant is only authorized to discharge according to the limitations, monitoring requirements, and other conditions listed in the proposed permit.

Additional protection of human health comes from the rule in 30 TAC § 309.3(g)(1) (Disinfection), which requires disinfection of domestic wastewater into water in the state in a manner conducive to the protection of both public health and aquatic life. The rules do not mandate a specific method of disinfection, as a permittee may disinfect domestic wastewater through use of 1) chlorination, 2) ultra-violet light, or 3) an equivalent method of disinfection with prior approval from the ED. Whichever form is used, the design criteria for chemical disinfection by chlorine, including safety requirements, in 30 TAC Chapter 217, Subchapter K must be observed. Therefore, in accordance with the TCEQ rules (30 TAC § 309.3(g)(1)), the proposed permit requires the treated effluent to be disinfected prior to discharge in a manner conducive to protect both the public health and aquatic life.

For this facility, the Applicant has chosen chlorine disinfection. Chlorination may be via gaseous, liquid, or tablet forms. Chlorine is one of the most practical and effective means of disinfection because it can kill disease-causing bacteria and nuisance organisms and can eliminate certain noxious odors during disinfection.<sup>2</sup> The effluent from the 529 facility, disinfected with chlorine, must contain a chlorine residual of at least 1.0 mg/L. The permit limit for maximum total chlorine residual is 4.0 mg/L after a

---

<sup>2</sup> U.S. EPA *Wastewater Technology Fact Sheet- Chlorine Disinfection* (EPA 832-F-99-062)

detention time of at least 20 minutes (based on peak flow), which must be monitored five times per week by grab sample.<sup>3</sup>

The ED's review of an application for a TPDES permit focuses on controlling the discharge of pollutants into water in the state, which includes both navigable and non-navigable water bodies. The Texas Water Code defines "water" or "water in the state" to mean 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 non-navigable, 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.<sup>4</sup>

The legislature has determined that "the goal of groundwater policy in this state is that the existing quality of groundwater is not degraded. This goal of non-degradation does not mean zero-contaminant discharge."<sup>5</sup> Chapter 26 of the Texas Water Code further states, "discharges of pollutants, disposal of wastes, or other activities subject to regulation by state agencies must be conducted in a manner that will maintain present uses and not impair potential uses of groundwater or pose a public health hazard (TWC § 26.401(c)(2)).

WQD staff determined that the proposed permit fully complies with the TSWQS, ensuring that the proposed discharge is protective of human health, water quality, aquatic life, and the environment. Further, the WQD has made the determination 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 proposed permit intended to maintain the existing uses and preclude degradation of the surface waters, protect against degradation of groundwater.

Further, 30 TAC § 309.13(c) states that a treatment unit at the 529 facility may not be located closer than 500 feet from a public water well nor 250 feet from a private water well. For public water sources, the provisions of § 309.13(c) bolster the safeguards from TCEQ's Groundwater Rule (GWR) that protect drinking water quality against disease-causing microorganisms.

However, the Ground Water Rule does not address private wells because they are not under the jurisdiction of the Safe Drinking Water Act and thus are not subject to TCEQ regulation. TCEQ does recommend that well owners periodically test their water for microbial and chemical contaminants and properly maintain their well. It is the responsibility of the private well owner to take steps to have his or her water quality tested at least annually for possible constituents of concern, or more often if the well is thought to have a surface water connection.

For further details about the information discussed in this paragraph, please see the Ground Water Links section below. For more information on total coliform and *E.coli* compliance related to the Revised Total Coliform Rule and the GWR, please see TCEQ's guidance, *Coliform Monitoring, Analyzing, and Reporting Guide* (RG-421). If your well tests positive for fecal coliform bacteria, please see Texas A&M AgriLife Extension's guidance, *What to Do About Coliform Bacteria in Well Water*, or TCEQ's guidance, *Disinfecting Your Private Well*. For more information about testing private water wells,

---

<sup>3</sup> Harris County Municipal Utility District No. 171 Draft Permit, Effluent Limitations and Monitoring Requirements, p.2; *see also* 30 TEX. ADMIN. CODE § 309.3(g)(2)

<sup>4</sup> Texas Water Code § 26.001(5).

<sup>5</sup> Texas Water Code § 26.401(b)

please see the National Ground Water Association's *Water Testing*. For more information on groundwater contamination or reporting groundwater contamination, please see the Texas Groundwater Protection Committee's (TGPC) webpages, *Ground Water Contamination* and *Reporting Contamination*.

The TGPC may be contacted through email at [tgpc@tceq.texas.gov](mailto:tgpc@tceq.texas.gov), through the TGPC website, or at (512) 239-4600. However, for groundwater emergencies, please contact the TCEQ Regional Office (Region 12) in Houston, Tx at (713) 767-3500 or the statewide toll-free number at 1-888-777-3186.

Related to vegetation, the TSWQS (30 TAC § 307.6(b)(4)) specifically state that water in the state shall be maintained to preclude adverse toxic effects on aquatic and terrestrial life, which also includes protection of vegetation. The effluent limits and conditions in the proposed permit were derived from a rigorous technical review to ensure compliance with the TSWQS.

The proposed permit was developed to protect human health, aquatic and terrestrial life, including vegetation, according to the TSWQS, provided the Applicant operates and maintains the 529 facility according to TCEQ rules and the requirements in the proposed permit.

### **Ground Water Links**

*Coliform Monitoring, Analyzing, and Reporting Guide* (RG-421)

<https://www.tceq.texas.gov/downloads/drinking-water/microbial/rg-421.pdf>

National Ground Water Association's webpage *Water Testing*

<http://wellowner.org/water-quality/water-testing/>

*What to Do About Coliform Bacteria in Well Water*

<https://twon.tamu.edu/wp-content/uploads/sites/3/2021/06/what-to-do-about-coliform-in-well-water.pdf>

*Disinfecting Your Private Well*

<https://www.tceq.texas.gov/publications/gi/gi-432.html>

Texas Groundwater Protection Committee (TGPC)

<https://tgpc.texas.gov/>

TGPC's *Groundwater Contamination and Reporting Contamination* webpages

<https://tgpc.texas.gov/groundwater-contamination/>

<https://tgpc.texas.gov/groundwater-contamination/#3>

### **COMMENT 2:**

James Donnelly, Gregory Johnston, and Philip Morris commented, expressing concerns that the flooding in South Mayde Creek will worsen due to the greater volume of discharge from the 529 facility. The Spicers commented that they are concerned about the increased flooding risks for their home and protecting livestock and domestic animals in the adjacent neighborhood when floodwaters containing wastewater flow over the creek's banks.

### **RESPONSE 2:**

The ED encourages the participation of all individuals in the environmental permitting process. However, there are certain concerns of individuals that the TCEQ

cannot address in the review of a wastewater discharge permit, as the scope of the ED's jurisdiction in a TPDES application is limited to the issues set out by statute.

While the Texas Legislature has given the TCEQ the responsibility to protect water quality, and section 26.027 of the Texas Water Code (TWC) authorizes the TCEQ to issue permits to control the discharge of wastes or pollutants into state waters and to protect the water quality of the state's rivers, lakes and coastal waters, and the proposed permit establishes terms and conditions that are intended to provide water quality pollution control, which focuses on controlling the discharge of pollutants into water in the state, the ED through his Water Quality Division (WQD) has no jurisdiction to address flooding or erosion issues in the wastewater permitting process, which is limited to controlling the discharge of pollutants into waters in the state and protecting the water quality of the state's waterbodies.

While the TCEQ does not have jurisdiction to regulate flooding in the context of a wastewater discharge permit to the extent that a concern over flooding also involves water quality, the Applicant is always required to comply with all the numeric and narrative effluent limitations and other conditions in the proposed permit, including during flooding conditions. Likewise, the proposed permit includes effluent limits and other requirements that the Applicant must meet even during rainfall events and periods of flooding. According to the application, the 529 facility will be located above the 100-year flood plain. For additional protection, the proposed permit includes Other Requirement No. 4, which requires the Applicant to provide protection for the facility against a 100-year flood event.

Similarly, the TSWQS require that discharges not cause surface waters to be toxic to aquatic life, terrestrial wildlife, livestock, or domestic animals. WQD Staff drafted the proposed permit with provisions to ensure that the TSWQS will be maintained, ensuring the proposed discharge is protective of human health, aquatic life, livestock, domestic animals, and the environment. Likewise, the proposed permit's effluent limits 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.

For flooding concerns, members of the public may contact the Harris County Floodplain Administrator's office, run out of the Harris County Engineering Department at (713) 274-3842 8:00 a.m. - 5:00 p.m., Monday through Friday, or by sending an email to [permitsinfo@hcpid.org](mailto:permitsinfo@hcpid.org). The TCEQ Resource Protection Team can be contacted for aid in identifying and contacting the appropriate county officials or offices, by calling (512) 239-4600, or by email at: [wcp@tceq.texas.gov](mailto:wcp@tceq.texas.gov). Additionally, the Federal Emergency Management Agency has programs designed to mitigate damage caused by flooding, that can be found at the following website: <https://www.fema.gov/floodplain-management>.

Finally, the issuance of a permit by the TCEQ does not authorize any injury to persons or property or an invasion of others property rights. In addition, the scope of TCEQ's regulatory jurisdiction does not, nor does the proposed permit, limit the ability of nearby landowners to seek relief from a court or use common law remedies in response to trespass, nuisance, other causes of action in response to activities that may or do interfere with the use and enjoyment of their property, or that may or do result in injury or adverse effects on human health or welfare, animal life, vegetation, or property. If the Applicant's activities create any nuisance conditions, the TCEQ may be contacted to investigate whether a permit violation has occurred.

**COMMENT 3:**

James Donnelly, Gregory Johnston, and the Spicers all commented, expressing concern about foul odors from the 529 facility.

**RESPONSE 3:**

Instances of foul odors from a discharge of treated wastewater can exist when there are insufficient levels of dissolved oxygen (DO) present in the effluent, and therefore, all wastewater treatment facilities (WWTF) have the potential to generate odors. To prevent odors from occurring, the number of oxygen-demanding constituents must be controlled. The proposed effluent limitations, specifically the minimum dissolved oxygen limit, restrict the amount of oxygen-demanding constituents and are set at levels to significantly reduce the odors in the effluent being discharged and prevent degradation of the receiving waters. Additionally, nuisance-odor controls have been incorporated into the proposed permit.

To control and abate odors, the TCEQ rules require domestic WWTFs to meet buffer zone requirements for the abatement and control of nuisance odor according to 30 TAC § 309.13(e), which provides options for applicants to satisfy the nuisance odor abatement and control requirements. The options are: 1) ownership of the buffer zone area; 2) restrictive easement from the adjacent property owners for any part of the buffer zone not owned by the Applicant; or 3) providing nuisance odor control.

According to the application, the 529 facility intends to comply with the requirement to abate and control nuisance odors by locating the treatment units at least 150 feet from the nearest property line and by legal restrictions prohibiting residences within the buffer zone. These requirements and legal restrictions are incorporated in the proposed permit. Therefore, nuisance odors are not expected to occur because of the permitted activities at the facility if the Applicant operates the 529 facility in compliance with TCEQ's rules and the terms and conditions of the proposed permit.

The proposed permit does not limit a landowner's ability to seek private action against the Applicant, and if anyone experiences any suspected incidents of noncompliance with the permit or TCEQ rules, they may reported to the TCEQ by calling the toll-free number, 1-888-777-3186, or the TCEQ Regional Office (Region 12) in Houston, TX at (512) 339-2929. Complaints may be filed electronically by using the methods described in the third subsection of Background Information (Access to Rules, Laws, and Records). If an inspection by the Regional Office finds that the Applicant is not complying with all the requirements of the permit, or that the 529 facility is out of compliance with TCEQ rules, enforcement actions may arise.

**COMMENT 4:**

The Spicers commented, expressing concern that the wind studies are outdated, and more recent and closer wind studies need to be performed.

**RESPONSE 4:**

TCEQ's instructions for the Municipal Wastewater Permit application, form number TCEQ-10053-inst, provides a link to the National Weather and Climate Center where applicants can download datasets of wind rose plot images. The period of records is Jan 1970 - Sept 2022. This application included the wind rose available from the National Weather and Climate Center for the Houston/Intercontinental Airport area from



station number 12960. The information provided complied with TCEQ's rules and TPDES application requirements.

**COMMENT 5:**

The Spicers commented, expressing concern about an independent environmental impact study must be performed which studies the concerns of the higher wastewater discharge in the environment.

**RESPONSE 5:**

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. To meet this requirement, federal agencies must prepare detailed statements which include an Environmental Assessment and either a Finding of No Significant Impact or Environmental Impact Statement. However, these requirements pertain to a proposed federal action. An environmental impact statement and compliance with NEPA are not required as part of the TPDES permitting process.

**COMMENT 6:**

The Spicers commented, expressing concern that the existing permit was approved for 1,000,000 gallons per day, and if allowed to exceed this capacity, the existing permit was not approved in good faith.

**RESPONSE 6:**

The Applicant applied for a major amendment to TPDES Permit No. WQ0015264001, to authorize an increase in the discharge of treated domestic wastewater from an annual average flow not to exceed 1,000,000 gallons per day to an annual average flow not to exceed 3,000,000 gallons per day. According to TCEQ regulations, an application for a major amendment to a TPDES permit is required when an applicant seeks to change a substantive term, provision, requirement, or limiting parameter of a permit. A request to increase the flow of a discharge of treated wastewater is a change in a term, condition, or provision of a permit that requires a major amendment. If the TCEQ ultimately issues the proposed permit and the Applicant needs to once again increase the flow of the discharge authorized in its permit, it would have to apply for another major amendment, just as it has done with the proposed permit. When applicants seek a major amendment, the application is subject to the same processing, technical review, and public notice regulations as the original and current application. Accordingly, the public would have an opportunity to comment on the proposed permit, request reconsideration of the ED's preliminary decision, and request a contested case hearing.

Individuals may request to be placed on a mailing list to receive notices of future applications filed in their area. For information and instructions on how to be added to a particular mailing list, please call the TCEQ's Office of the Chief Clerk at (512) 239-3300.

**COMMENT 7:**

Gregory Johnston and the Spicers commented, expressing concerns about property devaluation and violations of Texas property owner's bill of rights.

Additionally, James Donnelly, Gregory Johnston, and the Spicers all commented, expressing concerns about noise, and lights, from the 529 facility.

**RESPONSE 7:**

The ED acknowledges the significance of these concerns; however, while the ED encourages the participation of all citizens in the environmental permitting process, there are certain concerns of citizens that the TCEQ cannot address in the review of a wastewater discharge permit, as the scope of the ED's jurisdiction in a TPDES application is limited to the issues set out by statute. The ED, through his Water Quality Division, has no jurisdiction to address property values, or matters related to the Texas Property Owner's Bill of Rights. The ED's jurisdiction is limited to controlling the discharge of pollutants into waters in the state and protecting the water quality of the state's waterbodies.

Noise and light pollution are also outside of TCEQ's jurisdiction. The TCEQ does not have the authority to address these types of issues as part of the wastewater permitting process. While the Texas Legislature has given the TCEQ the responsibility to protect water quality, the water quality permitting process is limited to controlling the discharge of pollutants into or adjacent to water in the state and protecting the water quality of the state's rivers, lakes, and coastal waters.

The issuance of a permit by the TCEQ does not authorize any injury to persons or property or an invasion of others property rights. Alternatively, nothing in the proposed permit limits the ability of nearby landowners to use common law remedies for trespass, nuisance, or other causes of action in response to activities that may or do result in injury or adverse effects on human health or welfare, animal life, vegetation, or property.

Nor does the proposed permit limit the ability of a nearby landowner to seek relief from a court in response to activities that may or do interfere with the use and enjoyment of their property. If the Applicant's activities create any nuisance conditions, the TCEQ may be contacted to investigate whether a permit violation has occurred. Potential permit violations may be reported to the TCEQ Regional Office (Region 12) in Houston, TX at (713) 767-3500 or the statewide toll-free number at 1-888-777-3186 to address potential permit violations. In addition, complaints may be filed electronically by using the methods described above in the third subsection of Background Information (Access to Rules, Laws, and Records).

**CHANGES MADE TO THE PERMIT IN RESPONSE TO COMMENT**

No changes to the proposed permit were made in response to public comment.

Respectfully submitted,

Texas Commission on Environmental Quality

Toby Baker, Executive Director

Charmaine Backens, Deputy Director  
Environmental Law Division



---

Michael T. Parr II, Staff Attorney  
Environmental Law Division  
State Bar No. 24062936  
P.O. Box 13087, MC 173  
Austin, Texas 78711 3087  
Telephone No. 512-239 0611  
REPRESENTING THE EXECUTIVE DIRECTOR  
OF THE TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

**CERTIFICATE OF SERVICE**

I certify that on November 29, 2022, the Executive Director's Response to Public Comment for Permit No. WQ0015264001 was filed with the Texas Commission on Environmental Quality's Office of the Chief Clerk.



---

Michael T. Parr II, *Staff Attorney*  
State Bar No. 24062936