

Fact Sheet and Executive Director's Preliminary Decision
TPDES General Permit No. TXG500000

For proposed Texas Pollutant Discharge Elimination System (TPDES) General Permit No. TXG500000 to authorize the discharges from quarries located greater than one mile from a water body within the water quality protection areas in the John Graves Scenic Riverway and Coke Stevenson Scenic Riverway into surface water in the state.

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Permit Action: Renewal with Amendment of General Permit TXG500000

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I. Summary

The Texas Commission on Environmental Quality (TCEQ) is proposing the renewal with amendments of TPDES general permit TXG500000 authorizing discharges of process wastewater, mine dewatering, stormwater associated with industrial activity, construction stormwater, and certain non-stormwater discharges from quarries located greater than one mile from a water body within the water quality protection areas in the John Graves Scenic Riverway or Coke Stevenson Scenic Riverway and outside of the 100-year floodplain. These water quality protection areas include (for the John Graves) that portion of the Brazos River Basin, and its contributing watershed, located downstream of the Morris Shepard Dam on the Possum Kingdom Reservoir in Palo Pinto County and extending to the county line between Parker and Hood Counties and (for the Coke Stevenson) the South Llano River and its contributing watershed in Kimble County, located upstream of the river's confluence with the North Llano River at the City of Junction.

This general permit has been developed to comply with Texas Water Code (TWC) Chapter 26, Subchapter M and 30 Texas Administrative Code (TAC) Chapter 311, Subchapter H resulting from the passage of Senate Bill (SB) 1354 of the 79th Legislative Session and House Bill (HB) 1688 of the 88th Legislative Session. Specifically, TWC §26.553(b) requires quarries located greater than one mile from a water body in the water quality protection areas to obtain a general permit authorization. The expiration date of this pilot program and rules is September 1, 2027.

II. Executive Director's Recommendation

The executive director has made a preliminary decision that this general permit, if issued, meets all statutory and regulatory requirements. It is proposed that the general permit be issued to expire five years from the effective date in accordance with the requirements of 30 TAC §205.5(a).

III. Permit Applicability

A. Discharges Eligible for Authorization

This general permit authorizes the discharge of process wastewater, mine dewatering, stormwater associated with industrial activity, construction stormwater, and certain non-stormwater discharges from quarries located greater than one mile from a water body within the water quality protection areas in the John Graves Scenic Riverway and the Coke Stevenson Scenic Riverway and outside of the 100-year floodplain. The permit specifies the facilities that may be authorized under this general permit and those that must be authorized by individual permit.

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B. Limitations on Coverage

This general permit does not apply to:

1. A quarry located outside the water quality protection areas in the John Graves Scenic Riverway or the Coke Stevenson Scenic Riverway.
2. A quarry located within one mile from a water body within the water quality protection areas in the John Graves Scenic Riverway or the Coke Stevenson Scenic Riverway or within the 100-year floodplain. Quarries located within one mile of the water bodies or within the 100-year floodplain are required to obtain an individual TPDES permit.
3. A quarry or associated processing plant located greater than one mile from a water body within the water quality protection areas in the John Graves Scenic Riverway or the Coke Stevenson Scenic Riverway that mines clay and shale for use in manufacturing structural clay products.
4. A quarry or associated processing plant located greater than one mile from a water body within the water quality protection area in the John Graves Scenic Riverway that since or before January 1, 1994, has been in regular operation without cessation of operation for more than 30 consecutive days and under the same ownership.
5. The construction or operation of a municipal solid waste facility, regardless of whether the facility includes a pit or quarry that is associated with past quarrying.
6. Return flows from mining operations authorized by the U.S. Army Corps of Engineers under Title 33 Code of Federal Regulations (CFR) §323.2(d)(1)(iii).
7. Discharges that are regulated by the Railroad Commission of Texas.
8. The following discharges are not eligible for coverage under this general permit:
 - a. Discharges of the constituent(s) of concern to impaired water bodies for which there is a total maximum daily load (TMDL) implementation plan (I-Plan) are not eligible for this permit unless they are consistent with the approved TMDL and TMDL I-Plan. The executive director may amend this general permit or develop a separate general permit for discharges to these water bodies. For discharges not eligible for coverage under this general permit, the discharger must apply for and receive an individual or other applicable general permit prior to discharging.
 - b. Discharges that do not maintain existing uses of receiving waters, as determined by the executive director.
 - c. Discharges that would adversely affect a listed endangered or threatened species or its critical habitat. Federal requirements related to endangered species apply to all TPDES permitted activities, and site-specific controls may be required to ensure that protection of endangered or threatened species is achieved.
 - d. Sites that are classified as unsatisfactory performers as required under 30 TAC §60.3(a)(3)(A)(i).

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IV. Permit Effluent Limitations

A. Discharge Effluent Limitations

Effluent discharged under the authority of this general permit must meet the following effluent limitations as listed in Table 1 and Table 2. The classified segments listed below are defined in the Texas Surface Water Quality Standards (30 TAC Chapter 307, Appendix C).

Table 1 - Effluent Limits –Segment Nos. 1205, 1206, and 1230.

<i>Parameter</i>	<i>Daily Average Limitations</i>	<i>Daily Maximum Limitations</i>	<i>Sample Type</i>	<i>Monitoring Frequency</i>
Flow	Report MGD ¹	N/A	Estimate	One/day ²
Total Suspended Solids	45 mg/L ³	NA	Grab	One/day ^{2, 4}
pH	6.0-9.0 S.U.	N/A	Grab	One/day ^{2, 4}
Arsenic, Total	0.1 mg/L	0.3 mg/L	Grab	One/year ²
Barium, Total	1.0 mg/L	4.0 mg/L	Grab	One/year ²
Cadmium, Total	0.05 mg/L	0.14 mg/L	Grab	One/year ²
Chromium, Total	0.5 mg/L	5.0 mg/L	Grab	One/year ²
Copper, Total	0.04 mg/L	0.09 mg/L	Grab	One/year ²
Lead, Total	0.35 mg/L	0.75 mg/L	Grab	One/year ²
Manganese, Total	1.0 mg/L	3.0 mg/L	Grab	One/year ²
Mercury, Total	0.002 mg/L	0.004 mg/L	Grab	One/year ²
Nickel, Total	1.0 mg/L	3.0 mg/L	Grab	One/year ²
Selenium, Total	0.017 mg/L	0.036 mg/L	Grab	One/year ²
Silver, Total	0.03 mg/L	0.05 mg/L	Grab	One/year ²
Zinc, Total	0.31 mg/L	0.66 mg/L	Grab	One/year ²

1. Million Gallons per Day (MGD)

2. When discharging.

3. Milligram per Liter (mg/L)

4. Not applicable to discharges resulting from a rainfall event greater than the 25-year, 24-hour rainfall event. Monitoring is required when discharges result

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from a rainfall event greater than the 25-year, 24-hour event; however, compliance with effluent limitations is not required.

Table 2 - Effluent Limits - Stream Segment No. 1415.

<i>Parameter</i>	<i>Daily Average Limitations</i>	<i>Daily Maximum Limitations</i>	<i>Sample Type</i>	<i>Monitoring Frequency</i>
Flow	Report MGD ¹	N/A	Estimate	One/day ²
Total Suspended Solids	45 mg/L ³	NA	Grab	One/day ^{2, 4}
pH	6.0-9.0 S.U.	N/A	Grab	One/day ^{2, 4}
Arsenic, Total	0.1 mg/L	0.3 mg/L	Grab	One/year ²
Barium, Total	1.0 mg/L	4.0 mg/L	Grab	One/year ²
Cadmium, Total	0.05 mg/L	0.11 mg/L	Grab	One/year ²
Chromium, Total	0.5 mg/L	5.0 mg/L	Grab	One/year ²
Copper, Total	0.04 mg/L	0.09 mg/L	Grab	One/year ²
Lead, Total	0.35 mg/L	0.75 mg/L	Grab	One/year ²
Manganese, Total	1.0 mg/L	3.0 mg/L	Grab	One/year ²
Mercury, Total	0.002 mg/L	0.004 mg/L	Grab	One/year ²
Nickel, Total	0.99 mg/L	2.09 mg/L	Grab	One/year ²
Selenium, Total	0.017 mg/L	0.036 mg/L	Grab	One/year ²
Silver, Total	0.03 mg/L	0.05 mg/L	Grab	One/year ²
Zinc, Total	0.31 mg/L	0.66 mg/L	Grab	One/year ²

1. Million Gallons per Day (MGD)
2. When discharging.
3. Milligram per Liter (mg/L)
4. Not applicable to discharges resulting from a rainfall event greater than the 25-year, 24-hour rainfall event. Monitoring is required when discharges result from a rainfall event greater than the 25-year, 24-hour event; however, compliance with effluent limitations is not required.

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B. Best management practices (BMPs) and other non-numerical conditions/requirements

The following BMPs and other non-numerical conditions/requirements are included in the general permit:

1. Quarries authorized under this general permit must develop a pollution prevention plan (P3) that covers the entire quarry. The P3 is required to be submitted along with the Notice of Intent (NOI) for review and approval. Minimum contents of the P3 include establishing a pollution prevention team with associated training, a description of potential pollutant sources, a description of management controls to regulate pollutants in discharges (including good housekeeping measures, preventative measures, and spill prevention and response procedures), erosion and sediment controls (including structural controls, stabilization practices, permanent stormwater controls, other controls, and maintenance), and inspections and compliance evaluations.
2. Specifically, under the requirements of the P3, runoff control berms are required to be constructed to direct runoff from quarrying activities into sedimentation ponds prior to discharge.
3. Specifically, under the requirements of the P3, a sedimentation pond(s) is required to be constructed upgradient of each discharge point/outfall to allow for retention of the sediment at the quarry. A sedimentation pond(s) must be designed to retain the 25-year, 24-hour storm event.
4. Quarries authorized under this general permit must submit a restoration plan with the NOI. Minimum requirements of the restoration plan include identifying receiving waters at risk of unauthorized discharges, documenting background conditions of receiving waters, identifying potential environmental impacts to receiving waters from unauthorized discharges, identifying goals and objectives of potential restoration actions, identifying a range of restoration alternatives, monitoring of the effectiveness of restoration activities, identifying a process for public involvement in restoration activities, and providing cost estimates for restoration.
5. Quarries authorized under this general permit must submit proof of financial assurance for restoration with the NOI and maintain proof of financial assurance for restoration until the quarry operation is terminated and the site is restored according to the restoration plan.
6. Quarries authorized under this general permit must submit a final stabilization report with the Notice of Termination (NOT) when quarrying activities are completed.

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V. Changes from Existing General Permit

1. Rulemaking and Implementation

Modified the permit title from “John Graves Scenic Riverway General Permit TXG500000” to “Quarries in Certain Water Quality Protection Areas General Permit TXG500000.”

Added definition for “Coke Stevenson Scenic Riverway,” and modified the definition of “Water Quality Protection Areas” to encompass the Coke Stevenson Scenic Riverway; and revised language to refer to “Water Quality Protection Areas” instead of only the “John Graves Scenic Riverway” throughout the general permit to implement necessary changes related to proposed rule changes in 30 TAC Chapter 311, Subchapter H as a result of HB 1688 from the Texas 88th Legislative Session. The definition for “Water Quality Protection Areas” is based on the definition of the term in both TWC §26.551 and 30 TAC §311.71.

2. General Permit Cover Page

Revised the cover page of the general permit to:

- a. Update the term “significant aquatic life use” with “minimal aquatic life use” as it is no longer part of the Texas Surface Water Quality Standards (TSWQS), Table 3, which details aquatic life use subcategories, minimal aquatic life use has been historically known as no significant aquatic life use, and
- b. Replace the language “...designated in the...” with “...identified in the...” to clarify that the permit also encompasses water bodies that are not designated in Appendix A or Appendix D of the 2022 TSWQS, per 30 TAC §307.10.

3. Part I. Definitions

In addition to the definition changes based on the above rulemaking implementation, the Discharge definition was revised similarly as the cover page of the general permit.

The definition for “Hyperchlorination of Waterlines” was removed as the term is not used in the permit.

The definition for “Quarry” was modified by removing the description of “responsible party” language that is included as a separate definition in the permit.

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4. Part III. Permit Applicability and Coverage, Section A. Discharges Eligible for Authorization

Clarification was included in Part III. Permit Applicability and Coverage, Section A. Discharges Eligible for Authorization, that discharges from emergency fire-fighting activities are considered an allowable non-stormwater discharge for consistency with the TCEQ 2021 Multi-Sector General Permit (MSGP), 2023 Construction General Permit (CGP), and the 2022 U.S. Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) CGP.

5. Part III. Permit Applicability and Coverage, Section A-C

Modified permit applicability language in Part III to expand the permitting and financial assurance requirements for quarries to include the "Coke Stevenson Scenic Riverway" and to clarify that only quarries outside of the 100-year floodplain are eligible.

6. Part III. Permit Applicability and Coverage, Section B. Limitations on Permit Coverage

Permit language was modified in Part III.B.6. Aggregate Production Operations (APO) Registration Requirements to clarify that authorization under this general permit is separate from and does not fulfil the requirement for responsible parties who are primarily responsible for overall function and operation of a quarry, sand pit, gravel pit, or other aggregate production operation to register their APO with TCEQ's Occupational Licensing & Registration Division as per 30 TAC §342.25.

7. Part III. Permit Applicability and Coverage, Section D. Obtaining Coverage

Permit language was updated to expand on the minimum contents of the NOI to comply with federal electronic reporting requirements in Title 40 CFR Part 127.

8. Part III. Permit Applicability and Coverage, Section G. Permit Expiration

Updated the permit expiration language to reflect that this general permit and the authorization contained herein expire five years after the effective date or on the date of expiration of Texas Water Code Chapter 26, Subchapter M, whichever occurs first. Additionally included language explaining the need for operators to obtain alternative permit coverage once the Pilot Program expires mid-permit term on September 1, 2027.

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9. Part VI. Pollution Prevention Plan (P3), Section C. Measures and Controls

Simplified the permit language by combining the first two stabilization measures language in Part VI.C.4.(b)(iii) into one.

10. Part VI. Pollution Prevention Plan (P3), Section D. Inspections and Compliance Evaluations

Modified the inspection schedule in Part VI, Section D. Inspections and Compliance Evaluations, 1. Inspections of Erosion and Sediment Controls, by increasing it from once per week to once per day for discharges from dewatering of trenches and excavations, and pumping or dewatering of standing water to be consistent with TCEQ's 2023 CGP.

11. Part IX. Permit Requirements, Section A. Numeric Effluent Limitations

Updated the permit language to clarify that the eligible discharges discussed in Part IX.A. are also subject to the standard monitoring requirements described in Part X.G of this general permit.

Revised Part IX, Section A. Numeric Effluent Limitations to incorporate updated segment numbers and limits based on the Texas Toxicity Modeling Program (TEXTOX) calculations for Segment Nos. 1205, 1206, 1230, and 1415 shown in Appendices 1-4 of this fact sheet.

Table 3 of the general permit was revised to establish limits for and incorporate Segment No. 1230 within the John Graves Scenic Riverway based on the February 2, 2024 memoranda from TCEQ's Water Quality Assessment Section.

Updated the daily average and daily maximum limitations for Segment Nos. 1205 and 1206 (Table 3) for Selenium were lowered from 0.02 mg/L to 0.017 mg/L and 0.04 mg/L to 0.036 mg/L, respectively; and the daily maximum limitation for Cadmium was lowered from 0.15 mg/L to 0.14 mg/L, for consistency with the updated TEXTOX analysis conducted and available in the appendices of this fact sheet.

A new Table 4 was added to the general permit to establish effluent limitations for discharges to Segment No. 1415 in the Coke Stevenson Scenic Riverway.

The calculations of the water quality limits in this general permit are derived from the TCEQ's TEXTOX spreadsheets and the *Procedures to Implement the Texas Surface Water Quality Standards* (June 2010). For this general permit, the TCEQ used the TEXTOX Menu 1 spreadsheet based on the direction in the memorandum from the TCEQ Water Quality Assessments Section. The TCEQ's TEXTOX Menu 1 spreadsheet was last revised following the EPA approval of

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the 2014 Texas Surface Water Quality Standards (TSWQS). Water Quality Division staff reviews each TEXTOX menu spreadsheet for necessary updates following all subsequent EPA and TCEQ approved revisions to the TSWQS. The changes to the EPA approved 2018 TSWQS did not impact the numbers used in the TEXTOX Menu 1 spreadsheet so the 2014 TSWQS is the reference included.

12. Part IX, Permit Requirements, Section D. General Requirements

Updated language in the permit to distinguish which TCEQ Regional Office the permittee will report noncompliance that may endanger human health or safety, or the environment, respective to the site's location.

13. Minor Changes

Updating dates, grammar, capitalization, and modification of acronyms in the Table of Contents, definitions, and updating section headers to include the new general permit name that addresses the water quality protection areas.

VI. Addresses

Questions concerning this general permit should be directed to:

TCEQ Stormwater Team Leader
Wastewater Permitting Section (MC-148)
Water Quality Division
P.O. Box 13087 Austin, TX 78711-3087
(512) 239-4671
SWGP@tceq.texas.gov

Comments regarding the proposed general permit during the public comment period must be submitted either by mail to the following address, by facsimile (fax) followed by mail, or electronically as described below (please refer to the public notice for official instructions):

Electronically:
<https://www14.tceq.texas.gov/epic/eComment/>

By Mail:
TCEQ, Office of the Chief Clerk (OCC) (MC-105)
P.O. Box 13087
Austin, Texas 78711-3087

By fax: (512) 239-3311*

*Fax must be followed by hard copy in mail to OCC at address above within three days of fax date.

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Questions Regarding Public Comments Should Be Directed to OCC: (512) 239-3300

VII. Legal Basis

- TWC, §26.553, which requires quarries located in a water quality protection area and located a distance greater than one mile from any water body to obtain a general permit;
- TWC, §26.121, which makes it unlawful to discharge pollutants into or adjacent to water in the state except as authorized by a rule, permit, or order issued by the commission;
- TWC, §26.027, which authorizes the commission to issue permits and amendments to permits for the discharge of waste or pollutants into or adjacent to water in the state; and
- TWC, §26.040, which provides the commission with authority to authorize waste discharges by general permit.

VIII. Regulatory Background

The commission was given authority to issue general permits in place of authorizations by rule in TWC §26.040. 40 CFR §122.26(b)(14) and adopted by reference in 30 TAC §281.25, defines categories of industrial activities, including quarries that must obtain an NPDES authorization. Authorization to discharge stormwater associated with industrial activity was initially provided by EPA through issuance of the NPDES stormwater MSGP in 1995. TCEQ was provided authority to administer the NPDES program as the TPDES program on September 14, 1998, through a Memorandum of Agreement with EPA. TCEQ first reissued the MSGP as a TPDES general permit in 2001. Quarries are regulated under Sector J – Mineral Mining and Dressing. Senate Bill 1354 was passed during the 79th Legislative Session (2005) and TWC, Chapter 26 was amended to include Subchapter M (Water Quality Protection Areas) effective June 17, 2005. This section of the TWC requires quarries located greater than one mile from a water body to obtain general permit authorization and identifies specific requirements that are not included in TCEQ's MSGP. 30 TAC Chapter 311, Subchapter H was effective in 2006 and implements these revisions to the TWC.

House Bill (HB) 1688 was passed during the 88th Legislative Session (2023) and TWC, Chapter 26 Subchapter M (Water Quality Protection Areas) was amended and effective September 1, 2023. This section of the TWC expands the permitting and financial assurance requirements for quarries to the new Coke Stevenson Scenic Riverway water quality protection area, continues the requirements in the John Graves Scenic Riverway water quality protection area, and extends the expiration date of the pilot program to September 1, 2027. 30 TAC Chapter 311, Subchapter H became effective on July 18, 2024, and implements these revisions to the TWC from HB 1688.

The MSGP now specifically directs quarries located in the water quality protection area in the John Graves Scenic Riverway to obtain alternative permit authorization, either authorization under this general permit or an individual TPDES permit. The MSGP is

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being amended, anticipate issuance mid-2025, to include the same permit requirements for quarries located in the Coke Stevenson Scenic Riverway water quality protection area.

IX. Permit Coverage

The purpose of this general permit is to regulate the surface discharges of process wastewater, mine dewatering, stormwater associated with industrial activity, construction stormwater, and certain non-stormwater discharges into or adjacent to water in the state from quarries located greater than one mile from a water body within the water quality protection areas and outside of the 100-year floodplain.

Applicants seeking authorization to discharge under this general permit must submit a completed NOI. This general permit also requires the submittal of technical documents for review and approval by the executive director, including a P3, proof of financial assurance, and a restoration plan.

- A. An existing quarry operating under the current general permit must submit an NOI within 90 days of issuance of this general permit to continue quarry activities. A new quarry must submit an NOI and obtain authorization prior to commencing quarry activities, including construction activities at the quarry location.
- B. Submission of an NOI is an acknowledgment that the conditions of this general permit are applicable to the proposed discharge, and that the applicant agrees to comply with the conditions of this general permit. Following review of the NOI, the executive director shall confirm coverage by providing a notification and an authorization number to the applicant, or notify the applicant that coverage under this general permit is denied. Applicants seeking authorization to discharge to a municipal separate storm sewer system (MS4) must provide a copy of the NOI to the operator of the MS4 at the same time an NOI is submitted to TCEQ.
- C. Authorization under this general permit is not transferable. If the owner or operator of the regulated entity changes, the present owner and operator must submit an NOT and the new owner and operator must submit a NOI and any other required documentation. The NOT and NOI must be submitted not later than 10 days before the change. Permittees discharging to a MS4 must submit a copy of the NOT to the operator of the MS4 at the same time the NOT is submitted to TCEQ.
- D. If the owner or operator becomes aware that it failed to submit any relevant facts or submitted incorrect information in an NOI, the correct information must be provided to the executive director in a Notice of Change (NOC) within 14 days after discovery. If relevant information provided in the NOI changes (*e.g.*, telephone number or P.O. Box number) an NOC must be submitted within 14 days

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after the change. Permittees discharging to a MS4 must submit a copy of any NOC to the operator of the MS4 at the same time the NOC is submitted to TCEQ.

X. Technology-Based Requirements

The limitations and conditions of the general permit were developed to comply with the technology-based standards of the Clean Water Act (CWA). Except for the construction and development of effluent limit guidelines (ELGs) and new source performance standards (NSPS) in 40 CFR Part 450, to control the discharge of pollutants from construction sites, there are currently no nationally applicable ELGs in 40 CFR Chapter I, Subchapter N that identifies the best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT) standards. National effluent limitation guidelines at 40 CFR Part 436, Subpart B (Crushed Stone Subcategory), Subpart C (Construction Sand and Gravel Subcategory), and Subpart D (Industrial Sand Subcategory) were considered when establishing technology-based limitations in this general permit. Technology-based effluent limitations included in this general permit are based on best professional judgement and rules included at 30 TAC §311.79 and §319.22. The parameters selected for BCT/BAT limits are the primary pollutants of concern for discharges authorized in the general permit. The limitations for these parameters are: 45 mg/L total suspended solids and between 6.0 to 9.0 Standard Units pH as established at 30 TAC §311.79. Additionally, technology-based limitations are included for arsenic, barium, cadmium, chromium, lead, manganese, and nickel as established at 30 TAC §319.22. These effluent limitations are economically achievable based on inclusion in current state regulations.

The general permit also includes a requirement for construction operators to comply with the federal construction and development ELGs outlined in 40 CFR §§450.21, 450.23, and 450.24. TCEQ adopted these guidelines by reference in 30 TAC §305.541. The BPT effluent limitations (40 CFR §450.21) and BCT effluent limitations (40 CFR §450.23) are narrative in nature and are achieved through the implementation of BMPs.

XI. Water Quality-Based Requirements

The Texas Surface Water Quality Standards at 30 TAC Chapter 307 state that “surface waters will not be toxic to man, or to terrestrial or aquatic life.” The methodology outlined in the *Procedures to Implement the Texas Surface Water Quality Standards*, RG-194 (June 2010) is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater or stormwater 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.

A review by TCEQ's Water Quality Standards Implementation Team determined that the proposed technology-based and water quality-based effluent limits in the permit are protective of water quality. The evaluation of instream monitoring data for standards

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attainment shall include the effects of stormwater as described in 30 TAC §307.9. Implemented properly, the requirements and/or effluent limitations contained within the permit would provide substantial compliance with the Texas Surface Water Quality Standards as specified in 30 TAC §307.1-10. It has been preliminarily determined that where permit requirements, which may include best management practices, technology-based effluent limitations, and other permit requirements are properly implemented, no significant degradation is expected and existing uses of the receiving water bodies will be maintained and protected.

The daily average and daily maximum effluent limitations for aluminum, arsenic, cadmium, copper, lead, mercury, nickel, selenium, silver, and zinc were developed based on protection for acute freshwater aquatic life toxicity in situations where little or no dilution occurs. Chronic aquatic life and human health evaluation was not required based on the restriction of this general permit only applying to discharges greater than one mile from a water body, *e.g.*, discharges may only occur to intermittent streams and discharges would likely only occur during and following significant rainfall events. Water quality-based effluent limitations were evaluated for protection of receiving water bodies, Segment Nos. 1205, 1206, 1230 and 1415 of the Brazos River Basin and Colorado River Basin, the four classified segments that will potentially receive discharges authorized under this general permit.

Water quality-based effluent limitations for these ten metals are calculated in Appendices 1-4 of this fact sheet.

In order to achieve compliance with Texas Surface Water Quality Standards, permittees must meet the following narrative water quality requirements:

1. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
2. Concentration of taste and odor producing substances shall not interfere with the production of potable water by reasonable water treatment methods, impart unpalatable flavor to food fish including shellfish, result in offensive odors arising from the waters, or otherwise interfere with the reasonable use of water in the state.

The discharges authorized under this general permit are not typically continuous flows and the limitations for pollutants of concern in the permit should preclude instream toxicity.

There are no TMDLs in the permit watersheds. Lake Granbury (Segment No. 1205), Brazos River Below Possum Kingdom Lake (Segment No. 1206), and Lake Palo Pinto (Segment No. 1230) are not currently identified as impaired on the *Texas Integrated Report of Surface Water Quality* or the 2022 CWA Section 303 (d) List (approved by EPA on July 7, 2022). Llano River (Segment No. 1415) is not currently identified as impaired on the *Texas Integrated Report of Surface Water Quality* or the 2022 CWA Section 303 (d) List (approved by EPA on July 7, 2022).

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XII. Monitoring

Monitoring is required by 40 CFR §122.44(i) for each pollutant limited in a permit to ensure compliance with the permit limits. The general permit has the following monitoring criteria:

- A. Permittee Responsibilities - The permittee must ensure that properly trained and authorized personnel monitor and sample the discharge.
- B. Sampling Location - The sampling point must be downstream of any treatment unit or treatment process.
- C. Sample Collection - All samples must be collected according to the latest edition of *Standard Methods for the Examination of Water and Wastewater* (prepared and published jointly by the American Public Health Association, the American Water Works Association, and the Water Environment Federation), EPA's *Methods for Chemical Analysis of Water and Wastes* (1983), or EPA's *Biological Field and Laboratory Methods for Measuring the Quality of Surface Waters and Effluents* (1973).
- D. Sampling - Sample containers, holding times, preservation methods, and analytical methods must either follow the requirements in 40 CFR Part 136 or the *Standard Methods for the Examination of Water and Wastewater*.
- E. Analytical results for determining compliance with effluent limitations must be submitted online using the NetDMR reporting system available through the TCEQ website, unless the permittee requests and obtains an electronic reporting waiver. Permittees that are issued an electronic reporting waiver must submit analytical results to TCEQ's Enforcement Division (MC-224) on an approved discharge monitoring report (DMR) form (EPA No. 3320-1) that is signed and certified as required by Part X.G.10 of the general permit. The analytical results must be submitted to TCEQ on a monthly basis. The self-report form for any given month is due by the 20th day of the following month for each discharge that is described by this permit, whether or not a discharge is made for the month. If noncompliance with a discharge limitation occurs, the permittee must provide notification according to Part IX.D.7 of the general permit.
- F. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

XIII. Additional Permit Conditions

Additional permit conditions are included in this general permit for the purpose of water quality protection and compliance with enacted legislation and associated revisions to the TWC and TAC applicable to quarries in the water quality protection areas.

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A P3 is required to be developed and implemented by permittees authorized under this general permit. The P3 is structured similar to the stormwater pollution prevention plan (SWP3) required in the MSGP and the CGP, however the conditions in this general permit are tailored specifically to quarry operations in the water quality protection areas. Specific best management practices (BMPs) and structural controls are proposed as part of the P3 to address the prevention of unauthorized discharges and to retain sediment on site. Runoff control berms are required to be installed around the entire perimeter of the active quarry to direct stormwater runoff into sedimentation pond(s). The sedimentation pond(s) must be sized to capture the resulting runoff from the 25-year 24-hour storm event. These requirements should ensure that all runoff containing sediment and other pollutants will be controlled and treated to remove sediment prior to controlled releases into receiving waters and will assist in discharges complying with the total suspended solids and other effluent limitations in the general permit.

The general permit includes the requirement for permittees to develop a restoration plan that would be implemented should unauthorized discharges occur from the quarry that impact receiving waters. The restoration plan is required under TWC §26.553(f)(1) and 30 TAC § 311.76.

The general permit includes the requirement for permittees to maintain proof of financial assurance for restoration. This is required in TWC §26.553(f)(2) and 30 TAC §311.81(a) and Chapter 37, Subchapter W.

A final stabilization report is required to be submitted with the NOT for review and approval by the executive director. The purpose of the stabilization report is to ensure that the quarry location does not continue to be a source of pollution after quarrying activities have ceased and requires the permittee to maintain compliance with the conditions of the general permit until the plan is approved.

XIV. Procedures for Final Decision

The memorandum of agreement between the EPA and TCEQ (June 2020) provides that EPA has 90 days to comment, object, or make recommendations to the general permit before it is published in the *Texas Register*. According to 30 TAC Chapter 205, when the draft general permit is proposed, notice must be published, at a minimum, in a newspaper of general circulation. The executive director may also publish notice in one or more additional newspapers of statewide or regional circulation. Mailed notice must also be provided to the following:

1. The county judge of the county or counties in which the discharges under the general permit could be located;
2. if applicable, state and federal agencies for which notice is required in 40 CFR §124.10(c);
3. persons on a relevant mailing list kept under 30 TAC §39.407, relating to Mailing Lists; and
4. any other person the executive director or chief clerk may elect to include.

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After notice of the general permit is published in the *Texas Register* and the newspaper(s), the public will have 30 days to provide public comment on the proposed permit.

Any person, agency, or association may make a request for a public meeting on the proposed general permit to the executive director of TCEQ before the end of the public comment period. A public meeting will be granted when the executive director or commission determines, on the basis of requests that a significant degree of public interest in the draft general permit exists. A public meeting is intended for the taking of public comment, and is not a contested case proceeding under the Administrative Procedure Act. The executive director may call and conduct public meetings in response to public comment.

If the executive director calls a public meeting, the commission will give a minimum of 30 days public notice in the *Texas Register* of the date, time, and place of the meeting, as required by commission rules. The public notice for the draft general permit and for the public meeting(s) may be combined. The public comment is automatically extended until the conclusion of all public meetings on the draft general permit. The executive director shall prepare a response to all significant public comments on the draft general permit raised during the public comment period. The proposed general permit will then be filed with the commission to consider final authorization of the permit. The executive director's response to public comment will be made available to the public and filed with the chief clerk at least ten days before the commission acts on the proposed general permit.

Once the draft permit and response to comment are completed, they are sent to TCEQ's Office of the Chief Clerk. The draft permit is set on a Commission's agenda for adoption. For additional information about this general permit, contact the Stormwater Team at (512) 239-4671.

XV. Administrative Record

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. 40 CFR Citations - Parts 122, 124, 136, 436, and 450.

B. TCEQ Rules:

- 30 TAC Chapter 311, Subchapter H - Regulation of Quarries in the John Graves Scenic Riverway
- 30 TAC Chapter 37, Subchapter W - Financial Assurance for Quarries
- 30 TAC Chapters 39, 60, 205, 281, 305, 307, 309, 311, 319, 321, 331, and 335

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C. Letters/Memoranda/Records of Communication:

- Memo from TCEQ's Water Quality Standards Implementation Team dated January 25, 2024.
- Memo from TCEQ's Total Maximum Daily Load Team dated February 5, 2024.
- Memo, Critical Conditions, from TCEQ's Water Quality Assessment Team dated February 2, 2024.
- Memo, Modeling, from TCEQ's Water Quality Assessment Team dated March 15, 2024.

D. Permits

- TPDES General Permit TXR050000 – Multi-Sector General Permit, effective August 14, 2021.
- TPDES General Permit TXR150000 – Construction General Permit, effective March 5, 2023.
- TPDES General Permit TXR040000 – Phase II Municipal Separate Storm Sewer System General Permit, effective December 13, 2019.

E. Miscellaneous

- Texas Surface Water Quality Standards, 30 TAC §§307.1 – 307.10.
- Texas Water Code Chapter 26, Subchapter M.
- *Procedures to Implement the Texas Surface Water Quality Standards*, TCEQ, RG-194, June 2010.

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Appendix 1

TEXTTOX MENU #1 Intermittent Stream

The water quality-based effluent limitations developed below are calculated using: Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life, *Procedures to Implement the Texas Surface Water Quality Standards*, Appendix D, Texas Commission on Environmental Quality, June 2010.

PERMIT INFORMATION

TPDES Permit No: TXG500000
 Permittee Name: NA
 Outfall No: NA
 Prepared By: Macayla Coleman
 Date: February 2, 2024

Discharge Information

Intermittent Receiving Water Body: Lake Granbury
 Segment Numbers: 1205 (using the lowest TSS, pH, Hardness, and Chloride values)

Parameter	Value
TSS (mg/L)	4
pH (Standard Units)	7.9
Hardness (mg/L as CaCO ₃)	230
Chloride (mg/L)	893
Effluent Flow for Aquatic Life (MGD)	NA
Critical Low Flow [7Q2] (cfs):	0
Percent Effluent for Acute Aquatic Life	100

Table 3. CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE)

<i>Stream/ River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effect Ratio (WER)</i>	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	173978.75	0.59		1	Assumed
Cadmium	6.60	-1.13	831136.22	0.23		1	Assumed
Chromium (Total)	6.52	-0.93	912187.69	0.22		1	Assumed
Chromium (+3)	6.52	-0.93	912187.69	0.22		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	375383.87	0.40		1	Assumed
Lead	6.45	-0.80	929719.64	0.21		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	222241.83	0.53		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	575278.59	0.30		1	Assumed
Zinc	6.10	-0.70	477043.53	0.34		1	Assumed

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Table 4. AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS					
<i>Parameter</i>	<i>FW Acute Criterion (ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>	<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
Aldrin	3	3	1.72	2.52	5.34
Aluminum	991	991	568	834	1765
Arsenic	340	577	330	100	300
Cadmium	19.27503	83.4	47.8	50	140
Carbaryl	2	2	1.15	1.68	3.56
Chlordane	2.4	2.4	1.38	2.02	4.27
Chlorpyrifos	0.083	0.083	0.0476	0.0699	0.147
Chromium (+3)	1127.067	5239	3002	4413	9336.86
Chromium (+6)	15.7	15.7	9.00	13.2	27.9
Copper	31.12889	77.9	44.6	40	90
Cyanide	45.8	45.8	26.2	38.5	81.6
4,4'-DDT	1.1	1.1	0.630	0.926	1.96
Demeton	N/A	N/A	N/A	N/A	N/A
Diazinon	0.17	0.17	0.0974	0.143	0.302
Dicofol	59.3	59.3	34.0	49.9	105
Dieldrin	0.24	0.24	0.138	0.202	0.427
Diuron	210	210	120	176	374
Endosulfan I (alpha)	0.22	0.22	0.126	0.185	0.392
Endosulfan II (beta)	0.22	0.22	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.22	0.126	0.185	0.392
Endrin	0.086	0.086	0.0493	0.0724	0.153
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.52	0.298	0.438	0.926
Hexachlorocyclohexane (Lindane)	1.126	1.13	0.645	0.948	2.00
Lead	157.8515	745	427	350	750
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.4	1.38	2	4
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	947.2974	1789	1025	1000	3000
Nonylphenol	28	28	16.0	23.5	49.8
Parathion (ethyl)	0.065	0.065	0.0372	0.055	0.115
Pentachlorophenol	21.553	21.6	12.3	18.1	38.4
Phenanthrene	30	30	17.2	25.2	53.4
Polychlorinated Biphenyls (PCBs)	2	2	1.15	1.68	3.56
Selenium	20	20	11.5	16.8	35.6
Silver (free ion)	0.8	29.4	16.8	24.7	52.4
Toxaphene	0.78	0.78	0.447	0.657	1.38
Tributyltin (TBT)	0.13	0.13	0.0745	0.109	0.231
2,4,5 Trichlorophenol	136	136	77.9	114	242
Zinc	237.327	690	395	310	660

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Appendix 2

TEXTTOX MENU #1 Intermittent Stream

The water quality-based effluent limitations developed below are calculated using: Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life, *Procedures to Implement the Texas Surface Water Quality Standards*, Appendix D, Texas Commission on Environmental Quality, June 2010.

PERMIT INFORMATION

TPDES Permit No: TXG500000
 Permittee Name: NA
 Outfall No: NA
 Prepared By: Macayla Coleman
 Date: February 2, 2024

Discharge Information

Intermittent Receiving Water Body: Brazos River below Possum Kingdom Lake
 Segment Numbers: 1206 (using the lowest TSS, pH, Hardness, and Chloride values)

Parameter	Value
TSS (mg/L)	7
pH (Standard Units)	7.8
Hardness (mg/L as CaCO ₃)	230
Chloride (mg/L)	692
Effluent Flow for Aquatic Life (MGD)	NA
Critical Low Flow [7Q2] (cfs):	0
Percent Effluent for Acute Aquatic Life	100

Table 5. CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE)

<i>Stream/ River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effect Ratio (WER)</i>	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	115632.1	0.55		1	Assumed
Cadmium	6.60	-1.13	441610.3	0.24		1	Assumed
Chromium (Total)	6.52	-0.93	542074.3	0.21		1	Assumed
Chromium (+3)	6.52	-0.93	542074.3	0.21		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	248100.4	0.37		1	Assumed
Lead	6.45	-0.80	594184.8	0.19		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	161545.2	0.47		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	323257.8	0.31		1	Assumed
Zinc	6.10	-0.70	322426.98	0.31		1	Assumed

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Table 6. AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>FW Acute Criterion (ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>	<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
Aldrin	3	3	1.72	2.52	5.34
Aluminum	991	991	568	834	1765
Arsenic	340	615	353	100	300
Cadmium	19.27503	78.9	45.2	50	140
Carbaryl	2	2	1.15	1.68	3.56
Chlordane	2.4	2.4	1.38	2.02	4.27
Chlorpyrifos	0.083	0.0830	0.0476	0.0699	0.147
Chromium (+3)	1127.067	5404	3096	4551	9629
Chromium (+6)	15.7	15.7	9.00	13.2	27.9
Copper	31.12889	85.2	48.8	40	90
Cyanide	45.8	45.8	26.2	38.5	81.6
4,4'-DDT	1.1	1.10	0.630	0.926	1.96
Demeton	N/A	N/A	N/A	N/A	N/A
Diazinon	0.17	0.170	0.0974	0.143	0.302
Dicofol	59.3	59.3	34.0	49.9	105
Dieldrin	0.24	0.240	0.138	0.202	0.427
Diuron	210	210	120	176	374
Endosulfan I (alpha)	0.22	0.220	0.126	0.185	0.392
Endosulfan II (beta)	0.22	0.220	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.220	0.126	0.185	0.392
Endrin	0.086	0.0860	0.0493	0.0724	0.153
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.520	0.298	0.438	0.926
Hexachlorocyclohexane (Lindane)	1.126	1.13	0.645	0.948	2
Lead	157.8515	814	467	350	750
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.40	1.38	2	4
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	947.2974	2019	1157	1000	3000
Nonylphenol	28	28	16	23.5	49.8
Parathion (ethyl)	0.065	0.0650	0.0372	0.0547	0.115
Pentachlorophenol	19.49192	19.5	11.2	16.4	34.7
Phenanthrene	30	30	17.2	25.2	53.4
Polychlorinated Biphenyls (PCBs)	2	2	1.15	1.68	3.56
Selenium	20	20	11.5	16.8	35.6
Silver (free ion)	0.8	29.1	16.7	24.4	51.7
Toxaphene	0.78	0.78	0.447	0.657	1.38
Tributyltin (TBT)	0.13	0.13	0.0745	0.109	0.231
2,4,5 Trichlorophenol	136	136	77.9	114	242
Zinc	237.327	773	443	310	660

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Appendix 3

TEXTTOX MENU #1 Intermittent Stream

The water quality-based effluent limitations developed below are calculated using: Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life, *Procedures to Implement the Texas Surface Water Quality Standards*, Appendix D, Texas Commission on Environmental Quality, June 2010.

PERMIT INFORMATION

TPDES Permit No: TXG500000
 Permittee Name: NA
 Outfall No: NA
 Prepared By: Macayla Coleman
 Date: February 2, 2024

Discharge Information

Intermittent Receiving Water Body: Lake Palo Pinto
 Segment Numbers: 1230 (using the lowest TSS, pH, Hardness, and Chloride values)

Parameter	Value
TSS (mg/L)	5
pH (Standard Units)	8
Hardness (mg/L as CaCO ₃)	230
Chloride (mg/L)	39
Effluent Flow for Aquatic Life (MGD)	NA
Critical Low Flow [7Q2] (cfs):	0
Percent Effluent for Acute Aquatic Life	100

Table 7. CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE)

<i>Stream/ River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effect Ratio (WER)</i>	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	147826.36	0.58		1	Assumed
Cadmium	6.60	-1.13	645897.93	0.24		1	Assumed
Chromium (Total)	6.52	-0.93	741238.38	0.21		1	Assumed
Chromium (+3)	6.52	-0.93	741238.38	0.21		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	318245.45	0.39		1	Assumed
Lead	6.45	-0.80	777721.31	0.21		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	195698.32	0.51		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	457152.29	0.30		1	Assumed
Zinc	6.10	-0.70	408057.15	0.33		1	Assumed

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Table 8. AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>FW Acute Criterion (ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>	<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
Aldrin	3	3	1.72	2.52	5.34
Aluminum	991	991	568	834	1765
Arsenic	340	591	339	100	300
Cadmium	19.27503	81.5	46.7	50	140
Carbaryl	2	2	1.15	1.68	3.56
Chlordane	2.4	2.4	1.38	2.02	4.27
Chlorpyrifos	0.083	0.0830	0.0476	0.0699	0.147
Chromium (+3)	1127.067	5304	3039	4467	9452
Chromium (+6)	15.7	15.7	9	13.2	27.9
Copper	31.12889	80.7	46.2	40	90
Cyanide	45.8	45.8	26.2	38.5	81.6
4,4'-DDT	1.1	1.1	0.63	0.926	1.96
Demeton	N/A	N/A	N/A	N/A	N/A
Diazinon	0.17	0.17	0.0974	0.143	0.302
Dicofol	59.3	59.3	34	49.9	105
Dieldrin	0.24	0.240	0.138	0.202	0.427
Diuron	210	210	120	176	374
Endosulfan I (alpha)	0.22	0.22	0.126	0.185	0.392
Endosulfan II (beta)	0.22	0.22	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.22	0.126	0.185	0.392
Endrin	0.086	0.086	0.0493	0.0724	0.153
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.520	0.298	0.438	0.926
Hexachlorocyclohexane (Lindane)	1.126	1.13	0.645	0.948	2
Lead	157.8515	772	442	350	750
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.4	1.38	2	4
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	947.2974	1874	1074	1000	3000
Nonylphenol	28	28	16	23.5	49.8
Parathion (ethyl)	0.065	0.065	0.0372	0.0547	0.115
Pentachlorophenol	23.8313	23.8	13.7	20	42.4
Phenanthrene	30	30	17.2	25.2	53.4
Polychlorinated Biphenyls (PCBs)	2	2	1.15	1.68	3.56
Selenium	20	20	11.5	16.8	35.6
Silver (free ion)	0.8	9.24	5.29	7.78	16.4
Toxaphene	0.78	0.78	0.447	0.657	1.38
Tributyltin (TBT)	0.13	0.13	0.0745	0.109	0.231
2,4,5 Trichlorophenol	136	136	77.9	114	242
Zinc	237.327	722	413	310	660

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Appendix 4

TEXTTOX MENU #1 Intermittent Stream

The water quality-based effluent limitations developed below are calculated using: Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life, *Procedures to Implement the Texas Surface Water Quality Standards*, Appendix D, Texas Commission on Environmental Quality, June 2010.

PERMIT INFORMATION

TPDES Permit No: TXG500000
 Permittee Name: NA
 Outfall No: NA
 Prepared By: Macayla Coleman
 Date: February 2, 2024

Discharge Information

Intermittent Receiving Water Body: Llano River
 Segment Numbers: 1415 (using the lowest TSS, pH, Hardness, and Chloride values)

Parameter	Value
TSS (mg/L)	2
pH (Standard Units)	7.9
Hardness (mg/L as CaCO ₃)	163
Chloride (mg/L)	21
Effluent Flow for Aquatic Life (MGD)	NA
Critical Low Flow [7Q2] (cfs):	0
Percent Effluent for Acute Aquatic Life	100

Table 9. CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE)

<i>Stream/ River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effect Ratio (WER)</i>	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	288567.96	0.63		1	Assumed
Cadmium	6.60	-1.13	1819014.27	0.22		1	Assumed
Chromium (Total)	6.52	-0.93	1737969.31	0.22		1	Assumed
Chromium (+3)	6.52	-0.93	1737969.31	0.22		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	626957.07	0.44		1	Assumed
Lead	6.45	-0.80	1618735.92	0.24		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	329923.24	0.60		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	1174732.83	0.30		1	Assumed
Zinc	6.10	-0.70	774959.49	0.39		1	Assumed

Fact Sheet and Executive Director's Preliminary Decision
TPDES General Permit No. TXG500000

Table 10. AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>FW Acute Criterion (ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>	<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
Aldrin	3	3	1.72	2.52	5.34
Aluminum	991	991	568	834	1765
Arsenic	340	536	307	100	300
Cadmium	13.7975	64	36.7	50	114
Carbaryl	2	2	1.15	1.68	3.56
Chlordane	2.4	2.4	1.38	2.02	4.27
Chlorpyrifos	0.083	0.0830	0.0476	0.0699	0.147
Chromium (+3)	850.112	3805	2180	3205	6780
Chromium (+6)	15.7	15.7	9	13.2	27.9
Copper	22.5044	50.7	29.1	40	90
Cyanide	45.8	45.8	26.2	38.5	81.6
4,4'-DDT	1.1	1.1	0.63	0.926	1.96
Demeton	N/A	N/A	N/A	N/A	N/A
Diazinon	0.17	0.17	0.0974	0.143	0.302
Dicofol	59.3	59.3	34	49.9	105
Dieldrin	0.24	0.240	0.138	0.202	0.427
Diuron	210	210	120	176	374
Endosulfan I (alpha)	0.22	0.22	0.126	0.185	0.392
Endosulfan II (beta)	0.22	0.22	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.22	0.126	0.185	0.392
Endrin	0.086	0.086	0.0493	0.0724	0.153
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.52	0.298	0.438	0.926
Hexachlorocyclohexane (Lindane)	1.126	1.13	0.645	0.948	2.00
Lead	109.462	464	266	350	750
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.4	1.38	2	4
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	707.906	1175	673	989	2093
Nonylphenol	28	28	16	23.5	49.8
Parathion (ethyl)	0.065	0.065	0.0372	0.0547	0.115
Pentachlorophenol	21.5527	21.6	12.3	18.1	38.4
Phenanthrene	30	30	17.2	25.2	53.4
Polychlorinated Biphenyls (PCBs)	2	2	1.15	1.68	3.56
Selenium	20	20	11.5	16.8	35.6
Silver (free ion)	0.8	5.96	3.42	5.02	10.6
Toxaphene	0.78	0.78	0.447	0.657	1.38
Tributyltin (TBT)	0.13	0.13	0.0745	0.109	0.231
2,4,5 Trichlorophenol	136	136	77.9	114	242
Zinc	177.2727	452	259	310	660