September 2024

Form TCEQ-10411\_10055-inst

INSTRUCTIONS FOR COMPLETING THE INDUSTRIAL WASTEWATER PERMIT APPLICATION

**Texas Commission on Environmental Quality**

Table of Contents

[INTRODUCTION 6](#_Toc155273557)

[PURPOSE 6](#_Toc155273558)

[OBJECTIVES 6](#_Toc155273559)

[STATUTORY CITATIONS 6](#_Toc155273560)

[PRIMARY REGULATORY CITATIONS 6](#_Toc155273561)

[ABBREVIATIONS AND ACRONYMS 7](#_Toc155273562)

[GENERAL DEFINITIONS 9](#_Toc155273563)

[DEFINITIONS RELATING TO PRETREATMENT DEFINED IN *40 CFR PART 403* 17](#_Toc155273564)

[DEFINITIONS RELATING TO SEWAGE SLUDGE DEFINED IN 30 TAC § 312.8 18](#_Toc155273565)

[WHO MUST APPLY FOR AN INDUSTRIAL WASTEWATER PERMIT? 20](#_Toc155273566)

[WHEN MUST THE APPLICATION BE SUBMITTED? 20](#_Toc155273567)

[WHAT PERMIT APPLICATION FORMS ARE REQUIRED? 20](#_Toc155273568)

[HOW IS THE APPLICATION COMPLETED? 21](#_Toc155273569)

[HOW IS THE APPLICATION SUBMITTED? 21](#_Toc155273570)

[WHAT FEES ARE REQUIRED? 22](#_Toc155273571)

[HOW DO I CANCEL OR TRANSFER A PERMIT? 24](#_Toc155273572)

[HOW DO I OBTAIN MORE INFORMATION? 24](#_Toc155273573)

[ADMINISTRATIVE REPORT 1.0 26](#_Toc155273574)

[Item 1. Application INFORMATION And Fees 26](#_Toc155273577)

[Item 2. Applicant Information 26](#_Toc155273578)

[Item 3. Co-Applicant Information 27](#_Toc155273579)

[Item 4. Core Data Form 27](#_Toc155273580)

[Item 5. Application Contact Information 27](#_Toc155273581)

[Item 6. Permit Contact Information 28](#_Toc155273582)

[Item 7. Billing Contact Information 28](#_Toc155273583)

[Item 8. Dmr/Mer Contact Information 28](#_Toc155273584)

[Item 9. Notice Information 28](#_Toc155273585)

[Item 10. Regulated Entity And Permitted Site Information 29](#_Toc155273586)

[Item 11. Tpdes Discharge/Tlap Disposal Information 31](#_Toc155273587)

[Item 12. Miscellaneous Information 33](#_Toc155273588)

[Item 13. Signature Page 33](#_Toc155273589)

[ADMINISTRATIVE REPORT 1.1 35](#_Toc155273590)

[Item 1. Affected Landowner Information 35](#_Toc155273591)

[Item 2. Original Photographs 37](#_Toc155273592)

[ADMINISTRATIVE REPORT ATTACHMENTS 38](#_Toc155273593)

[SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF) 38](#_Toc155273594)

[WATER QUALITY PERMIT PAYMENT SUBMITTAL FORM 38](#_Toc155273595)

[ATTACHMENT 1 38](#_Toc155273596)

[CHECKLIST OF COMMON DEFICIENCIES 38](#_Toc155273597)

[TECHNICAL REPORT 1.0 39](#_Toc155273598)

[Item 1. Facility/Site Information 39](#_Toc155273600)

[Item 2. Treatment System 40](#_Toc155273601)

[Item 3. Impoundments 40](#_Toc155273602)

[Item 4. Outfall/Disposal Method Information 42](#_Toc155273603)

[Item 5. Blowdown And Once-Through Cooling Water Discharges 43](#_Toc155273604)

[Item 6. Stormwater Management 44](#_Toc155273605)

[Item 7. Domestic Sewage, Sewage Sludge, And Septage Management And Disposal 44](#_Toc155273606)

[Item 8. Improvements Or Compliance/Enforcement Requirements 45](#_Toc155273607)

[Item 9. Toxicity Testing 45](#_Toc155273608)

[Item 10. Off-Site/Third Party Wastes 45](#_Toc155273609)

[Item 11. Radioactive Materials 46](#_Toc155273610)

[Item 12. Cooling Water 46](#_Toc155273611)

[Item 13. Permit Change Requests 48](#_Toc155273612)

[Item 14. Laboratory Accreditation 49](#_Toc155273613)

[WORKSHEET 1.0 EPA CATEGORICAL EFFLUENT GUIDELINES 53](#_Toc155273631)

[Item 1. Categorical Industries 53](#_Toc155273632)

[Item 2. Production/Process Data 54](#_Toc155273633)

[Item 3. Process/Non-Process Wastewater Flows 54](#_Toc155273634)

[Item 4. New Source Determination 54](#_Toc155273635)

[WORKSHEET 2.0 POLLUTANT ANALYSES REQUIREMENTS 55](#_Toc155273636)

[Item 1. General Testing Requirements 55](#_Toc155273637)

[Item 2. Specific Testing Requirements 56](#_Toc155273638)

[WORKSHEET 3.0 LAND APPLICATION OF EFFLUENT 69](#_Toc155273639)

[Item 1. Type Of Disposal System 69](#_Toc155273640)

[Item 2. Land Application Area 69](#_Toc155273641)

[Item 3. Annual Cropping Plan 69](#_Toc155273642)

[Item 4. Well And Map Information 70](#_Toc155273643)

[Item 5. Soil Map And Soil Information 71](#_Toc155273644)

[Item 6. Effluent Monitoring Data 72](#_Toc155273645)

[Item 7. Pollutant Analysis 72](#_Toc155273646)

[WORKSHEET 3.1 SURFACE LAND APPLICATION AND EVAPORATION 73](#_Toc155273647)

[Item 1. Edwards Aquifer 73](#_Toc155273648)

[Item 2. Surface Spray/Irrigation 73](#_Toc155273649)

[Item 3. Evaporation Ponds 74](#_Toc155273650)

[Item 4. Evapotranspiration Beds 74](#_Toc155273651)

[Item 5. Overland Flow 74](#_Toc155273652)

[WORKSHEET 3.2 SUBSURFACE IRRIGATION (NON-DRIP) 75](#_Toc155273653)

[Item 1. Edwards Aquifer 75](#_Toc155273654)

[Item 2. Subsurface Application 75](#_Toc155273655)

[WORKSHEET 3.3 SUBSURFACE AREA DRIP DISPERSAL SYSTEMS 76](#_Toc155273656)

[Item 1. Edwards Aquifer 76](#_Toc155273657)

[Item 2. Administrative Information 76](#_Toc155273658)

[Item 3. Sadds 77](#_Toc155273659)

[Item 4. Required Plans 78](#_Toc155273660)

[Item 5. Flood And Run-On Protection 79](#_Toc155273661)

[Item 6. Surface Waters In The State 79](#_Toc155273662)

[WORKSHEET 4.0 RECEIVING WATERS 80](#_Toc155273663)

[Item 1. Domestic Drinking Water Supply 80](#_Toc155273664)

[Item 2. Discharge Into Tidally Influenced Waters 80](#_Toc155273665)

[Item 3. Classified Segment 80](#_Toc155273666)

[Item 4. Description Of Immediate Receiving Waters 80](#_Toc155273667)

[Item 5. General Characteristics Of Water Body 81](#_Toc155273668)

[WORKSHEET 4.1 WATERBODY PHYSICAL CHARACTERISTICS 82](#_Toc155273669)

[Item 1. Data Collection 82](#_Toc155273670)

[Item 2. Summarize Measurements 83](#_Toc155273671)

[WORKSHEET 5.0 SEWAGE SLUDGE MANAGEMENT AND DISPOSAL 84](#_Toc155273672)

[Item 1. Sewage Sludge Solids Management Plan 84](#_Toc155273673)

[Item 2. Sewage Sludge Management And Disposal 84](#_Toc155273674)

[Item 3. Authorization For Sewage Sludge Disposal 85](#_Toc155273675)

[WORKSHEET 6.0 INDUSTRIAL WASTE CONTRIBUTION 86](#_Toc155273676)

[Item 1. All Potws 86](#_Toc155273677)

[Item 2. Potws With Approved Programs Or Those Required To Develop A Pretreatment Program 86](#_Toc155273678)

[Item 3. Significant Industrial User And Categorical Industrial User Information 87](#_Toc155273679)

[WORKSHEET 7.0 STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES 89](#_Toc155273680)

[Item 1. Applicability 89](#_Toc155273681)

[Item 2. Stormwater Outfall Coverage 89](#_Toc155273682)

[Item 3. Site Map 90](#_Toc155273683)

[Item 4. Facility/Site Information 90](#_Toc155273684)

[Item 5. Pollutant Analysis 91](#_Toc155273685)

[Item 6. Storm Event Data 93](#_Toc155273686)

[WORKSHEET 8.0 AQUACULTURE 94](#_Toc155273687)

[Item 1. Facility/Site Information 94](#_Toc155273688)

[Item 2. Species Identification 95](#_Toc155273689)

[Item 3. Stock Management Plan 95](#_Toc155273690)

[Item 4. Water Treatment And Discharge Description 96](#_Toc155273691)

[Item 5. Solid Waste Management 96](#_Toc155273692)

[Item 6. Site Assessment Report 96](#_Toc155273693)

[RESOURCES 98](#_Toc155273694)

[WORKSHEET 9.0 CLASS V INJECTION WELL 99](#_Toc155273695)

[WORKSHEET 10.0 QUARRIES IN THE JOHN GRAVES SCENIC RIVERWAY 100](#_Toc155273696)

[Item 1. Exclusions: 100](#_Toc155273697)

[Item 2. Location Of The Quarry 101](#_Toc155273698)

[Item 3. Additional Requirements 101](#_Toc155273699)

[WORKSHEET 11.0 COOLING WATER SYSTEM INFORMATION 104](#_Toc155273700)

[Item 1. Cooling Water System Data 104](#_Toc155273701)

[Item 2. Cooling Water Intake Structure(S) Data 105](#_Toc155273702)

[Item 3. Source Water Physical Data 105](#_Toc155273703)

[Item 4. Operational Status 106](#_Toc155273704)

[WORKSHEET 11.1 IMPINGEMENT MORTALITY 107](#_Toc155273705)

[Item 1. Impingement Compliance Technology Option Selection 107](#_Toc155273706)

[Item 2. Impingement Compliance Technology Information 107](#_Toc155273707)

[WORKSHEET 11.2 SOURCE WATER BIOLOGICAL DATA 109](#_Toc155273708)

[Item 1. Species Management 109](#_Toc155273709)

[Item 2. Source Water Biological Data 109](#_Toc155273710)

[WORKSHEET 11.3 ENTRAINMENT MORTALITY 111](#_Toc155273711)

[Item 1. Applicability 111](#_Toc155273712)

[Item 2. Existing Entrainment Performance Studies 111](#_Toc155273713)

[Item 3. Facility Entrainment Performance Studies 111](#_Toc155273714)

[WORKSHEET 12.0 OIL AND GAS EXPLORATION, DEVELOPMENT, AND PRODUCTION 112](#_Toc155273715)

[Item 1. Operational Information 112](#_Toc155273716)

[Item 2. Production/Process Data 112](#_Toc155273717)

[Item 3. Pollutant Analysis 113](#_Toc155273718)

[APPENDIX 1 – COMMON PROCESSES AND PROCESS MODIFICATIONS 114](#_Toc155273719)

[APPENDIX 2 – COMMON TREATMENT UNITS 116](#_Toc155273720)

[LIQUID TREATMENT PROCESSES 116](#_Toc155273721)

[SLUDGE TREATMENT PROCESSES 117](#_Toc155273722)

[SLUDGE DISPOSAL METHOD 117](#_Toc155273723)

[MISCELLANEOUS 117](#_Toc155273724)

[APPENDIX 3 – EXAMPLE – FLOW DIAGRAM 118](#_Toc155273725)

[APPENDIX 4 – EXAMPLE – SLUDGE MANAGEMENT CALCULATIONS 119](#_Toc155273726)

[APPENDIX 5 – EXAMPLES – ADJACENT AND DOWNSTREAM LANDOWNERS 120](#_Toc155273727)

[APPENDIX 6 – EXAMPLE – WATER BALANCE AND STORAGE CALCULATIONS 122](#_Toc155273728)

[APPENDIX 7 – EXAMPLE – STORAGE CALCULATION FOR EVAPORATION PONDS WITHOUT IRRIGATION 128](#_Toc155273733)

INTRODUCTION

# PURPOSE

The industrial wastewater permit application is used to apply for a permit for an industrial facility to discharge or dispose of wastewater.

This application form is for an industrial wastewater permit only. This facility may need additional authorizations from the [TCEQ Waste Permits Division](https://www.tceq.texas.gov/permitting/waste_permits)[[1]](#footnote-2) or the [TCEQ Air Permits Division](https://www.tceq.texas.gov/permitting/air/air_permits.html)[[2]](#footnote-3).

# OBJECTIVES

These instructions will answer the following questions.

Who must apply for an industrial wastewater permit?

When must the application be submitted?

What fees must be paid?

What permit application forms are required?

How is the application completed?

How is the application submitted?

How can more information be obtained?

# STATUTORY CITATIONS

Texas Water Code (TWC) Chapters 5 and 26

Title 40 of the Code of Federal Regulations (CFR)

# PRIMARY REGULATORY CITATIONS

Rules of the Texas Commission on Environmental Quality (TCEQ) are found in Title 30 of the Texas Administrative Code (TAC). The TAC can be viewed through the [Texas Secretary of State website](http://www.sos.texas.gov/tac/)[[3]](#footnote-4) and the [TCEQ website](https://www.tceq.texas.gov/rules/current.html)[[4]](#footnote-5).

In addition, printed copies of TCEQ rules are available through TCEQ Publications. The mailing address is TCEQ Publications, MC-118, P.O. Box 13087, Austin, Texas 78711-3087. The telephone number is (512) 239-0028. The fax number is (512) 239-4488. The initial copy is free.

Chapter 21 - Water Quality Fees

Chapter 25 – Environmental Testing Laboratory Accreditation and Certification

Chapter 30 - Occupational Licenses and Registrations

Chapter 39 - Public Notice

Chapter 40 - Alternative Dispute Resolution Procedure

Chapter 50 - Action on Applications and Other Authorizations

Chapter 55 - Requests for Reconsideration and Contested Hearings; Public Comment

Chapter 60 - Compliance History

Chapter 80 - Contested Case Hearings

Chapter 213 - Edwards Aquifer

Chapter 217 - Design Criteria for Domestic Wastewater Systems

Chapter 222 - Subsurface Area Drip Dispersal Systems

Chapter 281 - Applications Processing

Chapter 305 - Consolidated Permits

Chapter 307 - Texas Surface Water Quality Standards

Chapter 308 - Criteria and Standards for the National Pollutant Discharge Elimination System

Chapter 309 - Domestic Wastewater Effluent Limitation and Plant Siting

Chapter 311 - Watershed Protection

Chapter 312 - Sludge Use, Disposal, and Transportation

Chapter 314 - Toxic Pollutant Effluent Standards

Chapter 315 - Pretreatment Regulations for Existing and New Sources of Pollution

Chapter 319 - General Regulations Incorporated into Permits

Chapter 332 - Composting

Chapter 351 - Regionalization

# ABBREVIATIONS AND ACRONYMS

AIF - actual intake flow

BOD5 - biochemical oxygen demand, 5-day

BMPs – Best Management Practices

BPJ – best professional judgement

CASRN - Chemical Abstract Service Registration Number

CBOD5 - carbonaceous biochemical oxygen demand, 5-day

CCRS - closed-cycle recirculating system

CDD - chlorinated dibenzo-p-dioxin

CDF - chlorinated dibenzofuran

CFR - Code of Federal Regulations

CFU - colony forming units

CIU - Categorical Industrial User

CN – Customer Reference Number

CWA - Clean Water Act

CWS - cooling water system

CWIS - cooling water intake structure

d.b.a. - doing business as

DIF - design intake flow

DMR - discharge monitoring report

DO - dissolved oxygen

ED - Executive Director

EPA - Environmental Protection Agency

GC/MS - gas chromatography/mass spectrometry

GLO - Texas General Land Office

gpd - gallons per day

gpm - gallons per minute

IU - Industrial User

LCU - low capacity utilization

MAL - minimum analytical level

MER - monthly effluent report

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

MGD - million gallons per day

MLSS - mixed liquor suspended solids

mmhos/cm - millimhos per centimeter

MPN - most probable number

MSGP - Multi-Sector General Permit

MW - megawatt

NAPD - Notice of Application and Preliminary Decision

NMFE – National Marine Fisheries Service

NORI - Notice of Receipt and Intent to Obtain a Water Quality Permit

NORM - naturally occurring radioactive material

NPDES - National Pollutant Discharge Elimination System

NRCS - Natural Resources Conservation Service

OCC - Office of the Chief Clerk

pCi/L - picoCuries per liter

POTW - publicly-owned treatment works

ppb - parts per billion (1 × 10-9)

ppq - parts per quadrillion (1 × 10-15)

ppt - parts per trillion (1 × 10-12)

PWS - public water system

RCRA - Resource Conservation and Recovery Act

RN - Regulated Entity Reference Number

RRC – Railroad Commission of Texas

QA/QC - quality assurance/quality control

SADDS - subsurface area drip dispersal system

SAR - sodium adsorption ratio

SDS - safety data sheets

SIC - Standard Industrial Classification

SIU - Significant Industrial User

SPIF - Supplemental Permit Information Form

SWDA - Solid Waste Disposal Act

SWPPP – Stormwater Prevention Pollution Plan

TAC - Texas Administrative Code

TBLL - technically based local limit

TCDD - 2,3,7,8-tetrachlorodibenzo-p-dioxin

TCEQ - Texas Commission on Environmental Quality

TDS - total dissolved solids

TEQ - toxicity equivalent

TLAP - Texas Land Application Permit

TMDL - total maximum daily load

TPDES - Texas Pollutant Discharge Elimination System

TPWD - Texas Parks and Wildlife Department

TSS - total suspended solids

TSWQS - Texas Surface Water Quality Standards

TVMDL – Texas A&M Veterinary Diagnostic Laboratory

TX SOS - Texas Secretary of State

TWC - Texas Water Code

TWDB - Texas Water Development Board

μg/L - micrograms per liter

UIC - underground injection control

USACE - United States Army Corps of Engineers

USDA - United States Department of Agriculture

USFWS – United States Fish and Wildlife Service

USGS - United States Geological Survey

USPS - United States Postal Service

WOTUS - Waters of the United States

WWTF - wastewater treatment facility

WWTP - wastewater treatment plant

# GENERAL DEFINITIONS

## Numeric

2-Hour Peak Flow – The maximum flow sustained for a two-hour period during the period of daily discharge.

303(d) List - A list of water bodies identified as impaired or threatened in accordance with the CWA Section 303(d).

## A-B

Act of God - If a person can establish that an event that would otherwise be a violation of a permit, an order, the rules adopted by the Commission, or the TWC was caused solely by an act of God, war, strike, riot, or other catastrophe, the event is not a violation of that permit, order, rule, or statute.

Actual Intake Flow (AIF) – The average volume of water withdrawn on an annual basis by the CWIS(s) over the past three years.

Algae - Plants that lack true roots, stems, and leaves. Algae consist of nonvascular plants that attach to rock and debris in the water or are suspended in the water column. Such plants may be green, blue-green, or olive in color, slimy to the touch, and usually have a coarse filamentous structure.

Annual Average Flow - The arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months.

Aquatic Macrophytes - Vascular plants that usually are arranged in zones corresponding closely to successively greater depths in shallow water. The characteristic plant forms that dominate these gradients (in order of decreasing depth) are: (1) submersed rooted aquatics; (2) floating-leaved rooted aquatics; (3) immersed rooted aquatics; and (4) marginal mats. Some vascular plants (like duckweed) may live unattached in the water and may occur anywhere on the water surface.

Biochemical Oxygen Demand, 5-day (BOD5) - The amount of DO consumed in five days by biological and chemical processes breaking down organic matter.

## C

Carbonaceous Biochemical Oxygen Demand, 5-day (CBOD5) - The amount of DO consumed in five days by biological and chemical processes breaking down organic matter, but in which the contribution from nitrogenous bacteria has been suppressed.

Classified Waters - Water bodies classified as segments with specific uses and criteria in Appendix A of 30 TAC § 307.10 of the TSWQS.

Class I Sludge Management Facility - Any POTW identified under 40 CFR § 403.8(a) as being required to have an approved pretreatment program and any other treatment works treating domestic sewage classified as a Class I sludge management facility by the regional administrator in conjunction with the ED because of the potential for its sludge use or disposal practices to adversely affect public health and the environment.

Closed-Cycle Recirculating System (CCRS) – A system designed and properly operated using minimized make-up and blowdown flows withdrawn from a WOTUS to support contact or non-contact cooling uses within a facility, or a system designed to include certain impoundments. A CCRS passes cooling water through the condenser and other components of the cooling system and reuses the water for cooling multiple times.

Commission - The Texas Commission on Environmental Quality.

Composite Sample - A sample made up of a minimum of three effluent portions or, as specified in 30 TAC § 319.9(b) or (c), collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, combined in volumes proportional to flow, and collected no closer than two hours apart.

Continuous Discharge - A discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Cooling Water – Water used for contact or non-contact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations of the facility’s premises.

Cooling Water Intake Structure (CWIS) - The total physical structure and any waterways used to withdraw cooling water from [a] WOTUS. The CWIS extends from the point at which water is withdrawn from the surface water source up to, and including, the intake pumps.

Cooling Water System (CWS) – The combination of all equipment and construction used to convey water from a WOTUS to the cooling portion of the cooling system. CWSs are unique to facilities; however, they are comprised of some or all of the following: CWISs, including primary or make-up intake structures; cooling water impoundments, including cooling water storage units and waste treatment units; constructed waterways and/or pipelines; cooling portions of the cooling system (e.g. condensers and heat exchangers); and, cooling towers.

Crop - Proposed permanent plant cover on the application site.

## D

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

Daily Average Flow - The arithmetic average of all determinations of the daily discharge within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the average of all instantaneous measurements taken during a 24-hour period or during the period of daily discharge if less than 24 hours. Daily average flow determinations for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

Design Intake Flow – The value assigned during the CWIS design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source water.

Design Flow - The wet-weather maximum 30-day average flow of wastewater.

Disinfection - A chemical or physical process that kills pathogenic organisms in water.

Discharge Monitoring Report (DMR) - The EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. Permittees with TPDES permits are required to submit monitoring results online using the NetDMR system, available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

Disposal - The disposal, deposit, injection, dumping, spilling, leaking, or placing of any solid, liquid, or hazardous waste into or on any land or water so that such waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwater.

Dissolved Oxygen (DO) - The concentration of oxygen dissolved in wastewater or surface water.

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

Dry Weight Basis - Calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100% solids content).

## E

Effluent - Wastewater, treated or untreated, that flows out of a treatment plant.

Effluent Limitations - Restrictions established by TCEQ or the EPA on quantities, rates, and concentrations of pollutants in wastewater discharges.

Entrainment - Any life stages of fish and shellfish in the intake water flow entering and passing through a CWIS and into a CWS, including the condenser or heat exchanger.

Entrainment Mortality - Death as a result of entrainment through the CWIS, or death as a result of exclusion from the CWIS by fine mesh screens or other protective devices intended to prevent the passage of entrainable organisms through the CWIS.

Entrapment - The condition where impingeable fish and shellfish lack the means to escape the cooling water intake. Entrapment includes but is not limited to: organisms caught in the bucket of a traveling screen and unable to reach a fish return; organisms caught in the forebay of a cooling water intake system without any means of being returned to the source waterbody without experiencing mortality; or cooling water intake systems where the velocities in the intake pipes or in any channels leading to the forebay prevent organisms from being able to return to the source waterbody through the intake pipe or channel.

Executive Director (ED) - The Executive Director of TCEQ or his/her designee.

Existing Facility - Any facility used for the storage, processing, or disposal of domestic wastewater and which has obtained approval of construction plans and specifications as of March 1, 1990.

## F-G

Facility - All contiguous land and fixtures, structures, or appurtenances used for storing, processing, or disposing of waste. (See also the definition relating to sewage sludge.)

Fixture of the Land - An item that has become so annexed to the realty that it is regarded as part of the land (i.e., ponds, lagoons).

Fragile Species - Those species of fish and shellfish that are least likely to survive any form of impingement. For purposes of this subpart, fragile species are defined as those with an impingement survival rate of less than 30 percent, including but not limited to alewife, American shad, Atlantic herring, Atlantic long-finned squid, Atlantic menhaden, bay anchovy, blueback herring, bluefish, butterfish, gizzard shad, grey snapper, hickory shad, menhaden, rainbow smelt, round herring, and silver anchovy.

Glide - Portion of the water column that resembles flow that would be found in a shallow canal. Water surface gradient over a glide is nearly zero, so velocity is slow, but flow is shore to shore without eddy development.

Grab Sample - An individual sample collected in less than 15 minutes.

Groundwater - Water below the land surface in the saturated zone.

## I-L

Impingement - The entrapment of any life stages of fish and shellfish on the outer part of an intake structure or against a screening device during periods of intake water withdrawal.

Impingement Mortality - Death as a result of impingement. Impingement mortality also includes organisms removed from their natural ecosystem and lacking the ability to escape the cooling water intake system, and thus subject to inevitable mortality.

Independent Supplier - An entity, other than the regulated facility, that owns and operates its own CWIS and directly withdraws water from WOTUS. The supplier provides the cooling water to other facilities for their use but may itself also use a portion of the water. An entity that provides potable water to residential populations (i.e., PWS) is not a supplier for purposes of CWA Section 316(b) requirements.

Industrial Wastewater - Wastewater generated in a commercial or industrial process.

Interference - A discharge that, alone or in conjunction with a discharge or discharges from other sources, both: (1) inhibits or disrupts the treatment system, its treatment processes or operations, or its sludge processes, use, or disposal; and (2) therefore is a cause of a violation of any requirement of the facility’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the CWA, the SWDA (including title II, more commonly referred to as RCRA, and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Intermittent Stream - A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a seven-day, two-year low-flow of less than 0.1 cubic feet per second is considered intermittent.

Land Application - The spraying of wastewater onto the land surface; the injection of wastewater below the land surface; or the incorporation of wastewater into the soil so that the wastewater can fertilize crops or vegetation grown in the soil.

Legal Name - An individual’s first, middle (if applicable), and last named spelled out or the company/organization name exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, on other documents forming the entity, or on documents that are filed in the county where the entity is doing business.

Low Capacity Utilization (LCU) - An existing facility’s annual average capacity utilization rate (i.e., annual capacity utilization averaged over a 24-month contiguous period) is less than 8%, as described in 40 CFR § 125.94(c)(12).

## M

Major Amendment of Permit - An amendment that changes a substantive term, provision, requirement, or limiting parameter of a permit, as described in 30 TAC § 305.62(c)(1).

Mean Annual Flow - The flow calculated by averaging the intake water withdrawn each day of the calendar year. This average includes days with zero (0) flow.

Minimum Analytical Level (MAL) - The lowest concentration at which a particular substance can be quantitatively measured with a defined precision level, using approved analytical methods. The MAL is not the published method detection limit for an EPA-approved analytical method, which is based on laboratory analysis of the substance in reagent (distilled) water. The MAL is based on analyses of the analyte in the matrix of concern (i.e., wastewater effluents). The commission will establish general MALs that will be applicable when information on a matrix-specific MAL is unavailable.

Minor Amendment of Permit - An amendment to improve or maintain the permitted quality or method of disposal of waste or injection of fluid if there is neither a significant increase of the quantity of waste or fluid to be discharged or injected nor a material change in the pattern or place of discharge or injection. A minor amendment includes any other change to a permit issued under 30 TAC Chapter 305, Subchapter D, that will not cause or relax a standard or criterion which may result in a potential deterioration of quality of water in the state. A minor amendment may also include, but is not limited to: except for TPDES permits, changing an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date; and except for TPDES permits, requiring more frequent monitoring or reporting by the permittee.

Minor Modification of Permit - Under 40 CFR § 122.63 and 30 TAC § 305.62(c)(3), a minor modification may only:

correct typographical errors;

require more frequent monitoring or reporting by the permittee;

change an interim compliance date in a schedule of compliance (not to exceed 120 days of date specified in existing permit and not to interfere with final compliance date);

allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary;

change the construction schedule for a discharger which is a new source;

delete a point source outfall when the discharge from that outfall is terminated; or

incorporate conditions of a POTW pretreatment program as enforceable conditions of the POTW’s permits.

Monthly Effluent Report (MER) - Facilities with TLAPs or Sludge Permits are required to complete this form or equivalent.

## N

National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, amending, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA Sections 307, 402, 318, and 405. The term includes an approved program.

Naturally Occurring Radioactive Material (NORM) - Solid, liquid, or gaseous material or combination of materials, excluding source material, special nuclear material, and byproduct material, that in its natural physical state spontaneously emits radiation and that is not exempt under Texas Health and Safety Code § 401.106.

New Discharger - Any building, structure, facility or installation from which there is or may be a discharge of pollutants, but that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, is not a new source, and has never received a finally effective NPDES permit for discharges at that site.

New Facility - Any domestic or industrial WWTF which is not an existing facility.

Non-Process Wastewater – Wastewater, including sanitary and other non-regulated wastestreams, as referenced in 40 CFR § 403.6(e)(1).

Non-Stormwater Wastestreams - Wastewater that is listed in TXR050000, the TPDES Industrial Stormwater Multi-Sector General Permit, Part II, Section A, Item 6, as follows:

discharges from emergency firefighting activities and uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);

potable water sources (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);

lawn watering and similar irrigation drainage, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;

water from the routine external washing of buildings, conducted without the use of detergents or other chemicals;

water from the routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed);

uncontaminated air conditioner condensate, compressor condensate, and steam condensate, and condensate from the outside storage of refrigerated gases or liquids;

water from foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials, solvents, and other pollutants);

uncontaminated water used for dust suppression;

springs and other uncontaminated groundwater;

incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but excluding intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains); and

other discharges described in Part V of TXR050000 that are subject to effluent guidelines and effluent limitations.

Nuisance Odor Prevention - The reduction, treatment, and dispersal of potential odor conditions that interfere with another’s use and enjoyment of property that are caused by or generated from a WWTP unit, which conditions cannot be prevented by normal operation and maintenance procedures of the wastewater treatment unit.

## O

Off-site - Property which cannot be characterized as on-site.

On-site - The same or contiguous property owned, controlled, or supervised by the same person. If the property is divided by public or private right-of-way, the access shall be by crossing the right-of-way or the right-of-way shall be under the control of the person.

Operator - The person responsible for the overall operation of a facility or beneficial use site.

Outfall - The point or location where waterborne waste discharges from a sewer system, treatment facility, or disposal system into or adjacent to water in the state.

Overhanging Vegetation - Vegetation that overhangs the water column and indirectly provides fish food and cover and shades the water from solar radiation.

Owner - The person who owns a facility or part of a facility.

## P

Peak Flow - The highest two hour average flow rate expected to be delivered to the treatment units under any operational conditions, including periods of high rainfall (generally the two-year, 24-hour storm is assumed) and prolonged periods of wet weather.

Permit - A written document issued by the Commission which, by its conditions, may authorize the permittee to construct, install, modify, or operate, in accordance with stated limitations, a specified facility for waste discharge, for solid waste storage, processing or disposal, or for underground injection.

Perennial Stream – A normally flowing stream.

Persistent Pools - Enduring pools containing sufficient habitat to maintain significant aquatic life uses.

Person - An individual, corporation, organization, government, governmental subdivision or agency, business trust, estate, partnership, or any other legal entity or association.

Pool - An area of the water column that has slow velocity and is deeper than a riffle, run, or glide. The water surface gradient of pools is very close to zero and their channel profile is usually concave. Pools often have eddies with varying directions of flow.

Process Wastewater - Any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly-Owned Treatment Works (POTW) - Any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature which is owned by the State or a municipality (and including certain political subdivisions created by the State of Texas that provide regional municipal and industrial wastewater treatment). This definition includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant. For a complete legal definition of POTW, see 40 CFR § 403.3(q).

Public Water System (PWS) - A water distribution system for the provision of water to the public of water for human consumption through pipes or other constructed conveyances. Such term includes (i) any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, and (ii) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A system with a PWS registration number issued by TCEQ that is listed as active (A) in the [Texas Drinking Water Watch database](https://dww2.tceq.texas.gov/DWW/)[[5]](#footnote-6) is considered a PWS for the purposes of the CWA Section 316(b) requirements.

## R

Radioactive Material - A naturally occurring or artificially produced solid, liquid, or gas that emits radiation spontaneously.

Renewal of Permit - An extension of the effective date of a permit that authorizes the continued discharge or disposal of wastewater without substantive changes in term, provision, requirement, or limiting parameters of a permit.

Renewal of Permit With Changes (or Minor Amendment with Renewal) - An extension of the effective date of a permit that authorizes the continued discharge or disposal of wastewater without substantive changes in term, provision, requirement, or limiting parameters of a permit but with a change that would be considered a minor amendment if the applicant was not seeking to extend the expiration date of the permit.

Riffle – A portion of the water column that is usually constricted where water velocity is fast due to a change in surface gradient. Stream depth is generally shallow, and the channel profile is usually straight to convex. Surface flow through riffles usually ripples due to constriction, shallowness, and presence of irregular bottom substrates.

Riparian Zone - Area that includes the stream bank and flood plain.

Run – A portion of the water column that has rapid, non-turbulent, shore-to-shore flow. A run is too deep to be a riffle and its flow is too fast to be a pool. The channel profile under a run is usually a uniform flat plane.

## S

Saltwater - A coastal water which has a measurable elevation change due to normal tides. In the absence of tidal information, saltwater is generally considered to be a coastal water which typically has a salinity of two parts per thousand or greater in a significant portion of the water column.

Site - The land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

Stormwater - Stormwater runoff, snow melt runoff, and surface runoff and drainage, see 40 CFR § 122.26(b)(13).

Stormwater Associated with Industrial Activity - The discharge from any conveyance that is used for collecting and conveying stormwater [including stormwater runoff, snow melt runoff, and surface runoff and drainage] and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, see 40 CFR § 122.26(b)(14)(i)-(xi) for full definition.

Stream Bend – A curved part of a stream. A well-defined bend has a deep outside area and shallow inside area accentuated by point bar development. Due to sharp bending, stream flow is forced to the outside and eddies develop on the inside of the bend. A moderately developed bend forces some flow to the outside and has only a slight change in depth across the channel. A poorly defined bend has no noticeable change in water depth across the channel and stream flow is generally not forced to one side.

Stream Depth - The vertical height of the water column from the existing water surface level to the channel bottom.

Stream Width - The horizontal distance along the transect line from shore to shore along the existing water surface.

Substantial Change in the Function or Use - An increase in the pollutant load or modification in the existing purpose of the unit.

Substrate - The mineral or organic material that forms the bottom of the stream.

Classification of substrate materials by particle size

| **Type of Substrate** | **Size (inches)** | **Size (metric)** |
| --- | --- | --- |
| **Bedrock** | Solid | Solid |
| **Large Boulders** | >17.7 | >45 cm |
| **Boulders** | 9.8 – 17.1 | 25 – 45 cm |
| **Rubble** | 2.4 – 9.8 | 6 – 25 cm |
| **Gravel** | 0.2 – 2.4 | 6 – 60 mm |
| **Sand** | 0.002 – 0.2 | 0.06 – 6 mm |
| **Mud/Silt** | <0.002 | <0.06 mm |

Subsurface Area Drip Dispersal System (SADDS) - A waste dispersal system that 1) uniformly injects processed wastewater effluent into the ground at a depth of not more than 48 inches; and 2) spreads the waste over the entire disposal area so that the soil hydrologic absorption rate and crop/plant root absorption rate are not exceeded. The following systems are not SADDSs: 1) wastewater disposal systems authorized under 30 TAC Chapter 285 (On-Site Sewage Facilities) and Texas Health and Safety Code 366; 2) disposal systems for oil and gas waste, tar sands, sulfur, brine from desalination plants, and hazardous waste as defined by Texas Health and Safety Code, Section 361.003; and/or 3) drainfields, leaching chambers, or other gravity trench systems.

## T

Texas Land Application Permit (TLAP) - An authorization issued by the Commission for the discharge of waste adjacent to water in the state in compliance with the TWC.

Texas Pollutant Discharge Elimination System (TPDES) - The state program for issuing, amending, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements under CWA Sections 307, 402, 318, and 405, the TWC, and the TAC.

Total Dissolved Solids (TDS) – A measure of the dissolved solids in wastewater or effluent.

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that a lake, river, stream, or estuary can receive without seriously harming its beneficial uses. Also, a detailed water quality assessment that provides the scientific foundation for a watershed action plan. A watershed action plan outlines the steps necessary to reduce pollutant loads in a certain body of water to restore and maintain uses or aquatic life.

Total Suspended Solids (TSS) - A measure of the suspended solids in wastewater or effluent.

TPDES Wastewater Permit - An authorization issued by the Commission for the discharge of waste into water in the state in compliance with the CWA and the TWC.

Transect Line - A straight line, perpendicular to stream flow, between two points on opposite stream banks.

Treatment Facility - Wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation, or disposal of domestic sewage, industrial wastes, agriculture wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

Tree Canopy - The uppermost spreading branchy layer of streamside trees that shades the water surface.

## U-W

Unclassified Water - Smaller water bodies that are not designated as segments with specific uses and criteria in Appendix A of 30 TAC § 307.10 of the TSWQS.

Vascular - Relating to a channel for the conveyance of a body fluid or to a system of such channels; supplied with or made up of such channels, especially blood vessels.

Wastewater Treatment Plant Unit - Any apparatus necessary for the purpose of providing treatment of wastewater (i.e., aeration basins, splitter boxes, bar screens, sludge drying beds, clarifiers, overland flow sites, treatment ponds, or basins that contain wastewater, etc.). For purposes of compliance with the requirements of 30 TAC § 309.13(e) (relating to Unsuitable Characteristics), this definition does not include off-site bar screens, off-site lift stations, flow metering equipment, or post-aeration structures needed to meet permitted effluent limitations on minimum DO.

Wetlands - Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

# DEFINITIONS RELATING TO PRETREATMENT DEFINED IN 40 CFR PART 403

Categorical Industrial User (CIU) - An IU that is subject to Categorical Pretreatment Standards according to 40 CFR § 403.6 and 40 CFR Chapter I, Subchapter N, §405 - 471, which are technology-based standards developed by the EPA setting industry-specific effluent limits. (A list of industrial categories subject to Categorical Pretreatment Standards is included on page 50 of these instructions.)

Commercial User – An IU that is not considered to be a significant single source of toxics because of its small size, generally low flow, and insignificant pollutant levels or loadings, including but not limited to, radiator shops, car washes, small laundries, gasoline stations, dry cleaners, and restaurants.

Composite Sample - For purposes of the TPDES Pretreatment Program, a composite sample is defined in 40 CFR § 403, Appendix E.

Industrial User (IU) - Any industrial or commercial facility that discharges wastewater to the treatment works that is not domestic wastewater. Domestic wastewater includes wastewater from connections to houses, hotels, non-industrial office buildings, institutions, or sanitary waste from industrial facilities. A non-regulated IU does not meet the definition of SIU or CIU.

Interference - A discharge that, alone or in conjunction with a discharge or discharges from other sources, both: (1) inhibits or disrupts the treatment system, its treatment processes or operations, or its sludge processes, use, or disposal; and (2) therefore is a cause of a violation of any requirement of the facility’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the CWA, the SWDA (including title II, more commonly referred to as the RCRA, and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Nonsubstantial Modification - A modification initiated by a POTW with a TCEQ-approved pretreatment program that is not considered to be a significant modification as defined in 40 CFR § 403.18(b).

Other Industrial User - IU that does not meet the definition of an SIU or CIU, but may discharge industrial wastewater which results in a pollutant loading that may have reasonable potential to adversely affect the operation and maintenance of a POTW.

Pass Through - A discharge which exits the POTW into WOTUS in quantities or concentrations that, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation).

Significant Industrial User (SIU) - An IU that is defined in 40 CFR § 403.3(v) as follows:

Subject to Categorical Pretreatment Standards according to 40 CFR § 403.6 and 40 CFR Chapter I, Subchapter N; and

Any other IU that:

* Discharges an average of 25,000 gpd or more of process wastewater to the treatment works (excluding sanitary, noncontact cooling, and boiler blowdown wastewater);
* Contributes a process waste stream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment works; or
* Is designated as such by the Control Authority as defined in 40 CFR § 403.3(f) on the basis that the IU has a reasonable potential for adversely affecting the treatment works operation or for violating any pretreatment standard or requirement (according to 40 CFR § 403.8(f)(6)).

Significant Industrial User - Non-Categorical - An IU defined in 40 CFR § 403.3(v) but not subject to Categorical Pretreatment Standards according to 40 CFR § 403.6 and 40 CFR Chapter I, Subchapter N.

Substantial Modification - A modification as defined in 40 CFR § 403.18(b) initiated by a POTW with a TCEQ-approved pretreatment program or a POTW developing a new pretreatment program.

Technically Based Local Limits (TBLLs) - Specific discharge limits developed and enforced by POTWs upon industrial or commercial users to prevent interference and pass through and address the general and specific prohibitions, needs and concerns of a POTW. This will include consideration of its receiving waters, sludge contamination and worker health and safety problems.

# DEFINITIONS RELATING TO SEWAGE SLUDGE DEFINED IN 30 TAC § 312.8

## A-C

Active Sludge Unit - A sludge unit that has not closed and/or is still receiving sewage sludge.

Aerobic Digestion - The biochemical decomposition of organic matter in sewage sludge into carbon dioxide, water, and other by-products by microorganisms in the presence of free oxygen.

Agricultural Management Unit - A portion of land application area contained within an identifiable boundary, such as a river, fence, or road, where the area has a known crop or land use history.

Agronomic Rate - The whole sludge application rate (dry weight basis) designed: 1) to provide the amount of nitrogen needed by the crop or vegetation grown on the land; and 2) to minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the groundwater.

Beneficial Use - Placement of sewage sludge onto land in a manner which complies with the requirements of 30 TAC Chapter 312, Subchapter B, and does not exceed the agronomic need or rate for a cover crop or any metal or toxic constituent limitations which the cover crop may have. Placement of sewage sludge on the land at a rate below the optimal agronomic rate will be considered a beneficial use.

Bulk Sewage Sludge - Sewage sludge that is not sold or given away in a bag or other container for application to the land.

Class A Sewage Sludge - Sewage sludge meeting one of the pathogen reduction requirements on 30 TAC § 312.82(a).

Class B Sewage Sludge - Sewage sludge meeting one of the pathogen reduction requirements on 30 TAC § 312.82(b).

## D-G

Domestic Septage - Either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap.

Dry Weight Basis - Calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100% solids content).

Facility - Includes all contiguous land, structures, other appurtenances, and improvements on the land used for the surface disposal, land application for beneficial use, or incineration of sewage sludge.

## L-M

Land Application - The spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Monofill - A landfill trench in which sewage sludge is the only type of solid waste placed.

## P

Place Sewage Sludge or Sewage Sludge Placed - Disposal of sewage sludge on a surface disposal site.

Process or Processing of Sewage Sludge - These terms shall have the same meaning as treat or treatment of sewage sludge.

## S

Sewage Sludge - Solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in treatment works. Sewage sludge includes, but is not limited to, domestic septage, scum, or solids removed in primary, secondary, or advanced wastewater treatment processes; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Sludge Unit - Land on which only sewage sludge is placed for disposal. A sludge unit shall be used for sewage sludge. This does not include land on which sewage sludge is either stored or treated.

Sludge Unit Boundary - The outermost perimeter of a surface disposal site.

## T-W

Transporter - Any person who collects, conveys, or transports sewage sludge, water treatment plant sludge, grit trap waste, grease trap waste, chemical toilet waste and/or septage by roadway, ship, rail, or other means.

Treat or Treatment of Sewage Sludge - The preparation of sewage sludge for final use or disposal including thickening, stabilization, and dewatering. This does not include storage.

Vector Attraction - The characteristic of sewage sludge that attracts rodents, flies, mosquitos, or other organisms capable of transporting infectious agents.

Water Treatment Sludge - Sludge generated during the treatment of either surface water or groundwater for potable use, which is not an industrial solid waste as defined in 30 TAC § 335.1.

# WHO MUST APPLY FOR AN INDUSTRIAL WASTEWATER PERMIT?

The **owner(s)** of any industrial facility that generates wastewater and wishes to: 1) discharge wastewater into water in the state (TPDES permit) or 2) dispose of wastewater adjacent to water in the state by irrigation, evaporation, or subsurface disposal (TLAP), must apply for an industrial wastewater permit. In addition, whoever has overall financial responsibility for the operation of the facility must apply for the permit as a co-applicant with the facility owner. Facility operators are not required to apply as a co-applicant if they do not have overall financial responsibility of the facility operations.

Entities seeking a domestic wastewater permit must complete and submit a domestic wastewater permit application (forms TCEQ-10053 and TCEQ-10054, which can be located using the [TCEQ’s Form Lookup](https://www.tceq.texas.gov/search_forms.html)[[6]](#footnote-7) feature.).

# WHEN MUST THE APPLICATION BE SUBMITTED?

For **new** and **amendment** applications, the completed application should be submitted at least 330 days before the date the proposed discharge or disposal is to occur.

For **renewal** applications, the completed application must be submitted at least 180 days before the expiration date of the current permit. If an application is not submitted before the existing permit expires, the existing permit will be terminated, and the application will be processed as a new facility, with all applicable forms and fees required.

# WHAT PERMIT APPLICATION FORMS ARE REQUIRED?

The industrial wastewater permit application has three separate parts: 1) the Administrative Report (TCEQ-20893 or TCEQ-10411), 2) the Technical Report (TCEQ-10055), and 3) the Core Data Form (TCEQ-10400). An Administrative Report, a Technical Report, and a Core Data Form must be completed to apply for a new permit or to amend or renew an existing permit. The reports and instructions are available in Microsoft Word format (.docx) and can be located using the [TCEQ’s Form Lookup](https://www.tceq.texas.gov/search_forms.html) feature.

Facilities seeking individual authorization to discharge wastewater from oil and gas exploration and production activities under TWC Chapter 26 must complete form TCEQ-20893. All other facilities seeking authorization to discharge wastewater from industrial activities under TWC Chapter 26 must complete and submit form TCEQ-10411. All facilities seeking to discharge wastewater under TWC Chapter 26 must complete and submit form TCEQ-10055.

All applications for new permits or major amendments to permits must include the Public Involvement Plan form (TCEQ-20960).

Download the following forms, as applicable:

TCEQ-20893-ins: Instructions for Completing the Administrative Report for Oil and Gas Exploration and Production Permits Issued Under Texas Water Code Chapter 26

TCEQ-20893: Administrative Report for Oil and Gas Exploration and Production Permits

TCEQ-10411\_10055-ins: Instructions for Completing the Industrial Wastewater Permit Application

TCEQ-10411: Administrative Report for the Industrial Wastewater Permit Application

TCEQ-10055: Technical Report for the Industrial Wastewater Permit Application

TCEQ-10400: TCEQ Core Data Form

TCEQ-20971: Supplemental Permit Information Form (SPIF)

TCEQ-20972: Summary of Application in Plain Language Form (PLS)

TCEQ-20960: Public Involvement Plan Form

TCEQ-20960-ins: Instructions for completing the Public Involvement Plan Form

**NOTE:** Older versions of the application forms **will not be accepted after six months** from the date of the updated or revised forms.

# HOW IS THE APPLICATION COMPLETED?

**Use these instructions to complete the industrial wastewater permit application.** Each item in the application is cross-referenced to a page number in the instructions to assist with finding needed information and guidance.

**Do not alter, delete, or rearrange questions. Applications which are altered, not in the correct format, or page numbering sequence will not be processed and will be returned.**

**The Administrative Report and Technical Report must be submitted by all applicants**; however, only the sections and worksheets relevant to the type of authorization being sought by the applicant should be completed. If an entire worksheet is not required to be completed, it does not need to be submitted. For example, Worksheet 3.0 (Land Disposal of Effluent) is used only if the applicant is requesting authorization for land disposal of effluent. If unsure whether a section or worksheet must be completed, check the instructions for more information or call the Industrial Permits Team.

If the answer to a question requires more space than is provided, submit a separate attachment to answer the question. **Separate attachments must be clearly cross-referenced** back to the original question and the attachment number must be included in the space provided in the application. Failure to clearly cross-reference attachments may result in delays in processing the application.

**All items must be addressed**. If an item is not applicable, enter **N/A** as the response to indicate it was considered. An item without a response will be considered a deficiency. An incomplete or incorrectly completed item will be considered a deficiency. A notice of all deficiencies found during the initial review will be sent to the applicant’s representative. The application cannot be declared administratively complete until each deficiency is addressed or an explanation provided for why each item not addressed is not applicable. Failure to address deficiencies in a timely manner may result in significant delays in processing the application or, ultimately, return of the application. If a renewal application has to be returned after the current permit has expired, the facility will be operating without a permit and in violation of TWC Chapter 26.

Applicants are required to keep records of all data used to complete the permit application and any supplemental information submitted as part of the application process for a period of at least three years from the date the application is signed.

# HOW IS THE APPLICATION SUBMITTED?

TCEQ offers two methods to submit a completed application. Applicants may complete and submit an application using **TCEQ’s online e-permitting system** [STEERS](https://www3.tceq.texas.gov/steers/)[[7]](#footnote-8). Alternatively, applicants may submit a completed physical application (i.e., paper copy) and submit an exact electronic copy of the application via TCEQ’s file transfer protocol (FTP) server. An application only needs to be submitted using one of the available methods.

## **STEERS Submittal**

Applicants may complete and submit an application using **TCEQ’s online e-permitting system** [STEERS](https://www3.tceq.texas.gov/steers/)[[8]](#footnote-9). If an application is submitted via STEERS, **additional copies (paper or electronic) are not required**.

To submit an application through STEERS:

1. Register an account at <https://www3.tceq.texas.gov/steers/>
2. Add the program, Water Quality Individual Permit (EPR\_WQIP)
3. Select the program access type (Read-only, Edit, Preparer, or Sign)
4. Sign the STEERS Participant Agreement (SPA) using a Texas Driver’s License.

Signatory must meet requirements under 30 TAC § 305.44. The account status will indicate **PROBATION** until the SPA is signed.

1. Create an application for the permit action needed:

* Specify the authorization type (Industrial Wastewater)
* Specify the needed permit action (New permit, or Renewal or Amendment of an existing permit).

1. Fill out each application item within the STEERS application module.
2. Fill out and attach any other relevant portions of the application, including Administrative Report 1.1, Technical Report, and all required Worksheets and attachments within STEERS, when prompted.

Portable document format (pdf) file type preferred. Please ensure any map files have a resolution of at least 600 dots per inch (dpi).

1. Electronically sign the application.

The application must be in Ready to Sign status. The application may be shared with other accounts with access type Sign using the Set Access Rights option.

1. Pay the application fee.

The application must be in Ready to Pay status.

NOTE: The application process is not done after payment is made. You will need to click the Return to STEERS button after the payment confirmation screen to select and submit the application to TCEQ.

1. Select and submit the application.

The application must be in Ready to Submit status.

The submitted application along with the attachments and confirmation letters can be viewed at any time under STEERS Home > Submissions.

## **Physical Application Submittal**

Applicants may submit a completed physical application (i.e., paper copy) and submit an electronic copy of the application via TCEQ’s file transfer protocol (FTP) server, as directed under items 1 and 2 below. If a completed physical application is submitted, an exact electronic copy of the application must be uploaded via TCEQ’s FTP server for the application to be considered complete.

1. **Paper application submittal**

**One original (with an original wet-ink signature)** of the completed application, including the entire Administrative Report, Technical Report, and all required Worksheets and attachments, must be submitted. **Do not staple or bind** the original application. **Do not use plastic sleeves** for the maps in the original application. Use the following addresses to deliver the application. **One additional paper copy for subsurface area drip dispersal system (SADDS) applications is required.**

Regular US mail:

Texas Commission on Environmental Quality

Water Quality Division

Applications Review and Processing Team, MC-148

P.O. Box 13087

Austin, Texas 78711-3087

Express/Overnight mail:

Executive Director

Applications Review and Processing Team, MC-148

Texas Commission on Environmental Quality

12100 Park 35 Circle

Austin, Texas 78753

Hand delivery:

Texas Commission on Environmental Quality

Applications Review and Processing Team

Building F, Room 2101

12100 Park 35 Circle

Austin, Texas 78753

1. Electronic Copy Submittal

**One exact electronic copy** of the completed individual wastewater permit application must be uploaded via TCEQ’s file transfer protocol (secure) (FTPS) server at <https://ftps.tceq.texas.gov/> and shared to [WQDeCopy@tceq.texas.gov](https://tceq-my.sharepoint.com/personal/shannon_gibson_tceq_texas_gov/Documents/01172020/Special%20Projects/Application/2022%20Revisions/WQDeCopy@tceq.texas.gov). Portable document format (pdf) file type preferred. Please ensure any map files have a resolution of at least 600 dots per inch (dpi).

Submittal of an exact electronic copy of the completed application does not relieve applicants of the requirement to submit a hardcopy original, per TCEQ Rule 30 TAC §305.48. For instructions on using the agency's FTP, or other questions about the submittal of electronic copies, please view https://www.tceq.texas.gov/help/helpcmpr.html

# WHAT FEES ARE REQUIRED?

Wastewater permits are subject to two different types of fees: 1) an application fee and 2) an annual water quality fee. Payment of the fees may be made either by check or money order payable to TCEQ or through TCEQ’s online payment portal ([ePay](https://www3.tceq.texas.gov/epay/index.cfm)[[9]](#footnote-10)).

1. Application Fee

This fee is required to be paid at the time of application submittal. Failure to submit payment at the time the application is filed will cause delays in processing or denial of permit coverage. Application fees for industrial wastewater permits are based on: 1) the EPA Major/Minor facility designations and 2) whether the facility is subject to categorical effluent guidelines promulgated by the EPA (see table on page 52). All new TPDES permit applications are considered minors until formally classified as majors by the EPA.

Application fee schedule

| **EPA Classification** | **New** | **Major Amend. (with or without Renewal)** | **Renewal Only (with or without Minor Amend./Mod.)** | **Minor Amend./ Minor Mod. (without Renewal)** |
| --- | --- | --- | --- | --- |
| Minor facility not subject to EPA categorical effluent guidelines  (40 CFR Parts 400-471) | $350 | $350 | $315 | $150 |
| Minor facility subject to EPA categorical effluent guidelines  (40 CFR Parts 400-471) | $1,250 | $1,250 | $1,215 | $150 |
| Major facility | N/A | $2,050 | $2,015 | $450 |

Postage fees of $50.00 for new and amendment applications and $15.00 for renewals are included with the application fees to cover the expense of the required notice (30 TAC § 305.53). For new and major amendment applications, the $50.00 postage fee covers the expense of notifying up to 100 landowners. An additional $50.00 postage fee will be required for each additional increment of up to 100 landowners.

To verify receipt of payment, or for any other questions regarding payment of fees to TCEQ, please call the Cashier’s Office. The applicant is responsible for the cost of publishing the public notices in the newspaper concerning the application for a permit. The applicant will be provided the information necessary to publish, including instructions, by the Applications Review and Processing Team (first notice) and by TCEQ’s Office of the Chief Clerk (second notice).

### Mailed Payments

Payment must be mailed to one of the addresses below in a separate envelope from the application. Complete the Water Quality Permit Payment Submittal Form located on page 14 of the Administrative Report and include it with the mailed payment.

Regular U.S. mail:

Texas Commission on Environmental Quality

Financial Administration Division

Cashier’s Office, MC-214

P.O. Box 13088

Austin, TX 78711-3088

Overnight/express mail:

Texas Commission on Environmental Quality

Financial Administration Division

Cashier’s Office, MC-214

12100 Park 35 Circle

Austin, TX 78753

### ePay Electronic Payment

Make an electronic payment through [ePay](https://www3.tceq.texas.gov/epay/index.cfm) on the TCEQ website. Payment methods include MasterCard, Visa, and electronic check payment (ACH). A transaction over $500 can only be made by ACH. When making the payment, select **Water Quality** and then select the **Industrial** fee category.

**NOTE:** A copy of the ePAY payment voucher must be included with the application as an attachment for Administrative Report 1.0, Item 1.e. An application will not be considered complete without the payment voucher.

1. Annual Water Quality Fee

This fee is assessed to permittees with an authorization in effect on September 1 of each year. The permittee will receive an invoice for payment of the annual water quality fee in November. The payment will be due 30 days from the invoice date. A 5% penalty will be assessed if the payment is not received by TCEQ by the due date. **Annual water quality fee assessments cannot be waived if the permit is in effect, whether active or inactive, on September 1.**

**NOTE:** If an existing permit is in effect on September 1, the permittee will be assessed an annual water quality fee. It is the responsibility of the permittee to submit a cancellation or transfer form in a timely manner. Pursuant to 30 TAC § 305.66, failure to pay fees is good cause for permit denial or revocation. If an applicant has outstanding fees, a proposed permit application will not be considered for approval by the Commission or ED. For account balance information, contact the Revenue Operations Section of the Financial Administration Division.

### Mailed Payments

Return the payment with the billing coupon provided with the billing statement.

Regular U.S. mail:

Texas Commission on Environmental Quality

Financial Administration Division

Cashier’s Office, MC-214

P.O. Box 13088

Austin, TX 78711-3088

Overnight/express mail:

Texas Commission on Environmental Quality

Financial Administration Division

Cashier’s Office, MC-214

12100 Park 35 Circle

Austin, TX 78753

### ePay Electronic Payment

Make an electronic payment through [ePay](https://www3.tceq.texas.gov/epay/index.cfm) on the TCEQ website. Enter the account number provided at the top portion of the facility’s billing statement. Payment methods include MasterCard, Visa, and electronic check payment (ACH). A transaction over $500 can only be made by ACH. When making the payment, select **Water Quality** and then select the **Industrial** fee category.

# HOW DO I CANCEL OR TRANSFER A PERMIT?

1. Permit Cancelation

To cancel an industrial wastewater permit, the facility must complete and submit the Request to Cancel a Water Quality Permit or Registration Form ([TCEQ-20029](https://www.tceq.texas.gov/cgi-bin/comm_exec/forms.pl)) to the Applications Review and Processing Team.

1. Permit Transfer

If the owner has changed (i.e., the charter number has changed), the facility must complete and submit the Application to Transfer a Wastewater Permit or CAFO Permit/Registration ([TCEQ-20031](https://www.tceq.texas.gov/search_forms.html))

If the name of the facility has changed but the owner did not change (i.e., the charter number remains the same), the facility must complete and submit the TCEQ Core Data Form ([TCEQ-10400](https://www.tceq.texas.gov/search_forms.html)).

Submit the completed forms to the Applications Review and Processing Team.

# HOW DO I OBTAIN MORE INFORMATION?

Additional information is available through the [Industrial Wastewater Discharges: The Permit Process webpage](https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html)[[10]](#footnote-11) or by contacting one of the following program areas:

Contact the Water Quality Division with questions in the following specific areas: (512) 239-4671

Applications Review and Processing (administrative report, signatories, permit transfers)

Groundwater Assessment (land application, geology)

Agronomy Assessment (land application, hydraulic-loading rates, soil sampling)

Industrial Permits (technical report, pre-application meetings, reuse)

Municipal Permits (package plants, design and speceification review)

Pretreatment (IUs, POTWs)

Standards Implementation (receiving water assessments, 401 certifications, water quality studies)

Stormwater (BMPs, SWPPP, benchmark sampling)

Water Quality Modeling (oxygen-demand, diffuser analysis, TMDLs, 303(d) listings)

Information from the following areas of TCEQ may also be helpful:

Cashier’s Office (fee payment): (512) 239-0357

Central Records (copies of records and permits on file): (512) 239-2900

Environmental Law Division (legal questions): (512) 239-0600

Publications (agency publications): (512) 239-0028

Revenue Operations Section (account balance information) : (512) 239-0354

UIC Permits Team (Worksheet No. 9): (512) 239-6466

Information from the following state agencies may also be useful:

Texas Secretary of State (information on Charter Numbers) : (512) 463-5555

State Comptroller of Texas (Tax Identification): (800) 252-1386

Railroad Commission of Texas: (512) 463-6838

INSTRUCTIONS FOR  
INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for all new, amendment, and renewal permit applications for TPDES permits and TLAPs.

PLEASE READ THE INSTRUCTIONS CAREFULLY AND FOLLOW THEM WHILE COMPLETING THE APPLICATION.

**If an item does not apply, enter N/A** to indicate the item has been considered. Include separate reported or additional sheets as clearly cross-referenced attachments and provide the attachment number.

1. Application Information and Fees
2. For **new** and **existing** permits, provide the applicant’s legal name. For **existing** permits, provide the TCEQ Permit Number, expiration date, and EPA ID Number. For new permits, enter N/A.
3. Check the box next to the appropriate authorization type.
4. Check the box next to the appropriate facility status.
5. Check the box next to the appropriate permit type.
6. Check the box next to the appropriate application type.
7. If the application if for an amendment **or** modification of an **existing** permit (with or without renewal), briefly describe the proposed changes (e.g., increasing flow from 0.1 MGD to 0.2 MGD, decreasing them monitoring frequency, increasing the irrigation site acreage, adding an outfall, etc.).
8. Check the box next to the appropriate amount submitted for the application fee in the table provided.
9. Provide the payment information for the application fee. If the payment was mailed, provide the check or money order number, check or money order amount, and the name printed on the check or money order. If the payment was submitted via [ePAY](http://www.tceq.texas.gov/epay), provide the voucher number and check the box to confirm a copy of the voucher was attached to the application (see page 14 of the Administrative Report).
10. Applicant Information
11. TCEQ’s Central Registry will assign each customer a Customer Reference Number (CN) that begins with “CN” followed by nine digits. **This is not a permit number**, registration number, or license number.

If this customer has not been assigned a CN, leave the space for the CN blank.

If this customer has already been assigned this number, enter the permittee’s CN.

If the CN is now known, locate it using [TCEQ’s Central Registry Customer Search](http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch)[[11]](#footnote-12) feature.

1. Provide the current legal name of the permittee, as authorized to do business in Texas. The name must be provided exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, on other documents forming the entity, or on documents that are filed in the county where the entity is doing business. You may contact the TX SOS at (512) 463-5555 for more information related to filing in Texas. If filed in the county where doing business, provide a copy of the legal documents that show the legal name.
2. Provide the name, title, and credentials of the person signing the application. The person signing the application must be an executive official that meets signatory requirements in 30 TAC § 305.44.
3. Indicate if this applicant will have overall financial responsibility for the facility. If not, the entity with overall financial responsibility for the facility must apply as a co-applicant.
4. Co-Applicant Information

For all permit applications, whoever has overall responsibility for the operation of the facility must submit the application for a permit as a co-applicant along with the facility owner. The facility operator is not required to apply as co-applicant if they do not have overall responsibility of the facility operations. If co-applicants are required, please indicate the address to be used on the permit and for permit correspondence (either the address provided for Item 1.a or 1.b). Complete the address, CN, and name of the person signing the application as directed for Item 1.a.

If the facility is considered a fixture of the land (e.g., ponds, units half-way in the ground), there are two options. The owner of the land can apply for the permit as a co-applicant or a copy of an executed deed recorded easement must be provided. The deed recorded easement must give the facility owner sufficient rights to the land for the operation of the treatment facility.

If a co-applicant is not required, check the box to indicate Item 3 is not required.

1. TCEQ’s Central Registry will assign each customer a Customer Reference Number (CN) that begins with “CN” followed by nine digits. **This is not a permit number**, registration number, or license number.

If this customer (co-applicant) has not been assigned a CN, leave the space for the CN blank.

If this customer (co-applicant) has already been assigned this number, enter the permittee’s CN.

If the CN is now known, locate it using [TCEQ’s Central Registry Customer Search](http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch)[[12]](#footnote-13) feature.

1. Provide the current legal name of the co-applicant, as authorized to do business in Texas. The name must be provided exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, on other documents forming the entity, or on documents that are filed in the county where the entity is doing business. You may contact the TX SOS at (512) 463-5555 for more information related to filing in Texas. If filed in the county where doing business, provide a copy of the legal documents that show the legal name.
2. Provide the name, title, and credentials of the person signing the application. The person signing the application must be an executive official that meets signatory requirements in 30 TAC § 305.44.
3. Indicate if this co-applicant will have overall financial responsibility for the facility.
4. Core Data Form

Complete and attach one copy of the Core Data Form (TCEQ Form 10400) for each customer. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of the Administrative Report.

1. Application Contact Information

Provide the name and contact information of the person(s) that TCEQ can contact for additional information regarding this application. Below the contact is a box to indicate with a checkmark if the contact is the Administrative contact, the Technical contact, or both. If the contact can answer administrative and technical questions, check both boxes. Two contacts may be provided in the application, one administrative and one technical. If additional contacts are provided, include as an attachment.

1. Permit Contact Information

Provide the name and contact information for two individuals that can be contacted by the agency as needed during the term of the permit. The individuals should be of the level of Vice President or higher of a corporation, an Elected Official of a City or County, or a General Partner of a Partnership. If additional contacts are provided, include as an attachment.

1. Billing Contact Information

An annual fee is assessed to each permittee on September 1 of each year. Provide the complete mailing address where the annual fee invoice should be mailed. The address must be verifiable with the USPS for regular mail delivery (not overnight express mail). [Verify the address](https://tools.usps.com/go/ZipLookupAction!input.action)[[13]](#footnote-14) on the USPS website. Provide the phone number of the permittee’s representative responsible for payment of the invoice.

1. DMR/MER Contact Information

Provide the name and contact information of the person responsible for submitting DMRs or MERs.

**NOTE:** DMRs must be submitted online through TCEQ’s [NetDMR](https://www.tceq.texas.gov/permitting/netdmr)[[14]](#footnote-15) system unless a waiver has been obtained. An electronic reporting account can be established once the facility obtains the permit number.

1. Notice Information

The applicant will be required to publish two public notices in a newspaper of the largest general circulation in the county where the facility is/will be located. Detailed information regarding notice, public comments, and response to comment procedures may be obtained by referring to TCEQ’s web site and 30 TAC Chapters 39, 50, 55, and 281.

The first notice, the “Notice of Receipt of Application and Intent to Obtain a Water Quality Permit” (NORI) must be published within 30 days of the application being declared Administratively Complete. The notice package including the TCEQ declaration of completeness, a notice ready for publication, instructions for publishing the notice, and a publication affidavit will be mailed by the Water Quality Division’s Applications Review and Processing Team (ARP). The address to mail the required information back to TCEQ will be included in the information from ARP.

The second notice, “Notice of Application and Preliminary Decision” (NAPD) must be published within 45 days of a draft permit being filed with the Office of Chief Clerk (OCC). All information necessary to publish the NAPD, as well as proof of publication, will be mailed by the OCC. The address to mail the required information back to TCEQ will be included in the information from the OCC.

1. Individual Publishing the Notices

Provide the name and contact information of the person that will publish the required public notices. Only one person can be designated. This person (not the newspaper) will be contacted by TCEQ to publish the required public notices (NORI and NAPD). This person must be available during application processing since the first notice, the NORI must be published within 30 days of the application being declared Administratively Complete.

1. Method for Receiving the NORI Package

Check the box next to the preferred method for receiving the required first public notice information. The day the application is declared administratively complete, the notice package will be sent to the designated person in Item 9.a via the method chosen.

1. Contact in the Notice

Provide the name and contact information of the **one individual** that will be identified as the notice contact in both required notices, the NORI and NAPD. This individual may be contacted by the public to answer general and specific questions about all aspects of the permit application.

1. Public Place Information

Provide the name and physical address for the public place where the application information will be available for public viewing and copying. The information requested in this portion of the application regards a public place where the complete application, draft permit, and technical summary/statement of basis or fact sheet, if applicable, must be made available for viewing and copying by the general public by the date the first notice is published. Please verify with the proper authority that they will make the application available for public viewing and copying. The public place must be located within the county in which the facility is or will be located. The address must be a physical address. If the facility or outfall is located in more than one county, or if an outfall discharges to a water body that borders more than one county, a public viewing place for each county must be provided. Post office box addresses are not acceptable.

1. Bilingual Notice Requirements

Bilingual notices may be required for new, major amendment, minor amendment or minor modifications, and renewal permit applications. If an elementary school or middle school nearest to the facility offers a bilingual program, the applicant may be required to publish notices in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, requires a bilingual education program to apply to an entire school district should the requisite alternative language speaking student population exist. However, bilingual-speaking students may not be present at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notices in an alternative language is triggered if:

the nearest elementary or middle school, as a part of a larger school district, is required to make a bilingual education program available to qualifying students **and**

the school either has students enrolled at such a program on-site, or has students who attend such a program at another location in satisfaction of the school’s obligation to provide such a program.

The applicant is required to call the bilingual/ESL coordinator for the nearest elementary and middle schools and obtain information to determine if alternative language notices are required. If it is determined that bilingual notices are required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language.

f.Summary of Application in Plain Language Template

Download, complete, and attach the Summary of Application in Plain Language Form (TCEQ Form 20972). Note: If you are subject to the alternative language notice requirements in [30 Texas Administrative Code §39.426](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=66532&p_tloc=&p_ploc=1&pg=17&p_tac=&ti=30&pt=1&ch=39&rl=351)[[15]](#footnote-16), you must also provide a translated copy of the completed plain language summary in the appropriate alternative language as part of your application package.

1. Public Involvement Plan Form

Complete and attach one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment to a permit. This form is not required for renewal or minor amendment applications.

1. Regulated Entity and Permitted Site Information
2. The Regulated Entity Reference Number (RN) is a number issued by TCEQ’s Central Registry to sites (a location where a regulated activity occurs) regulated by TCEQ. This is not a permit number, registration number, or license number.

If this regulated entity has not been assigned an RN, leave this space blank.

If this customer has been assigned this number, enter the permittee’s RN.

If the site of the business is part of a larger business site, an RN may already be assigned for the larger site. Use the RN assigned for the larger site. Use the [TCEQ’s Central Registry Regulated Entity Search](http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=regent.RNSearch)[[16]](#footnote-17) on the TCEQ website to see if the larger site may already be registered as a regulated site at:

If the site is found, provide the assigned RN and provide the information for the site to be authorized through this application below. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of the unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

1. Provide the name of the Project or Site as known by the public in the area where the site is located. The name provided on this application will be used in TCEQ’s Central Registry as the Regulated Entity. An RN will be assigned by Central Registry if this site is not currently regulated by TCEQ.
2. If the facility has an existing permit renewal or amendment and the location address for the facility will remain the same, check **yes**. Otherwise, check **no**.

NOTE: The Edwards Aquifer is located under the boundaries of several counties. If the facility is or will be located in Bexar, Comal, Hays, Kinney, Medina, Travis, Uvalde, or Williamson County, 30 TAC Chapter 213, Edwards Aquifer Rules, may be applicable and the applicant may be required to provide additional information.

1. Provide the name of the owner of the treatment facility**. The plant owner must be the applicant for the permit (same as Item 1)**. Indicate the type of ownership by checking the appropriate box.
2. Indicate the type of ownership of the facility.
3. Provide the name and contact information of the owner of the land where the treatment facility is or will be located. If the owner of the land is not the same as the applicant, attach a long-term lease agreement for the life of the facility. A lease agreement can only be submitted if the facility is not a fixture of the land (e.g., above-ground package plant).

If the facility is considered a fixture of the land (e.g., ponds, units half-way in the ground), there are two options: 1) the owner of the land can apply for the permit as a co-applicant **or** 2) a copy of an executed deed recorded easement must be provided. A long-term lease agreement is not sufficient if the facility is considered a fixture of the land. Attach a copy of an executed deed, if required.

Both the long-term lease agreement and the deed recorded easement must give the facility owner sufficient rights to the land for the operation of the facility.

1. **This item is only applicable for effluent disposal sites (e.g., irrigation, subsurface drip irrigation, evaporation). It is not for the point of discharge to the receiving waters.** Provide the name and contact information of the owner of the effluent disposal site (e.g., irrigation, evaporation), if applicable. If the owner of the land is not the same as the applicant, attach a long-term lease agreement. The lease agreement must give the facility owner uses of the land for effluent disposal. If the term of the lease agreement is less than five years, the permit may be drafted for a term equivalent to the term of the lease.

If ponds (i.e., holding ponds, evaporation ponds) are located on land not owned by the applicant, there are two options: 1) the owner of the land can apply for the permit as a co-applicant **or** 2) the applicant must provide a copy of an executed deed recorded easement. The deed recorded easement must give the facility owner sufficient rights to the land for the operation of the facility and must be recorded in the county where the facility is located. Attach a copy of an executed deed, if required.

If the land is to be acquired by the facility owner, a copy of an executed option to purchase agreement must be submitted. The option to purchase must give a legal description of the land to be purchased and identify when the option to purchase agreement expires. An option to purchase may only be submitted with a new permit application.

1. Provide the name and contact information of the owner of the sewage sludge disposal site. The owner of the sewage sludge disposal site only needs to be provided if authorization for the disposal of sewage sludge on property owned or under the direct control of the applicant is being sought in the permit. If the owner of the land where the sewage sludge disposal site is located is not the same as the applicant, attach a long-term lease agreement for at least the term of the permit. **If sludge is hauled by a registered transporter to a separate site that is permitted or registered by TCEQ, such as a municipal solid waste landfill or a registered land application site, ownership information does not need to be provided.**
2. TPDES Discharge/TLAP Disposal Information

The following provides specific location information used to describe the location of the facility, the discharge route, the effluent disposal site, and other information relevant to the facility.

For every application (TPDES and TLAP), provide responses to Items a – c. If this application is for a TPDES permit, also provide responses to the TPDES-related Items (d – h). If this application is for a TLAP permit, also provide responses to the TLAP-related Items (i – n).

1. If the facility is located on, or the discharge route passes through, Indian Land, check **yes**. Otherwise, check **no**.
2. For **renewal and amendment** applications, attach an 8.5"×11", **reproduced** portion of the most current and original USGS Topographic Quadrangle Map(s) that meets the 1:24,000 scale.

For **new** applications, attach an **original**, full size, 7.5-minute USGS Topographic Quadrangle Map(s). The original USGS Topographic Quadrangle Map(s) must be in color, have a scale, and have the latitude and longitude on **all** four sides of the map. An original, full size, 7.5-minute USGS Topographic Quadrangle map may be obtained by calling the USGS at (888) 275-8747.

For **all** USGS Map submittals, the maps must contain the **applicable information below, clearly outlined and labeled on original and copy portion USGS Map:**

One mile in all directions from the facility. If more than one map is required to show one mile in all directions from the facility, provide each individual map. Do not splice together.

The boundaries of the applicant’s property.

The boundaries of the treatment plant.

The point(s) of discharge (mark with an “X” or a dot).

The discharge route(s) highlighted for a distance of three stream miles or until the effluent reaches a classified segment (only use a yellow or light colored highlighter so that the stream characteristics are visible - do not mark over the discharge route with dark ink).

The boundaries of the effluent disposal site such as the irrigation tract or subsurface drainfield.

All wastewater ponds including storage/holding, treatment, and evaporation ponds.

The sewage sludge disposal site.

All new and future commercial developments, housing developments, industrial sites, parks, schools, and recreational areas.

All springs, public water supply wells, monitor wells, surface water supply intakes, water treatment plants, potable water storage facilities, and sewage treatment facilities within one mile of the facility.

Around the point(s) of discharge and one mile downstream of the discharge route(s), all parks, playgrounds, and schoolyards must be highlighted withthe names provided.

Check the box next to each item to confirm it has been included in the application.

1. If the existing permit includes an accurate description of the location of the sewage disposal site, check **yes**. Otherwise, check **no**. If authorization for disposal of sewage sludge is not being sought in the permit, select N/A.

If **no**, provide this information only if authorization for the disposal of sewage sludge is being sought in the permit. If sewage sludge is disposed of at a site permitted or registered by another entity check **N/A**, it is not necessary to address ownership or the location description of the sewage sludge disposal site. If sewage sludge is generated and authorization for disposal is sought in the permit, provide a location description for the sewage sludge site. The location description must use easily identifiable landmarks found on the USGS map submitted as an attachment to the application. The description must include the distance in feet or miles from road intersections.

1. If the point(s) of discharge and discharge route(s) in the existing permit are correct, check **yes**. Otherwise, check **no**. If authorization to discharge is not being sought, check **N/A** and proceed to Item 9.i.

If **no**, please provide an accurate description. A discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). Two examples of a discharge route are: 1) through a six-inch pipe to a county drainage ditch, thence to Doe Creek, thence to the Brazos River, or 2) from the plant site to an unnamed tributary of Joe Creek, thence to Joe Creek, thence to Quail Creek, thence to the Jane River Below Charles Lake. Classified segments can be found in 30 TAC § 307.10 Appendix A and segment location descriptions can be found in 30 TAC § 307.10 Appendix C. **The issuance of a permit does not grant a permittee the right to use the specific discharge route. The issuance of a permit does not grant the permittee the right to use private or public property for conveyance of wastewater along the discharge route described above. The permittee must acquire all property rights as may be necessary to use the discharge route.**

**Please NOTE: The relocation of the discharge point or discharge route may require a Major Amendment to the permit.**

1. Provide the name of the city or cities in which the outfall(s) are/will be located or nearest to where the outfall(s) are/will be located.
2. Provide the county or counties in which the outfall(s) are/will be located.
3. If treated effluent is/will be discharged to a city, county, state highway right-of-way, or flood control district drainage ditch, check **yes**. Otherwise, check **no**. The wastewater permit sought by this application does not grant authorization to discharge to a city, county, state highway right-of-way, or flood control district drainage ditch; authorization must be obtained from the owner of the structure prior to commencement of discharge. If **yes**, please read the following and answer the remaining questions as appropriate.

For **renewal** applications, check the box to indicate whether the entity granted authorization.

For **new and amendment** applications, check the box to indicate whether the entity granted authorization or if authorization is still pending. If pending, provide a copy of the letter sent to the owner of the drainage structure with the application. Upon receipt, provide a copy of the response letter.

1. For permits that have a permitted average flow of 5 MGD, or for applications requesting an increase in permitted average flow to 5 MGD or greater, provide the name(s) of each county or counties within 100 statute miles downstream of the point(s) of discharge.
2. **For TLAPs**, if the existing permit includes an accurate description, check **yes**. Otherwise, check **no**. If authorization for land disposal is not being sought in the permit, select **N/A** and proceed to Item 9.n.

If **no** or if this is an application for a new site, provide an accurate location description of the effluent disposal site (e.g., irrigation, subsurface drip irrigation, evaporation). Do not provide directions to the disposal site. The location description must use easily identifiable landmarks found on the USGS map submitted as an attachment to the application. The description must include the distance in feet or miles from road intersections. Two examples of acceptable location descriptions are: 1) The effluent disposal site is located 2,600 feet southwest of the intersection of State Highway 20 and Farm-to-Market Road 1200; 2) The effluent disposal site is located 1.2 miles east of the intersection of Farm-to-Market Road 345 and County Road 10. **NOTE:** A **major amendment** is required in order to change the disposal site location or increase acreage.

1. Provide the name of the city or cities in which the disposal site is/will be located or nearest to where the disposal site is/will be located.
2. Provide the county or counties in which the disposal site is/will be located.
3. For a **TLAP**, provide a description of how the effluent is routed from the treatment facility to the effluent disposal site. An example of the flow of effluent to the disposal site is: from the treatment plant through a six-inch pipe to a one-acre holding pond; thence via a four-inch pipe to the irrigation site. **NOTE:** A **major amendment** is required in order to use an effluent disposal site different than the one described in an existing permit.
4. For a **TLAP**, provide the name of the nearest watercourse to the effluent disposal site to which rainfall runoff might flow if not contained within the disposal site. The name of the nearest watercourse is not included as part of the TLAP but is used to assist staff in determining the watershed in which the facility is/will be located.
5. Miscellaneous Information
6. If any person formerly employed by TCEQ represented this company and was paid for service regarding this application, check **yes**. Otherwise, check **no**.

If **yes**, list each person formerly employed by TCEQ who represented this company and was paid for services regarding the application. Any violation of the Health and Safety Code, TWC, or Government Code relating to conflict of interest may result in denial of the application and filing of charges with the appropriate office.

1. Delinquent Fee Information

**Note:** Effective September 1, 2006, TCEQ will no longer issue, amend, or renew permits, registrations, certifications, or licenses to an entity or person who is delinquent on a penalty or fee owed to TCEQ. TCEQ will not declare any application administratively complete that is submitted by a person or entity who is delinquent on a fee or penalty until the fee or penalty is paid, or if on an approved installment plan, that payments under the plan are current. TCEQ will withhold final action on an application until the fee or penalty is paid and the account is current, if after the application is considered administratively complete, we discover that the owner or entity who submitted the application is delinquent on a fee or penalty.

Identify whether the facility owe any fees to TCEQ. If fees are owed, please identify the type of fee or penalty owed, the amount past due, and the TCEQ identifying number. Visit the TCEQ website for further information on the [Delinquent Fee & Penalty Protocol](https://www.tceq.texas.gov/agency/fees/delin/index.html)[[17]](#footnote-18).

1. Penalty Information

Identify whether the facility owe any penalties to TCEQ. If penalties are owed, please identify the type of fee or penalty owed, the amount past due, and the TCEQ identifying number. For penalties, please provide the TCEQ docket number. Visit the TCEQ website for further information on the Delinquent Fee & Penalty Protocol.

1. Signature Page

Each entity applying for the permit is required to sign the certification statement. The certification must bear an **original (wet-ink) signature** of a person meeting the signatory requirements specified under 30 TAC § 305.44, preferably in blue ink. **NOTE:** Copies of the Signature Page may be used in the copies of the application that are also required to be submitted in addition to the original.

If there are any questions or additional information is needed concerning the signatory requirements discussed above, please contact TCEQ’s Environmental Law Division at (512) 239-0600.

## **30 TAC § 305.44 **- Signatories to Applications****

### All applications shall be signed as follows:

For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

For a partnership or joint venture, the application shall be signed by a general partner or principal executive officer as identified in the partnership agreement.

For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a state and/or federal agency includes Directors of Division, Regional Directors, the Chief Executive Officer of the agency, or a Senior Executive Officer having responsibility for the overall operations of a principal geographic unit of the agency (i.e., Reginal Administrator of the EPA).

For Individuals and Sole Proprietorships, the application shall be signed by the individual him/herself, including the first, middle and last name.

For Utility District, the application shall be signed by at least the level of District Manager, Vice President or a member of the Board of Directors.

For Water Authorities, the application shall be signed by a Regional Manager.

For Independent School Districts, the application shall be signed by at least the level of the Assistant Superintendent or a member of the Board.

For Trust or Estates, the application for shall be signed by the trustee(s), beneficiaries and executor of the trust or estate, as identified in the trust agreement

INSTRUCTIONS FOR  
INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.1

The following information **is required** for all **new** and **major** **amendment** permit applications.

1. Affected Landowner Information
2. The following information is required for the affected landowner list and other interested parties. Please use the format described below. **See Appendix 5 of these instructions for examples of landowner maps.** Affected landowner information is critical to the processing of the application and any errors may cause significant delays in processing the application.

The landowners list is used by TCEQ to notify affected landowners of the application by mail. These individuals, as well as others, may provide comments on the application or request a contested case hearing on the application.

1. All applicants shall submit a map that clearly shows the following:

the applicant’s property boundaries (including all contiguous property owned by the applicant);

the location of the treatment facility within the applicant’s property; and

the property boundaries of landowners surrounding the applicant’s property. **NOTE 1:** If the application is a **major amendment** for a **lignite mine**, the map shall include the property boundaries of all landowners within a ½ mile radius of the newly proposed pond(s)/outfall(s). If notice has previously been given to all landowners within the ½ mile radius of the newly proposed pond(s)/outfall(s), identification of landowners isn’t required; however, a written statement confirming that notice was previously given is required. **NOTE 2:** For all other mines, all landowner’s adjacent to the property boundaries where the mine is located must be identified.

1. For applications to discharge treated effluent to waters in the state, in addition to the landowners in **Item 1.a.i** above, the map must clearly show the following:

the discharge point;

the highlighted discharge route for one-mile downstream from discharge point;

the property boundaries of all landowners surrounding the discharge point and on both sides of the discharge route for one full stream-mile downstream of the discharge point; or

if the discharge point is to a lake, bay estuary, or affected by tides, the property boundaries of landowners along the shoreline for a ½-mile radius from discharge point.

1. For applications to use land disposal of effluent, in addition to the landowners in **Item 1.a.i**. above, the map must clearly show the following:

the property boundaries of the effluent disposal sites;

all effluent holding/storage/treatment/evaporation ponds; and

the property boundaries of all landowners surrounding the disposal site.

1. For sewage sludge beneficial use land application site and incineration site, the map must clearly show:

the property boundaries of the beneficial use land application site within the applicant’s property boundaries; and

the property boundaries of the landowners within **¼-mile** of theapplicant’s property boundaries where the beneficial use land application site is located.

1. For sewage sludge disposal (monofill), the map must clearly show the following:

the property boundaries of the sludge disposal site within the applicant’s boundaries; and

the property boundaries of the landowners within **½-mile** in all directions from the applicant’s property boundaries where the sewage sludge disposal site is located.

Two examples of affected landowner maps have been provided in Appendix 5 of these Instructions.

Example 5a

For increases in flow at a plant and disposal of wastewater via irrigation, landowners from **Items** **1.a.i** and **1.a.iii** above must be shown. If the application is for a new permit in which irrigation is being proposed, landowners from **Items** **1.a.i** and **1.a.iii** must be shown.

Example 5b

The second map shows all the landowners adjacent to the applicant’s property, surrounding the point of discharge, and all landowners along the discharge route for a distance of one mile downstream. In this map, landowners 1-10 must be identified as affected landowners with the landowner’s name and mailing address submitted with the application in the format described in Item b below.

If there are questions as to which landowners must be identified, call the Applications Review and Processing staff. The landowners map should be a city or county plat, another map sketch, or a drawing with a scale adequate enough to show the cross-referenced affected landowners. The landowners map must include a scale so that TCEQ can verify that all landowners within the required distances have been identified.

1. To expedite processing of the application, TCEQ requires applicants to provide the affected landowner list in mailing label format (Avery 5160). The electronic copy of the mailing labels can either be included with the electronic copy of the application uploaded in PDF format or, if provided separately from the application, the mailing labels can be provided in Microsoft Word document file by email. Each name and corresponding address must appear only once on the mailing labels or USB Drive even if the entity owns more than one tract of land identified on the landowner map. Please remove duplicate names and addresses.

Please ensure the names and mailing addresses are in Avery 5160 label format (3 columns across, 10 rows down, for a total of 30 labels per page.

Names and addresses must be typed in the format indicated below and in accordance with the US Postal Service guidelines for machine readability. Each letter in the name and address must be capitalized, contain no punctuation, and the appropriate two-character abbreviation must be used for the state. Each entity listed must be blocked and spaced consecutively as shown below.

EXAMPLES:

SHARMA DUNN

RR 1 BOX 34

SEA TX 76724MR AND MRS EDWARD PEABODY

1405 MONTAGUE LN

SEA TX 76710-1234BRIAR LP

PO BOX 249

SEA TX 76710-0249

1. All landowners identified must be clearly cross-referenced to a list of the landowner names and complete mailing addresses. The cross reference must be in consecutive numeric order (1, 2, 3). The complete list of affected landowners must be provided on a **separate sheet of 8.5"×11" paper**. DO NOT USE THE PROPERTY TAX TRACT NUMBER SYSTEM.
2. Provide the source of the landowners names and mailing address in the space provided.
3. If any permanent school fund land is affected by this application, check **yes**. Otherwise, check **no**. This information is required by the Texas Water Code § 5.115. If **yes**, provide the location of the property and foreseeable impacts and effects this application has on the land(s).
4. Original Photographs

Photographs of each of the following must be attached to the application:

At least one photograph of the new and expanded treatment unit(s) location.

At least two photographs of the existing/proposed discharge point and as much area downstream (photo 1) and upstream (photo 2) as can be captured on film. If the discharge is to an open water body (e.g., lake, bay), the discharge point should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.

At least one photograph of the existing/proposed effluent disposal site.

A plot plan or map that indicates the location of each photograph and the direction (e.g., northwest) the camera was facing when the photograph was taken.

Check the box next to each item to confirm it was included with the application.

INSTRUCTIONS FOR  
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
ADMINISTRATIVE REPORT ATTACHMENTS

Supplemental Permit Information Form (SPIF)

This form applies to TPDES permit applications.

This form applies to TPDES permit applications only. Complete and attach the Supplemental Permit information Form (SPIF) (TCEQ Form 20971). The application will not be declared administratively complete without this form being completed in its entirety including all attachments.

Water Quality Permit Payment Submittal Form

The application fee is required to be paid at the time the application is submitted. Failure to submit payment at the time the application is filed will cause delays in processing your application. Payment of the fee may be made by check or money order, payable to TCEQ, or through [ePAY](http://www.tceq.texas.gov/epay) (electronic payment through the web).

**Mailed Payments:**

Complete and submit this Water Quality Permit Payment Submittal Form. The application fee is submitted to a different address than the application form. Read the Water Quality Permit Payment Submittal Form for further instructions.

[ePAY](http://www.tceq.texas.gov/epay) **Electronic Payment:**

When making the payment you must select Water Quality, and then select the fee category “Industrial”. You must include a copy of the payment voucher with your application. Your application will not be considered complete without the payment voucher.

Attachment 1

Complete this attachment if the facility owner or co-applicant is an individual. The address provided must be the individual’s home address. The address must be verifiable with the USPS for regular mail delivery (not overnight express mail). [Verify the address](https://tools.usps.com/go/ZipLookupAction!input.action) on the USPS website. If the operator must apply as co-applicant and is an individual, provide a separate sheet for information on the operator. As the facility owner, you need to provide the Customer Reference Number (CN).

Checklist of Common Deficiencies

To ensure the timely processing of this application, please review the items below and indicate by checking **Yes** that each item is complete and in accordance applicable rules. If an item is not required this application, indicate by checking **N/A** where appropriate. Complete this checklist for each permit application. Please do not submit the application until the items below have been addressed.

**End of Instructions for TCEQ-Form 10411.**

INSTRUCTIONS FOR  
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
TECHNICAL REPORT 1.0

READ THE INSTRUCTIONS CAREFULLY WHILE COMPLETING THIS APPLICATION.

This technical report **is required** for all TPDES permit and TLAP applications.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate the item has been considered.

Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided.

1. Facility/Site Information
2. Provide a brief narrative description of the general nature of the business and type of industrial and commercial activities at the plant, including what specific products are manufactured or produced, what services are provided, and all applicable SIC codes (up to 4) which best reflect the principal products or services provided by the facility.
3. Provide a detailed description of the wastewater-generating processes at the facility. Include information such as any modifications to process wastewater/stormwater handling facilities, the start-up or shutdown of any process or treatment units, any wastewater recycle or reuse projects, and any changes in production throughput. Attach additional pages if needed.
4. Provide a list of raw materials, major intermediates, and final products handled at the facility that may be reasonably expected to be present in effluent either discharged or disposed of via the authorizations requested in this application. Provide corresponding CASRNs. Be specific and avoid trade names. For commercial (non-manufacturing) facilities, provide a list of chemicals used on-site which could impact effluent quality. Attach additional pages if needed.

**NOTE:** If a material meeting the description above is confidential information as defined by 30 TAC § 1.5(d), the requirements of this provision may be satisfied by identifying the existence of the material and providing non-confidential information about the material. The applicant must submit adequate information about the material, as determined by the ED, for the ED to complete the technical review.

1. Attach a facility map (drawn to scale) showing the following information:

Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.

The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, and outfalls (also include locations of sampling points if significantly different from outfall locations).

1. If this is a new permit application for an existing facility, check **yes**. Otherwise, check **no.**

If **yes**, provide background information which explains the reason for pursuing an authorization to dispose of wastewater (e.g., new process which generates wastewater, enforcement action, etc.).

1. If the treatment facility or disposal site is/will be located above the elevation of the 100-year frequency flood event, check **yes.** Otherwise, check **no.** Provide the source(s) of data used to make this determination.

If **no**, provide the elevation of the 100-year frequency flood plain and describe any existing/proposed protective measures, including tailwater and rainfall run-on controls, to prevent flooding of the treatment facility and disposal area. If applicable, provide the size of dikes or other protective structures being utilized. Attach a map (i.e., FEMA map) showing the location of the treatment plant/disposal area within the 100-year frequency flood level. **NOTE:** Treatment units and disposal sites must be protected from inundation from a 100-year frequency flood event.

1. For **new or major amendment** permit applications, if any construction operations will result in a discharge of fill material into a water in the state, check **yes** and complete Item 1.h. Otherwise, check **no,** or **N/A** if this is a renewal application.
2. If **yes** to Item 1.g, and the applicant has applied for a USACE CWA Chapter 404 Dredge and Fill permit, check **yes** and provide the 404 Dredge and Fill Permit Number for purposes of tracking the 401 certifications by TCEQ. Otherwise, check **no**.

If **no**, provide the approximate date of application submittal to the USACE.

**NOTE:** It is the responsibility of the applicant to contact the USACE to obtain all necessary authorizations, including a USACE CWA Chapter 404 Dredge and Fill permit, if necessary. TCEQ is responsible for certifying that federal permits for the discharge of fill material into waters in the state are consistent with the state water quality standards. This information about the USACE CWA 404 Dredge and Fill permit is requested to ensure the most efficient review of all actions by TCEQ on a wastewater discharge permit that also requires a USACE permit.

1. Treatment System
2. List any physical, chemical, or biological treatment process(es) that are used/proposed to treat wastewater authorized or to be authorized for disposal at this facility. This list should be specific and include each unit in the treatment process and dimensions (e.g., dissolved air flotation, chemical precipitation, equalization, pH control, aeration, steam stripping, clarification, anaerobic lagoon). Please specify the associated outfall for each treatment unit and which wastewaters are chlorinated prior to discharge. Attach additional pages if needed.
3. Attach a flow schematic **with a water balance** showing all sources of water, operations contributing wastewater to the effluent, each treatment unit (including any impoundments), and each outfall/point of disposal. This schematic must include all process wastewater, non-process wastewaters, cooling water, domestic wastewater, and stormwater flows. The water balance must show average flows at intake, between units (including treatment units), and at the final discharge or disposal point. If a water balance cannot be determined (e.g., for certain mining activities), the applicant may instead provide a pictorial description of the nature and amount of any sources of water and any collection and treatment measures. (See Appendix 3 for an example of a water balance schematic.)
4. Impoundments

If impoundments (e.g., lagoons or ponds) are/will be used for treatment, disposal, containment, or evaporation of wastewater, check **yes.** Otherwise, check **no.**

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a – 3.e** for **new or proposed** impoundments.

For permit applications with more impoundments than spaces provided, copies of page 4 numbered accordingly (i.e., page 4a, 4b, etc.) may be used to provide the appropriate information on the additional impoundments.

1. Complete the table with the following information for each existing, new, or proposed impoundment:

**Use Designation:** Indicate the appropriate use designation for each existing or proposed impoundment by entering **T** for Treatment, **D** for Disposal, **C** for Containment, or **E** for Evaporation.

**Associated Outfall Number:** If discharge occurs from the impoundment, provide the outfall associated with the impoundment. If there are multiple impoundments contributing to an individual outfall, enter the same outfall for the respective ponds. Enter N/A if there are no discharges associated with the impoundment.

**Liner Type:** Review the following liner types and specifications and indicate which liner type is or will be used with one of the following letter designations: **C** for Compacted clay liner; **I** for In-situ clay liner; **S** for synthetic/plastic/rubber liner; or **A** for alternative Liner.

Compacted Clay Liner (C): The soil liner shall contain at least 3 feet, along the sides and bottom, of clay-rich soil material having more than 30% passing a 200-mesh sieve, liquid limit equal to or greater than 30, and a plasticity index equal to or greater than 15, compacted in lifts of no more than 8 inches, to 95% standard proctor density at the optimum moisture content to achieve a permeability equal to or less than 1 × 10-7 cm/sec.

In-Situ Clay Liner (I): The soil liner shall contain at least 3 feet, along the sides and bottom, of clay-rich soil material having more than 30% passing a 200-mesh sieve, liquid limit equal to or greater than 30, and a plasticity index equal to or greater than 15, with a surface scarified and recompacted to achieve a permeability equal to or less than 1 × 10-7 cm/sec.

Synthetic/Plastic/Rubber Liner (S): The soil liner shall be either a plastic or rubber membrane liner at least 40 mils in thickness which completely covers the sides and the bottom of the pond and which is not subject to degradation due to reaction with wastewater with which it will come into contact. If this lining material is vulnerable to ozone or ultraviolet deterioration it should be covered with a protective layer of soil of at least 6 inches. A leak detection and leak collection system is also required.

Alternate Liner (A): The soil liner is not one of the above specified liner types. An alternative liner requires review and approval from TCEQ. For new or proposed alternate linters, attach documentation of prior TCEQ approval or sufficient information for TCEQ review and approval. Please contact the Industrial Permits Team with questions regarding what information is needed for review and approval.

**Leak Detection System:** If any leak detection systems are in place or are planned enter **Y** for yes. Otherwise, enter **N** for no.

**Groundwater Monitoring Wells:** If any groundwater monitoring wells are in place or are planned enter **Y** for yes. Otherwise, enter **N** for no.

**Groundwater Monitoring Data:** Attach any existing groundwater monitoring data. The data should be summarized and evaluated to determine whether there is a statistically significant trend in concentrations or a statistically significant difference compared with background-concentrations. The summary should also include information on the monitoring wells such as the driller’s logs, well completion data, groundwater elevations, sampling procedures, etc.

**Dimensions:** Provide the following information for each impoundment using units indicated:

length

width

depth from water surface at maximum capacity—excluding two feet of freeboard for all proposed impoundments and excluding the amount of freeboard required for all existing impoundment

depth of freeboard— indicate the design freeboard for proposed impoundments and the required freeboard for existing impoundments

for impoundments with irregular shapes, provide surface area (instead of length and width), the average depth

**Compliance with 40 CFR Part 257, Subpart D:** Indicate with a **Y** or **N** if compliance is required.

**Date of Construction:** Enter the date construction of the impoundment commenced (mm/dd/yy). Enter TBD (To Be Determined) for proposed impoundments which the construction date is unknown.

1. Attach any available data on the liner, leak detection system, or groundwater monitoring and groundwater impacts. If information was submitted for an item, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed,** if applicable.
2. Liner Data

All new impoundments shall meet and provide a reference to the attachment requirements of one of the following liner types: Compacted clay liner (C); In-situ clay liner (I); or Synthetic/plastic/rubber liner (S). If the pond liner does not meet these specifications it is considered an Alternate liner (A). Provide the following information as appropriate for the liner type indicated in Item 3.a.

For impoundments using a **compacted clay liner**: liner permeability, liner thickness, test results on liner compatibility with appropriate wastes, test results from clay borrow source, test results from liner construction, etc.

For impoundments using **in-situ soils as the liner**: soils boring information, the depth of impermeable clay soils, test results on soil permeability, procedures for compaction of top layer of in-situ soil, etc.

For impoundments using a **synthetic liner**: liner material, liner thickness, test results on liner compatibility with appropriate wastes, test results from installation, documentation of the leak detection and leachate collection system, etc.

For impoundments using an **alternative liner**: a description of the alternate liner, including liner material, liner thickness, and test results on liner compatibility with appropriate wastes, and any additional technical information necessary for an evaluation.

1. Leak detection system or groundwater monitoring data

If the facility will use a leak detection system, describe the leak detection system for each pond **or** provide any available groundwater monitoring well data. All groundwater monitoring wells must be numbered and accurately located on a map submitted with the application.

1. Groundwater Impacts

If the bottom of the pond is **not** or **will not** be above the seasonal high-water table in the shallowest water bearing zone, provide additional information describing the depth of the seasonal high water in the shallowest water bearing zone in relation to the depth of the bottom of the new or proposed impoundment and how this may or may not impact groundwater.

**For TLAP applications Items 3.c -3.e are not required, proceed directly to Item 4.**

1. Attach an original USGS quadrangle map which accurately locates and identifies water supply wells and monitor wells within a ½-mile radius of the impoundments. Copies of the original USGS maps with the appropriate information may suffice if they are color copies of original quality and scale and all the features of the original map and information required by this item are legible and can be clearly deciphered. The well locations may also be provided in the map required in Item 8.b of the Administrative Report.
2. Attach copies of State Water Well Reports (driller’s logs, completion data) and data on depths to groundwater for water supply wells and monitor wells, including a description of how the depths to groundwater were obtained. Water well reports and groundwater information from TWDB, Texas Department of Licensing and Registration, and TCEQ records files may be obtained by accessing the [TWDB Water Data Interactive (WDI)](https://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer)[[18]](#footnote-19).
3. Attach information pertaining to the groundwater, soils, geology, etc. that has been or can be used to assess the potential for migration of wastes from the impoundments and the potential for contamination of groundwater or surface water. Additional data may include logs and location plats of borings, soil analyses, water quality data, etc.
4. Outfall/Disposal Method Information

Complete the tables with the following information regarding each outfall/point of disposal authorized or to be authorized by this permit. If there are more outfalls/points of disposal at the facility than the spaces provided, copies of page 6 or 7 numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

**NOTE:** For TLAP applications, provide the disposal method and the individual application area (I), evaporation pond (E), or subsurface drainage system (S) by entering the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** **Number**. (e.g., **E1** for an evaporation pond 1, **I2** for an individual application area No. 2, etc.).

**Outfall Latitude and Longitude:** Provide the [latitude and longitude](https://www.tceq.texas.gov/gis/sqmaview.html)[[19]](#footnote-20) of each outfall in decimal degrees to six decimal places. For TLAP applications, the specified sample point will suffice as the final point of disposal for location information purposes and do not need to be included in this table.

**Outfall Location Description:** Provide a narrative description of each outfall or final point of disposal (e.g. Outfall 001; at the outlet weir of the treatment plant prior to entering the river or where effluent is land applied via the irrigation system on tract 3).

**Description of Sampling Points:** Provide a narrative description of the sampling point for each outfall if the sampling point is not at the physical outfall location.

**Outfall Flow Information - Permitted and Proposed:** Provide the daily average and maximum flow information in MGD (e.g., 0.5 MGD daily average and 1.0 MGD daily maximum). Use the permitted flow for existing outfalls and the proposed flow for proposed outfalls or amendment requests to change the flow of a permitted outfall. If proposed, provide the anticipated date of commencement of discharge.

**Outfall Discharge - Method and Measurement:** If discharge via a permitted/proposed outfall are through a gravity/flow-through system or a result of pumping, enter **Y** for yes. Otherwise, enter **N** for no.

Provide the type of flow measurement device (e.g., V-notch weir, Totalizer, Parshall Flume) used/proposed to measure flow from discharge via the permitted/proposed outfall; from the treatment system to the storage/disposal system for TLAPs, or from the storage system to the irrigation system for TLAPs.

**Outfall Discharge -** **Flow Characteristics:** Enter the duration of the discharge in hours/day, days/month, and months/year. Existing permits should base the response on historical discharge data. New or amendment applications should base the response on design flow rates and discharge durations. **NOTE:** This information should be representative of periods of the maximum volume or duration of discharge anticipated at the facility. If necessary, attach additional information to clarify or explain an atypical discharge duration or frequency.

If the permitted or proposed discharge is continuous, intermittent, or seasonal, enter **Y** for yes. Otherwise, enter **N** for no.

A **continuous discharge** is defined (40 CFR § 122.2) as a discharge that occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

A **seasonal discharge** is considered to be a continuous discharge which typically only occurs during a fraction of a calendar year (e.g., a peaking power plant which primarily operates and discharges during summer months). The response to this item should correspond to the information provided for discharge duration.

**Wastestream Contributions:** List each individual wastestream to be discharged or disposed of via each outfall. Provide the approximate volume and the percent contribution of the total discharge for each wastestream. (e.g., for a total flow of 1.2 MGD – process wastewater: 0.22 MGD/18%; boiler blowdown: 0.18 MGD/15%; once through cooling water: 0.65 MGD/54%; domestic wastewater: 0.15 MGD/13%).

**NOTE:** Wastestreams generated from the following processes may not be included with low-volume waste sources. These wastestreams must be listed as individual wastestream contributions to an outfall.

Combustion residual leachate

Flue gas desulfurization

Flue gas mercury control

Gasification

1. Blowdown and Once-Through Cooling Water Discharges
2. If this facility uses/proposes to:

use cooling towers which discharge blowdown or other wastestreams generated from the use of cooling towers;

use boilers which discharge blowdown or other wastestreams generated from the use of boilers; or

discharge once-through cooling water via any outfall(s)**.**

**NOTE:** If the facility uses/proposes to use cooling towers **or** once-through cooling water, **Item 12** **is required**.

1. If **yes** to any of the above, attach SDS with the following information on all chemical additives including biocides used for cooling towers, boilers, and once-through cooling discharges.

Manufacturer’s Product Identification Number

Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)

Chemical composition including CASRN for each ingredient

Classify product as non-persistent, persistent, or bioaccumulative

Product or active ingredient half-life

Frequency of product use (e.g., 2 hrs/day once every two weeks)

Product toxicity data specific to fish and aquatic invertebrate organisms. If this data is for the whole product or active ingredient, provide the concentration of the whole product or the concentration of the active ingredient in the respective wastestream.

For guidance in determining the product classification, refer to pages 143-146 of the Procedures to Implement the Texas Surface Water Quality Standards (RG-194), June 2010. If aquatic toxicity information is not available, additional effluent biomonitoring may be required.

Provide SDS with the information specified above for each specific wastestream and the associated chemical additives, and specify which outfalls are affected. If the SDS do not contain the information specified above, it will be necessary to obtain the information from the manufacturer.In addition S, attach a summary for each specific wastestream and the associated chemical additives and specify which outfalls are affected.

1. **Cooling Towers and Boilers:** If the facility currently or proposes to use cooling towers or boilers that discharge blowdown or other wastestreams, provide the total number of cooling towers and boilers on-site and the daily average and maximum volume of total blowdown discharged to the outfall(s).
2. Stormwater Management

If any existing/proposed outfall(s) discharge stormwater associated with industrial activities, as defined at 40 CFR 122.26(b)(14), check **yes.** Otherwise, check **no.**

If **yes**, provide a brief description of each outfall whose discharge contains a stormwater associated with industrial activities component which includes the industrial processes and activities that occur outdoors or in some manner which may result in exposure of the materials to precipitation or runoff in areas where runoff is generated (e.g., coal pile storage area, equipment washdown area, maintenance chemical storage area, etc.).

**NOTE**: If any existing/proposed outfall(s) discharge consist of either 1) solely stormwater associated with industrial activities or 2) stormwater associated with industrial activities commingled with any allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6, Worksheet 7.0 **is required**. See instructions for Worksheet 7.0 for further guidance.

**NOTE:** Analytical testing is required for pollutants listed in Table 3 of Worksheet 2.0 which are believed to be present as a result of contact with stormwater runoff contributing to the discharge via the appropriate outfall(s).

1. Domestic Sewage, Sewage Sludge, and Septage Management and Disposal

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

1. Check the box next to the method used/proposed for treatment/disposal of domestic sewage and domestic sewage sludge at the facility and complete Item 7.b or Worksheet 5.0, if directed to do so:

Domestic wastewater is routed (i.e. directly connected or transported) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. **Complete Item 7.b**.

Domestic sewage is disposed of via on-site septic tank and drainfield system. **Complete Item 7.b**.

Domestic treatment sludges or domestic septage **ARE commingled** with industrial wastewater treatment sludges prior to sludge use or disposal. **Proceed to Item 8**.

Industrial wastewater and domestic sewage are treated separately. Domestic treatment sludges and domestic septage **ARE NOT commingled** with industrial wastewater treatment sludges prior to sludge use or disposal. **Complete Worksheet 5.0**.

Facility is a POTW. **Complete Worksheet 5.0**.

Domestic sewage is not generated on-site. **Proceed to Item 8**.

If domestic sewage is managed by a method other than those mentioned above (e.g., portable toilets), describe management of the waste and disposal method. **Complete Item 7.b**.

1. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste disposal facility which receives the domestic sewage/septage. If the domestic sewage/septage is hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.
2. Improvements or Compliance/Enforcement Requirements
3. If this facility is currently required to meet any implementation schedule for the construction, operation, or upgrading of its wastewater treatment equipment for compliance or enforcement requirements, check **yes.** Otherwise, check **no.** This includes: Federal, State, or local authority permit conditions; administrative, enforcement, or court orders; enforcement compliance schedule letters; stipulations; or grant and loan conditions.
4. If the facility has completed or plans for any improvements or construction projects, check **yes.** Otherwise, check **no.**
5. If **yes** to either 8.a **or** 8.b, provide a brief summary of the requirements which includes a background discussion of the requirements, an identification of each compliance/abatement requirement, and a listing of the required and projected final compliance dates.
6. Toxicity Testing

If the applicant or anyone at the facility has any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of the discharges or on a receiving water in relation to the discharge within the last three years, check **yes.** Otherwise, check **no.**

If **yes**, identify each test and describe the purpose of each test. Additionally, attach a copy of all tests performed that have not been previously submitted to TCEQ or EPA.

1. Off-Site/Third Party Wastes
2. If this facility receives/will receive wastes from off-site sources for any of the following activities: 1) treatment in this facility, 2) disposal on-site via land application (irrigation, evaporation, etc.), or 3) discharge via a permitted outfall, check **yes.** Otherwise, check **no.**

If **no**, proceed to Item 11. If **yes**, complete Items 10.b through 10.d. **NOTE:** Review 40 CFR Part 437 - Centralized Waste Treatment to determine the applicability of these guidelines to this facility.

1. Attach a detailed description which: 1) includes a list of the waste(s) received (including volumes, characterization, and compatibility with on-site wastes), 2) identifies the source(s) of the waste(s)(name and address of the generator), and 3) describes the relationship of the waste source(s) with facility activities. Be specific in identifying off-site waste sources, in characterizing these wastes, and in assessing the compatibility of these wastes with the existing or proposed treatment available at the facility.
2. If wastewater from another TCEQ, NPDES, or TPDES permitted facility is commingled with this facility’s wastewater after final treatment and prior to discharge via the final outfall/final point of disposal to be authorized by this permit, check **yes.** Otherwise, check **no.**

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and attach a copy of any agreements or contracts relating to this activity.

1. If this facility is a POTW that accepts process wastewater from any SIU and has or is required to have an approved pretreatment program under the NPDES/TPDES program, check **yes.** Otherwise, check **no.** **NOTE:** Certain political subdivisions were created by the State of Texas to provide regional municipal and industrial wastewater treatment and the wastewater treatment facilities owned by these political subdivisions are POTWs.

If **yes**, **complete Worksheet 6.0** of this application.

1. Radioactive Materials

Radioactive materials shall not be discharged in excess of the amount regulated by 30 TAC Chapter 336 (Radioactive Substance Rules) in accordance with 30 TAC § 7.118.

1. If radioactive materials are/will be mined, used, stored, or processed at this facility, check **yes.** Otherwise, check **no.**

If **yes**, list the radioactive materials and provide the results of at least one analysis of the effluent in pCi/L for all radioactive parameters which may be present. (This requirement is not applicable to radioactive materials fixed in a device or instrument.) If this application is for a new facility, submit results from similar facilities, treatability studies, or literature sources.

1. If the applicant or anyone at this facility has any knowledge or reason to believe that radioactive materials may be present in the discharge, including NORM in the source waters or on the facility property, check **yes.** Otherwise, check **no.**

If **yes**, list the radioactive materials and provide the results of at least one analysis of the effluent in pCi/L for all radioactive parameters which may be present (this requirement is not applicable to radioactive materials fixed in a device or instrument). If this application is for a new facility, submit results from similar facilities, treatability studies, or literature sources. Do not include information provided in response to Item 11.a.

1. Cooling Water

**NOTE:** The following items are not required for TLAPs.

1. If the facility uses/proposes to use water for cooling purposes, check **yes and complete Items 12.b thru 12.f**, as directed.

If the facility does not use/propose to use water for cooling purposes, check **no**.

If the cooling water system has been decommissioned and will not use water for cooling purposes during the permit term, select **decommissioned, provide the date it ceased operation, and stop here**.

If the cooling water system will be decommissioned during the permit term and will no longer use water for cooling purposes after a specific date, check **to be decommissioned, provide the date the facility anticipates ceasing operation, and stop here**.

1. If cooling water is/will be obtained from a groundwater source (i.e., on-site well), check **yes** **and stop here**. Otherwise, check **no** **and continue**.
2. Cooling Water Supplier
3. Complete the table with the following information:

Owner - Provide the legal name of the owner of each individual CWIS(s) that provides cooling water to the facility’s CWS (this includes primary and make-up CWIS(s)).

Operator - Provide the legal name of the operator of each individual CWIS(s) that provides cooling water to the facility’s CWS (this includes primary and make-up CWIS(s)).

1. If the cooling water provider listed in Item 12.c.1 has an **active** PWS Registration No., check **yes**. Otherwise, check **no**.

If **yes**, provide the PWS Registration No. for the entity providing cooling water and **stop** here. The PWS Registration No. can be obtained on the [TCEQ’s Central Registry Program ID Search](http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=addnid.IdSearch)[[20]](#footnote-21).

**NOTE:** A system with a PWS Registration No. issued by TCEQ must be listed as active (A) in the [Texas Drinking Water Watch database](https://dww2.tceq.texas.gov/DWW/) to be considered a PWS for the purposes of 316(b).

1. If the cooling water provider listed in Item 12.c.1 is providing reclaimed water for use as cooling water and has an **active** reuse authorization., check **yes**. Otherwise, check **no**.

If **yes**, provide the Reuse Authorization No. for the entity providing cooling water and **stop** here.

The Reuse Authorization No. can be obtained on the [TCEQ’s Central Registry Program ID Search](http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=addnid.IdSearch).

1. If the cooling water provider listed in Item 12.c.1 is an Independent Supplier, check **yes**. Otherwise, check **no**.

If **yes**, provide the actual intake flow of the CWIS(s) utilized by the Independent Supplier to provide water for cooling purposes to the facility and continue to Item 12.d.

1. Section 316(b) General Criteria
2. If the CWIS(s) has or will have a cumulative design intake flow of 2 MGD or greater, check **yes**. Otherwise, check **no**.
3. If at least 25% of the total water withdrawn by the CWIS is/will be used at the facility exclusively for cooling purposes on an annual average basis, check **yes**. Otherwise, check **no**.
4. If the facility withdraws/proposes to withdraw water for cooling purposes from surface waters that meet the definition of [Waters of the United States in 40 CFR § 122.2](http://www.ecfr.gov/cgi-bin/text-idx?SID=a0bbbe14d9544d6a41fbfb6ec9079069&mc=true&node=se40.24.122_12&rgn=div8)[[21]](#footnote-22), check **yes**. Otherwise, check **no**.

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in 40 CFR § 122.2. If additional space is needed for the explanation, include the information as an attachment and provide the attachment number in the space instead.

If **yes** to all three questions in Item 12.d the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to Item 12.f.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however a determination is required based upon BPJ. Proceed to Item 12.e.

1. If the facility **does** **not meet** the minimum criteria to be subject to the full requirements of 316(b) based on the responses provided for Item 12.c **and** **uses cooling towers**, check **yes**. Otherwise, check **no**.

If **yes**, stop here, no additional information is required.

If **no**, complete Worksheet 11.0, items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ.

1. Oil and Gas Exploration and Production

If the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA based on the responses provided in Item 12.d, complete this item as directed.

1. If this facility is subject to requirements at 40 CFR Part 435, Subparts A or D, check **yes**. Otherwise, check **no** and continue to Item 12.g.
2. If this is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u), check **yes**. Otherwise, check **no**.

If **yes**, complete Worksheet 11.0, items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ. If **no**, continue to Item 12.g.3

1. Compliance Phase and Track Selection

If the facility meets the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA based on the responses provided in Item 12.d, complete the following items as directed.

1. Phase I

If this is a new facility as defined at 40 CFR § 125.83(q), check **yes**. Otherwise, check **no**.

If **yes** to the above question this facility is subject to 40 CFR Part 125, Subpart I. Check the box next to the selected compliance track, attach the requested information based on the selection made, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2. If **no**, proceed to Item 12.g.2.

**NOTE:** See 40 CFR § 125.86 regarding [Compliance Track options](http://www.ecfr.gov/cgi-bin/text-idx?SID=465e9f9a925080753d97a0245acf5a1f&mc=true&node=pt40.24.125&rgn=div5#se40.24.125_186)[[22]](#footnote-23) for additional information.

Track I - AIF greater than 2 MGD, but less than 10 MGD

If selected, attach information required under 40 CFR §§ 125.86(b)(2)-(4).

Track I – AIF greater than 10 MGD

If selected, attach information required under 40 CFR § 125.86(b).

Track II

If selected, attach information required under 40 CFR § 125.86(c).

1. Phase II

If this is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u), check **yes**. Otherwise, check **no**.

If **yes** to the above question this facility is subject to 40 CFR Part 125, Subpart J. Complete Worksheets 11.0 through 11.3.

1. Phase III

If this is an offshore or coastal oil and gas exploration and production facility subject to 40 CFR Part 435, Subparts A or D, respectively, check **yes**. Otherwise, check **no**

If **yes** to the above question this facility is subject to 40 CFR Part 125, Subpart N. Check the box next to the selected compliance track and provide the requested information.

**NOTE:** See 40 CFR § 125.134(a)(1) regarding [Compliance Track options](http://www.ecfr.gov/cgi-bin/text-idx?SID=465e9f9a925080753d97a0245acf5a1f&mc=true&node=pt40.24.125&rgn=div5#se40.24.125_186)[[23]](#footnote-24) for additional information.

Track I – Fixed facility

If selected, attach information required under 40 CFR § 125.136(b) and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

Track I – Not a fixed facility

If selected, attach information required under 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except the CWIS latitude and longitude under Item 2.a).

Track II – Fixed facility

If selected, attach information required under 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

1. Permit Change Requests

**NOTE:**

Item 13 is only required for existing permitted facilities.

For amendment without renewal applications, only the parts of the application which are applicable to the amendment request are required. Contact the Industrial Permits Team for assistance with determining what specific information will be required.

Minor amendment and minor modification permit changes can be done under a renewal-only permit action.

Contact the Industrial Permits Team for assistance with determining if a permit change is needed.

1. Major Amendment Requests

If this application requests a **major amendment** of an existing permit, check **yes.** Otherwise, check **no.**

If **yes**, list each major amendment request individually and provide detailed information regarding the scope of each request and why it is needed. Any request which would result in relaxation of a substantive term, provision, requirement, or a limiting parameter in a reissued permit must include a justification (see 40 CFR § 122.44(l) relating to Reissued Permits). Attach any supplemental information or additional data which supports the request (e.g., study, analytical data, etc.).

For example, if the request is to increase a flow limit, provide an explanation which justifies an increased volume of discharge (e.g. expanded production, additional boilers/cooling towers, change in process, etc.). If the request is to relax a limitation, provide an explanation which justifies the less stringent limits (e.g., study, analytical data, change in process, etc.).

**NOTE:** A **major amendment** is defined in 30 TAC § 305.62(c)(1) as an amendment that changes a substantive term, provision, requirement, or a limiting parameter of a permit. Examples of a major amendment request include, but are not limited to: an increased flow limit, a reduced monitoring frequency, removal of an effluent limitation, addition of a wastestream, addition of an outfall, etc.

1. Minor Amendment Requests

If this application requests any **minor amendments** to the existing permit, check **yes.** Otherwise, check **no.** If **yes**, list and discuss the requested changes. Attach additional information, if necessary.

**NOTE:** A **minor amendment** is defined in 30 TAC § 305.62(c)(2) as an amendment to improve or maintain the permitted quality or method of disposal of waste. A minor amendment includes any other changes that will not cause or relax a standard or criterion which may result in a potential deterioration of water quality in the state.

1. Minor Modification Requests

If this application requests any minor modifications to the existing permit, check **yes.** Otherwise, check **no.** If **yes**, list and discuss the requested changes. Attach additional information, if necessary.

**NOTE:** A **minor modification** is defined in 40 CFR § 122.63 and 30 TAC § 305.62(c)(3) as a change for the purpose of making corrections or allowances for changes. Minor modifications may only:

correct typographical errors

require more frequent monitoring or reporting by the permittee

change an interim compliance date in a schedule of compliance (not to exceed 120 days of date specified in existing permit and will not interfere with final compliance date)

allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary

(1) change the construction schedule for a discharger which is a new source

(2) delete a point source outfall when the discharge from that outfall is terminated

incorporate conditions of a POTW pretreatment program as enforceable conditions of the POTW’s permits

1. Laboratory Accreditation

Effective July 1, 2008, all laboratory tests performed must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification with the following general exemptions:

1. The laboratory is an in-house laboratory and is:
2. periodically inspected by TCEQ; or
3. located in another state and is accredited or inspected by that state; or
4. performing work for another company with a unit located in the same site; or
5. performing pro bono work for a governmental agency or charitable organization.
6. The laboratory is accredited under federal law.
7. The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
8. The laboratory supplies data for which TCEQ does not offer accreditation.

The applicant should review 30 TAC Chapter 25 for specific requirements. The certification statement must be signed and submitted with every application. See page 34 of these Instructions for a list of designated representatives who may sign the certification.

WORKSHEETS TO THE  
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
TECHNICAL REPORT

Worksheets that do not apply to this permit action are not required to be completed or submitted. Use the following information to determine which worksheets are required depending on the method of disposal, authorizations being sought, or the permitted flow from the facility.

Applications for amendment without renewal are only required to complete the worksheets which are applicable to the amendment request. Contact the Industrial Permits Team for assistance with determining what specific information will be required for a specific amendment request.

# WORKSHEET 1.0: EPA CATEGORICAL EFFLUENT GUIDELINES

If this application requests authorization for a TPDES permit to discharge wastewaters which are subject to EPA categorical effluent guidelines - 40 CFR Parts 400 - 471, this worksheet is required.

**NOTE:** See the table on page 53 of these instructions for a listing of all industrial activities subject to categorical effluent guidelines.

# WORKSHEET 2.0: POLLUTANT ANALYSES REQUIREMENTS

If this application requests authorization for a TPDES permit to discharge wastewaters, this worksheet is required to be completed for each **external** outfall. Applications for a permit to dispose of all wastewater by land application or permit applications applying for individual TPDES permit coverage for discharges consisting of either 1) solely of stormwater associated with industrial activities, as defined in 40 CFR § 122.26 (b)(14)(i-xi), **or** 2) stormwater associated with industrial activities and any of the listed allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6, are **not required** to complete this worksheet, see Worksheet 7.0 for the required analyses.

# WORKSHEET 3.0: LAND APPLICATION OF EFFLUENT

If this application requests authorization to dispose of wastewater via land application (i.e., irrigation, subsurface disposal, evaporation, etc.), this worksheet is required.

# WORKSHEET 3.1: SURFACE LAND APPLICATION AND EVAPORATION

If this application requests authorization to dispose of wastewater via surface land application (i.e., irrigation, overland flow, etc.) or evaporation, this worksheet is required.

# WORKSHEET 3.2: SUBSURFACE IRRIGATION SYSTEMS (NON-DRIP)

If this application requests authorization to dispose of wastewater via a subsurface land application non-drip system (i.e., conventional drainfield, pressure dosing, mound system, etc.), this worksheet is required.

**NOTE:** All applicants authorized for or proposing subsurface disposal MUST also complete and submit **Worksheet 9.0 – Class V Injection Well Inventory/Authorization Form**.

# WORKSHEET 3.3: SUBSURFACE AREA DRIP DISPERSAL SYSTEMS

If this application requests authorization to dispose of wastewater via a SADDS, this worksheet is required.

**NOTE:** All applicants authorized for or proposing subsurface disposal MUST also complete and submit **Worksheet 9.0 – Class V Injection Well Inventory/Authorization Form**.

# WORKSHEET 4.0: RECEIVING WATERS

If this application requests authorization to discharge wastewater directly to surface waters in the state (e.g., to Doe Creek or to an unnamed tributary), this worksheet is required.

# WORKSHEET 4.1: WATERBODY PHYSICAL CHARACTERISTICS

If this application is for a designated major permit, a new permit application, or an amendment to add a new outfall, this worksheet is required.

# WORKSHEET 5.0: SEWAGE SLUDGE MANAGEMENT AND DISPOSAL

If sewage sludge is managed or disposed of in accordance with the conditions specified in Item 7 of Technical Report 1.0, this worksheet is required.

# WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

If this facility is a POTW, this worksheet is required.

**NOTE:** privately-owned facilities **do not** need to submit this worksheet.

# WORKSHEET 7.0: STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES

If this application requests authorization for an individual TPDES permit containing outfalls with discharges consisting solely of stormwater runoff or stormwater runoff and one or more non-stormwater wastestreams (see page 8 of these instructions), this worksheet is required.

# WORKSHEET 8.0: AQUACULTURE

If this application requests authorization for an individual TPDES permit containing outfalls with discharges of wastewater resulting from aquaculture activities, this worksheet is required.

# WORKSHEET 9.0: CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

If this application requests authorization to dispose of wastewater via subsurface disposal, this worksheet is required and must be submitted it to the appropriate program area as directed.

# WORKSHEET 10.0: QUARRIES IN THE JOHN GRAVES SCENIC RIVERWAY

If this application requests authorization for an individual TPDES permit containing outfalls with discharges of wastewater from a municipal solid waste or mining facility located within a water quality protection area in the John Graves Scenic Riverway, this worksheet is required.

# WORKSHEETS 11.0-11.3: COOLING WATER SYSTEM INFORMATION

If this application requests authorization for an individual TPDES permit for a facility that uses water for cooling purposes and is subject to Section 316(b) of the CWA in accordance with the conditions specified in Item 12 of Technical Report 1.0, these worksheets are required.

# WORKSHEETS 12.0: OIL AND GAS EXPLORATION, DEVELOPMENTS, AND PRODUCTION WASTEWATER DISCHARGES

If this application requests authorization for an individual TPDES permit containing outfalls with discharges of wastewater resulting from a facility subject to 40 CFR Part 435, this worksheet is required.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION   
WORKSHEET 1.0 EPA CATEGORICAL EFFLUENT GUIDELINES

Worksheet 1.0 **is required** for all applications for TPDES permits to discharge wastewater subject to EPA categorical effluent limitation guidelines (ELGs).

Worksheet 1.0 is not required for TLAP applications or TPDES Permit application which are not subject to EPA Categorical ELGs

1. Categorical Industries

Review the table below, which lists ELGs found in 40 CFR Parts 400 – 471, to determine whether this facility is subject to any categorical ELGs. More than one category may apply.

Table 1: Categorical Industries

| **INDUSTRY** | **CFR** | **INDUSTRY** | **CFR** |
| --- | --- | --- | --- |
| Dairy Products Processing | 405 | Mineral Mining and Processing | 436 |
| Grain Mills | 406 | Centralized Waste Treatment | 437 |
| Canned and Preserved Fruits and Vegetables | 407 | Metal Products and Machinery \* | 438 |
| Canned and Preserved Seafood Processing | 408 | Pharmaceutical Manufacturing | 439 |
| Sugar Processing | 409 | Ore Mining and Dressing | 440 |
| Textile Mills | 410 | Transportation Equipment Cleaning | 442 |
| Cement Manufacturing | 411 | Paving and Roofing Materials | 443 |
| Concentrated Animal Feeding Operation | 412 | Waste Combusters | 444 |
| Electroplating | 413 | Landfills | 445 |
| Organic Chemicals, Plastics, and Synthetic Fibers\* | 414 | Paint Formulating | 446 |
| Inorganic Chemicals | 415 | Ink Formulating | 447 |
| Soap and Detergent Manufacturing | 417 | Airport Deicing \* | 449 |
| Fertilizer Manufacturing | 418 | Construction and Development \* | 450 |
| Petroleum Refining | 419 | Concentrated Aquatic Animal Production \* | 451 |
| Iron and Steel Manufacturing | 420 | Gum and Wood Chemicals Manufacturing | 454 |
| Nonferrous Metals Manufacturing | 421 | Pesticide Chemicals | 455 |
| Phosphate Manufacturing | 422 | Explosives Manufacturing | 457 |
| Steam Electric Power Generating\* | 423 | Carbon Black Manufacturing | 458 |
| Ferroalloy Manufacturing | 424 | Photographic | 459 |
| Leather Tanning and Finishing | 425 | Hospital | 460 |
| Glass Manufacturing | 426 | Battery Manufacturing | 461 |
| Asbestos Manufacturing | 427 | Plastics Molding and Forming | 463 |
| Rubber Manufacturing | 428 | Metal Molding and Casting | 464 |
| Timber Products Processing | 429 | Coil Coating | 465 |
| Pulp, Paper, and Paperboard | 430 | Porcelain Enameling | 466 |
| Meat and Poultry Products | 432 | Aluminum Forming | 467 |
| Metal Finishing | 433 | Copper Forming | 468 |
| Coal Mining | 434 | Electrical and Electronic Components | 469 |
| Oil and Gas Extraction | 435 | Nonferrous Metals Forming and Metal Powders | 471 |

\* New or updated ELGs approved.

If this application requests authorization to discharge wastewater subject to one or more of the effluent guidelines referenced in Table 1, check **yes**. Otherwise, check **no** and stop, this worksheet is not required.

If **yes**, provide the appropriate category and the associated 40 CFR reference, and proceed through the worksheet as directed.

1. Production/Process Data

Industrial wastewater must be treated to levels that meet the requirements of applicable EPA Categorical ELGs in 40 CFR Parts 400 - 471. Therefore, the permit application must contain all information necessary to calculate permit limits based on these guidelines.

**NOTE:** For all TPDES permit applications requesting individual permit coverage for discharges of oil and gas exploration and production wastewater (discharges into or adjacent to water in the state falling under the Oil and Gas Extraction Effluent Guidelines—40 Part 435), please see worksheet 12.0, Item 3 instead.

1. **Production Data**

If limitations for any guidelines referenced in Item 1 above are expressed in terms of production (e.g., lbs of pollutant/1000 lbs of production), complete this item.

Complete the table with the following information: 1) identify each category or subcategory and 2) provide a quantity representative of the actual level of production over the previous three years for an existing activity, or the design level of production for a proposed activity, for each category or subcategory. Additionally, if this facility is a refinery (40 CFR Part 419), include: 1) the size of each process unit, 2) the throughput of the refinery, and 3) the throughput of each unit. If this facility is not a refinery, enter **N/A** for these items.

1. **Organic Chemicals, Plastics, and Synthetic Fibers Manufacturing Data (40 CFR Part 414):**

If this facility is subject to guidelines for organic chemicals, plastics, and synthetic fibers manufacturing, complete this item.

Provide the applicable subpart and the fraction of total plant production that falls into each subpart (for instance, 45% commodity chemicals, 35% bulk chemicals, and 30% specialty chemicals). Also, identify processes in 40 CFR Part 414, Appendices A and B, that are used, and provide the flow of metal-bearing wastestreams and cyanide-bearing wastestreams, if any. See 40 CFR Part 414 for additional information.

1. **Refineries (40 CFR Part 419)**

If this facility is subject to guidelines for refineries, complete this item.

Identify the specific subcategory (i.e., topping, cracking, petrochemical, lube, or integrated) this facility is classified as, provide a justification for the classification, and describe how the subcategory is applicable to facility operations.

1. Process/Non-Process Wastewater Flows

Provide a breakdown of all wastewater flows generated by the facility (including all process and non-process wastewater flows) as defined for the industry in the appropriate guideline category. Specify which wastewater flows are to be authorized for discharge under this permit and the disposal practices for wastewater flows which are not to be authorized for discharge under this permit. This quantitative listing of all wastewater sources is required in addition to a schematic flow diagram (Technical Report 1.0, Item 2.b) and the outfall contributing wastestream tables (Technical Report 1.0, Item 4).

1. New Source Determination

List all wastewater generating processes which: 1) are subject to EPA Categorical ELGs **and** 2) generate a wastewater that is discharged or proposed to be discharged via this permit. Provide the appropriate 40 CFR Part and Subpart (if any) for each process listed. For existing facilities, provide the date each process began, which may include the date construction for the process commenced.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 2.0 POLLUTANT ANALYSES REQUIREMENTS

Worksheet 2.0 **is required** for all new, amendment, or renewal TPDES permit applications. This worksheet contains 13 analytical tables, some or all of which may be required based on facility activities. Contact the Industrial Permits Team for help determining which analytical tables are required.

Worksheet 2.0 **is not required** for applications for a TLAP or individual TPDES permit coverage for discharges consisting solely of stormwater runoff.

1. General Testing Requirements

**NOTE: Analytical data provided with this application must be from a sampling event(s) conducted no more than one year prior to the date the application is submitted to TCEQ.**

1. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (i.e., 05/01/2018-05/30/2018).
2. Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
3. All information submitted with this worksheet shall comply with the following requirements:

* **Tables 1, 2, 3, 4, and 5:** Provide the analytical results from at least four separate samples collected at a frequency of once per week for a period of four weeks from the wastewater stream unless otherwise specified in the application or approved by TCEQ.
* **Tables 6, 8, 9, 10, 11, 12, and 13**: Provide the analytical results from at least from at least one analytical result obtained from a grab or 24-hr composite sample.
* **Reduced Sampling Requirements:** Approval to submit less than required number of samples should be obtained from TCEQ in writing prior to application submittal and attached.
* **Sampling and Laboratory Testing Methods:** All sampling and laboratory testing methods must be performed according to 30 TAC Chapter 319, General Regulations Incorporated into Permits. All testing must conform to EPA approved methodologies for sample collection, preservation, analysis, and detection levels. In addition, this data must comply with the QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard and suggested methods for analytes not addressed by 40 CFR Part 136. **NOTE:** The preferred analytical method for free cyanide is the EPA approved method at 40 CFR Part 136 for free cyanide; however, any EPA approved method at 40 CFR Part 136 for available cyanide, cyanide amendable to chlorination, or total cyanide may also be used. Please contact the Industrial Permits Team for assistance with determining the appropriate test method
* **Minimum Analytical Levels:** All test methods must be sensitive enough to detect the pollutants at the MAL. These values are subject to change. Please contact TCEQ’s Industrial Permitting Team before requesting these tests. Failure to use tests capable of meeting the MAL may compromise the analyses and retesting may be required. See Minimum Analytical Levels and Suggested Methods for Application Screening on pages 60-67 of these instructions.
* **Contract Laboratory:** If any of the analyses reported in this application are performed by a contract laboratory or a consulting firm, provide the name and contact information for each laboratory/firm. Also specify which pollutants were analyzed by which laboratory/firm.
* **Proposed Wastestreams:** If this application requests authorization to discharge a proposed wastestream which: 1) the facility has not yet generated or 2) has not undergone full treatment and would not be considered representative of end of pipe conditions, analytical results from similar facilities, treatability studies, design information, or literature sources may be submitted when real effluent analytical data is not available. The basis of the “results” submitted should be explained.
* **Sample Type:** Grab samples must be used for pH, temperature, cyanide (all forms), total phenols, residual chlorine, oil and grease, fecal coliform, E. coli, and Enterococci. For all other pollutants, 24-hour composite samples using a minimum of four grab samples must be used, unless specified as otherwise in 40 CFR Part 136. Check box next to the appropriate sample type, either composite or grab.
* **Averaging Calculations:** When more than one analytical result is available or required, TCEQ will calculate an **average** of the values according to the following guidelines. In these guidelines, the term “level of detection” shall be the level of detection achieved for that specific analytical test. These guidelines should not be used for reporting purposes on DMRs. Please contact TCEQ’s DMR hotline at 512-239-2545 for help with DMR reporting requirements.

For any detectable result, the actual analytical result shall be used verbatim, regardless of the MAL.

For any non-detectable result in which the level of detection was as sensitive as or more sensitive than the specified MAL **and** the analytical data for that parameter includes other samples with **detectable results**, the value of one-half of the level of detection shall be used for the **non-detectable results** for averaging purposes.

Example: Sample results are 14 µg/L, 12 µg/L, and two samples which were non-detect at a MAL of 10 µg/L; a value of 5 µg/L would be used for the “non-detects” for averaging purposes resulting in an average concentration of (14 + 12 + 5 + 5)/4 = 9 µg/L.

For any non-detectable result in which the level of detection was as sensitive as or more sensitive than the specified MAL **and** all sample results for that parameter were non-detect, the average shall be reported as less than the level of detection.

Example: All results are non-detect at a MAL of 10 µg/L; the average is reported as < 10 µg/L.

For any non-detectable result in which the level of detection was **not** as sensitive as the specified MAL, a value equivalent to the level of detection shall be used for averaging and reporting purposes.

Example: The specified MAL is 10 µg/L and the sample results are 26 µg/L, 22 µg/L, and two samples which were non-detect at an achieved level of detection of 20 µg/L; a value of 20 µg/L would be used for the “non-detects” for averaging purposes resulting in an average concentration of (26 + 22 + 20 + 20)/4 = 22 µg/L.

* For facilities which have an intermittent discharge from final retention impoundments when the impoundments reach holding capacity and a discharge is not foreseen in the near future, samples of the effluent currently stored in the impoundment may be used to satisfy the analytical requirements.

1. Specific Testing Requirements

The following is a list of conditions to help determine if a particular table is required to be completed, required to be partially completed, or not required to be completed. **NOTE 1:** The term **complete table required** means that all pollutants listed on that table are required to be tested, if the table is required. The term **partial table required** means that only certain pollutants from the table (as determined by the instructions) will be required to be tested, if the table is required. **NOTE 2:** Analytical testing is **not required for internal outfalls**.

All analytical testing shall be representative of the effluent to be discharged via the authorizations requested in this application, following final treatment. If this application requests authorization to discharge an **existing wastestream** which receives full treatment, testing is required based on the conditions below. If this application requests authorization to discharge a **proposed wastestream** which: 1) the facility has not yet generated or 2) has not undergone full treatment and would not be considered representative of the effluent to be discharged, contact the Industrial Permits Team to determine what testing is required.

If TCEQ approved submittal of less than the required number of samples, attach the correspondence.

## TABLE 1

**Completion** of Table 1 **is required** for all external outfalls that discharge any wastewater other than 1) stormwater runoff only **or** 2) stormwater commingled with any allowable non-stormwater wastestreams (see General Definitions, page 8). Completion of Table 1 is not required for internal outfalls. Report values in mg/L unless other units are indicated.

## TABLE 2

**Completion** of Table 2 **is required** for all external outfalls that discharge any wastewater other than 1) stormwater runoff only **or** 2) stormwater commingled with any allowable non-stormwater wastestreams (see General Definitions, page 8). Report values in µg/L unless other units are indicated. **NOTE:** It is quite common for laboratories to report metal concentrations in mg/L.

## TABLE 3

**Completion** of Table 3 **is required** for all external outfalls that discharge **process** wastewater. For each external outfall that contains **process** wastewater, provide the results of an analysis of all pollutants.

**Partial Completion** of Table 3 **is required** for each external outfall with **non-process** wastewater discharges. Provide analysis only for those pollutants that are used at the facility as a feedstock, intermediate, product, by-product, co-product, maintenance chemical or that could in any way contribute to contamination in the wastewater streams. If **stormwater associated with industrial activities** as defined at 40 CFR § 122.26(b)(14) is commingled with non-process wastewater prior to discharge via an external outfall, provide analysis only for those pollutants which may be present as a result of exposure to precipitation or runoff. Enter **N/A** for each pollutant that is not required to indicate it has been considered.

Table 3 contains a list of organic compounds included in the TSWQS at 30 TAC § 307.6. Report values in µg/L unless other units are indicated.

## TABLE 4

**Partial completion** of Table 4 (only those pollutants that are required by the conditions specified) **is required** for each external outfall.

Table 4 contains testing requirements for the compound tributyltin and for the indicator bacteria Enterococci and E. coli. Not all applicants are required to test for tributyltin, Enterococci, or E. coli. Testing is required only under the conditions specified below.

1. **Tributyltin**

Effluent testing **is required** for all external outfalls at 1) industrial/commercial facilities which directly dispose of wastewater from the types of operations listed below **or** 2) domestic facilities which receive wastewater from the types of industrial/commercial operations listed below. If any of the conditions below apply to an external outfall, check **yes**. Otherwise, check **no** and continue to Item 4.b, testing for Tributyltin is not required.

Manufacturers and formulators of tributyltin or related compounds, including, but not limited to, SIC Code 2879

Painting of ships, boats and marine structures, including, but not limited to, SIC Code 1721

Ship and boat building and repairing, including, but not limited to, SIC Codes 3731, 3732 and 3441

Ship and boat cleaning, salvage, wrecking and scaling, including, but not limited to, SIC Codes 4499 and 7699

Operation and maintenance of marine cargo handling facilities and marinas, including, but not limited to, SIC Codes 4491 and 4493

Facilities engaged in wood preserving, including, but not limited to, SIC Code 2491

Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent

If **yes**, indicate by checking the appropriate box which types of operations apply (check all that apply) and provide testing results for Tributyltin in Table 4.

1. **Enterococci**

Effluent testing **is required** for all external outfalls discharging **directly into saltwater** receiving waters (see definition of saltwater for further guidance) that either 1) contains domestic wastewater **or** 2) is expected to contain Enterococci based on processes at the facility. If either of the conditions above apply to an external, check **yes.** Otherwise, check **no** and continue to Item 4.c, testing for Enterococci is not required.

If **yes** for **either or both questions**, provide testing results for Enterococci in Table 4. Report an average (geometric mean) and maximum value if more than one analytical result is available.

1. E. coli

Effluent testing **is required** for all external outfalls discharging **directly into freshwater** receiving waters that either 1) contains domestic wastewater **or** 2) is expected to contain E. coli based on processes at the facility. If either of the conditions above apply to an external outfall, check **yes.** Otherwise, check **no**, testing for E. coli is not required.

If **yes** for **either or both** questions, provide testing results for E. coli in Table 4. An average (geometric mean) and maximum value will be calculated by TCEQ if more than one analytical result is available.

## TABLE 5

**Completion** of Table 5 **is required** for all external outfalls which discharge process wastewater from a facility that manufactures or formulates pesticides or herbicides or any other wastewaters which may contain pesticides or herbicides.

Table 5 contains a list of pesticide compounds included in the Texas Surface Water Quality Standards at 30 TAC § 307.6. If these conditions apply to this facilityandprovide the appropriate testing results in Table 5**.** Otherwise, check **N/A** and continue, testing for Table 5 is not required.

## TABLE 6

**Completion** of Table 6 **is required** for all external outfalls.

Review Table 6 and check the appropriate box to indicate whether a specific constituent is believed to be present or absent in the discharge. Base this determination on knowledge of raw materials, maintenance chemicals, intermediates, and products handled at this facility or on previous analyses of the facility’s wastewater. Also, base the decision on materials which may be exposed to precipitation or stormwater runoff, if stormwater associated with industrial activities are commingled with other wastestreams. The facility must provide the results of at least one analysis for each constituent believed present. TCEQ will calculate an average and maximum value if more than one analytical result is available.

## TABLE 7

A response **is required** for all external outfalls.

Table 7 is a list of **primary** industrial categories with a breakdown of GC/MS testing requirements for priority pollutants. Categories are defined in 40 CFR Parts 400 - 471. Review all of the categories and indicate by checking the box of any category that applies to this facility. If testing is required, indicate by checking the box provided that the testing results for the appropriate parameters in Tables 8, 9, 10, and 11 are provided with the application. If none of these categories apply to this facility, check **N/A**. If N/A is the appropriate response, no testing is required.

## TABLES 8, 9, 10, and 11

**Completion** of Tables 8, 9, 10, and 11 **is required** for each external outfall as specified in Table 7.

Table 8 contains a list of priority pollutants that are volatile compounds. Table 9 contains a list of priority pollutants that are acid compounds. Table 10 contains a list of priority pollutants that are base/neutral compounds. Table 11 contains a list of priority pollutants that are pesticides. If this facility is **a primary industry** as shown in Table 7 and process wastewater is discharged, the facility must analyze for those GC/MS fractions as shown in Table 7.

If this facility is **not** a primary industry, and if a specific constituent (except for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol) is believed to be present in the discharge in an amount greater than 10 ppb, but less than 100 ppb, the applicant must either 1) provide the results of at least one analysis for these chemicals or 2) attach a brief description for the reasons the pollutant is expected to be present in the discharge.

If this facility is **not** a primary industry, and if acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol are believed to be present in an amount greater than 100 ppb, results for these chemicals must be provided.

Base this determination on knowledge of raw materials, maintenance chemicals, intermediates, and products handled at this facility or analysis of the facility’s wastewater. TCEQ will calculate an average and a maximum value if more than one analytical result is available.

## TABLE 12

**Partial completion** of Table 12 (only those pollutants that are required by the conditions specified) **is required** for each external outfall.

Under certain conditions, the applicant may be responsible for providing analyses of the effluent from its process wastewater outfalls for Dioxin/Furan compounds. Review the specified conditions and proceed as instructed. The applicant is required to report that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be discharged if the applicant 1) has any knowledge or reason to believe that TCDD or any congeners of TCDD will or may be present in the effluent **or** 2) uses or manufactures one of the compounds listed below.

1. Review the following list of compounds and indicate which of of these compounds, if any, are manufactured or used in a process at the facility or believed to be present in the discharge. For any compound indicated, provide a brief description of the conditions for its presence at the facility.

2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5

2-(2,4,5-trichlorophenoxy)propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1

2-(2,4,5-trichlorophenoxy)ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4

0,0-dimethyl 0-(2,4,5-trichlorophenyl)phosphorothioate (Ronnel) CASRN 299-84-3

2,4,5-trichlorophenol (TCP) CASRN 95-95-4

hexachlorophene (HCP) CASRN 70-30-4

1. If TCDD or any congeners of TCDD are present in the effluent or if the applicant has any reason to believe it may be present in the effluent, check **yes**. Otherwise, check **no**. If **yes**, provide a brief description of the conditions for its presence.
2. If **yes** to either Item a **or** b, complete one analysis of a composite sample of each process wastewater outfall for Dioxin/Furan compounds. An additional sample of sludge from the wastewater treatment system must also be analyzed. The samples shall be analyzed and reported for congeners of chlorinated dibenzo-p-dioxins and dibenzofurans and also reported as TEQs based on the relative toxic equivalence factors provided in Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDDs and CDFs) and 1989 Update, EPA/625/3-89/016, March 1989.

Table 12 is provided to report the concentrations and the equivalents of the congeners in units of ppq for wastewater and ppt for sludge. The analyses should be made using EPA Method 1613B or an equivalent method if approved by TCEQ. An example of a completed Table 12 is shown below:

Example of Dioxin/Furan Analysis

| **Compound** | **Toxic Equivalency Factors** | **Concentration (ppq)** | **Toxicity Equivalent (ppq)** |
| --- | --- | --- | --- |
| 2,3,7,8-TCDD | 1 | 13 | 13 |
| 1,2,3,7,8-PeCDD | 1 | 22 | 22 |
| 2,3,7,8-HxCDDs | 0.1 | 17 | 1.7 |
| 1,2,3,4,6,7,8 HpCDD | 0.01 | 110 | 1.1 |
| 2,3,7,8-TCDF | 0.1 | 20 | 2.0 |
| 1,2,3,7,8-PeCDF | 0.03 | 100 | 3.0 |
| 2,3,4,7,8-PeCDF | 0.3 | 120 | 36 |
| 2,3,7,8-HxCDFs | 0.1 | 100 | 10 |
| 2,3,4,7,8 HpCDFs | 0.01 | 150 | 1.5 |
| OCDD | 0.0003 | 100 | 0.03 |
| OCDF | 0.0003 | 120 | 0.036 |
| PCB 77 | 0.0001 | 100 | 0.01 |
| PCB 81 | 0.0003 | 150 | 0.045 |
| PCB 126 | 0.1 | 20 | 2.0 |
| PCB 169 | 0.03 | 150 | 4.5 |
| Total |  |  | 96.921 |

**Test methods used must be sensitive enough to quantify constituents at the MAL specified.**

## TABLE 13

**Partial completion** of Table 13 (only those pollutants that are required by the conditions specified) **is required** for all external outfalls.

The Additional Toxic Pollutants and Hazardous Substances table below lists toxic pollutants and hazardous substances that are required to be identified by the applicant if expected to be present in any wastewater discharged or disposed of via the permit. Please review the lists of substances in the table below and respond to the following questions:

1. If any of the toxic pollutants or hazardous substances listed are present or the applicant has any reason to believe they may be present in the discharge, check **yes**. Otherwise, check **no**.
2. If any of the pollutants listed in **Item 1.c** on page 1 of the Technical Report are present or the applicant has any reason to believe they may be present in the discharge and the pollutant has not been analytically quantified elsewhere in this application, check **yes**. Otherwise, check **no**.

If **yes** to either Item a **or** b, Table 13 must be completed for pollutants identified above and for pollutants related to materials handled on-site (raw materials, intermediate products, final products, etc., as listed in Item 1.c on page 1 of the Technical Report), that are believed to be present in a wastewater discharge. For analytical results that are non-detect, report the analytical values as less than the detection level (example: a result that is non-detect with a detection level of 50 µg/L should be reported as “< 50 µg/L”).

Additional Toxic Pollutants

|  |
| --- |
| Toxic Pollutants |
| Asbestos |

Additional Hazardous Substances

|  |  |  |
| --- | --- | --- |
| ****Hazardous Substances**** |  |  |
| Acetaldehyde | Dinitrobenzene | Phosgene |
| Allyl alcohol | Diquat | Propargite |
| Allyl chloride | Disulfoton | Propylene oxide |
| Amyl acetate | Diuron | Pyrethrins |
| Aniline | Ethion | Quinoline |
| Benzonitrile | Ethylene diamine | Resorcinol |
| Benzyl chloride | Formaldehyde | Strontium |
| Butyl acetate | Furfural | Strychnine |
| Butylamine | Isoprene | Styrene |
| Carbofuran | Isopropanolamine | 2,4,5-T |
| Carbon disulfide | Kepone | TDE (Tetrachlorodiphenylethane) |
| Coumaphos | Mercaptodimethur | Trichlorfon |
| Cresol | Methyl mercaptan | Triethylamine |
| Crotonaldehyde | Methyl methacrylate | Trimethylamine |
| Cyclohexane | Mevinphos | Uranium |
| Dicamba | Mexacarbate | Vanadium |
| Dichlobenil | Monoethylamine | Vinyl acetate |
| Dichlone | Monomethylamine | Xylene |
| 2,2-Dichloropropionic acid | Naled | Xylenol |
| Dichlorvos | Naphthenic acid | Zirconium |
| Diethylamine | Nitrotoluene |  |
| Dimethylamine | Phenolsulfonate |  |

Minimum Analytical Levels and Suggested Methods for Application Screening

| **POLLUTANT** | **CASRN\*** | **MAL (µg/L)** | **Suggested Method** |
| --- | --- | --- | --- |
| Acenaphthene | 83-32-9 | 10 | 625 |
| Acenaphthylene | 208-96-8 | 10 | 625 |
| Acetaldehyde | 75-07-0 | 50 | 1667 |
| Acrolein | 107-02-8 | 50 | 624 |
| Acrylonitrile | 107-13-1 | 50 | 624, 1624B |
| Aldrin | 309-00-2 | 0.01 | 608 |
| Allyl alcohol | 107-18-6 | 50 | 608 |
| Allyl chloride | 107-05-1 | 10 | 1624 |
| Aluminum, total | 7429-90-5 | 2.5 | 200.8 |
| Amyl acetate | 628-63-7 | 5 | 1666 |
| Aniline | 62-53-3 | 10 | 625 |
| Anthracene | 120-12-7 | 10 | 625 |
| Antimony, total | 7440-36-0 | 5 | 200.8 |
| Arsenic, total | 7440-38-2 | 0.5 | 200.8 |
| Asbestos | 1332-21-4 | — | 100.1 and 100.2 |
| Barium, total | 7440-39-3 | 3 | 200.8 |
| Benzene | 71-43-2 | 10 | 624 |
| Benzidine | 92-87-5 | 50 | 625 |
| Benzo(a)anthracene | 56-55-3 | 5 | 625 |
| Benzo(a)pyrene | 50-32-8 | 5 | 625 |
| 3,4-Benzofluoranthene  [Benzo(b)fluoranthene] | 205-99-2 | 10 | 625 |
| Benzo(g,h,i)perylene | 191-24-2 | 20 | 625 |
| Benzo(k)fluoranthene | 207-08-9 | 5 | 625 |
| Benzonitrile | 100-47-0 | 1 mg/L | ASTM D3371 |
| Beryllium, total | 7440-41-7 | 0.5 | 200.8 |
| Bis(2-chloroethoxy)methane | 111-91-1 | 10 | 625 |
| Bis(2-chloroethyl)ether | 111-44-4 | 10 | 625 |
| Bis(2-chloroisopropyl)ether | 108-60-1 | 10 | 625 |
| Bis(chloromethyl)ether | 542-88-1 | \*\* | \*\* |
| Bis(2-ethylhexyl)phthalate | 117-81-7 | 10 | 625 |
| Boron, total | 7440-42-8 | 20 | 200.7 |
| Bromide | 7726-95-6 | 400 | 300.0, Rev. 2.1  300.1, Rev.1.0 |
| Bromodichloromethane  [Dichlorobromomethane] | 75-27-4 | 10 | 624 |
| Bromoform | 75-25-2 | 10 | 624 |
| 4-Bromophenyl phenyl ether | 101-55-3 | 10 | 625 |
| Butyl acetate  [Tribromomethane] | 540-88-5 | 5 | 1666 |
| Butylbenzyl phthalate | 85-68-7 | 10 | 625 |
| Cadmium, total | 7440-43-9 | 1 | 200.8 |
| Carbaryl | 63-25-2 | 5 | 632 |
| Carbofuran | 1563-66-2 | 3 | 632 |
| Carbon disulfide | 75-15-0 | 10 | 1624 |
| Carbon tetrachloride | 56-23-5 | 2 | 624 |
| Chlordane | 57-74-9 | 0.2 | 608 |
| Chlorobenzene | 108-90-7 | 10 | 624 |
| Chlorodibromomethane | 124-48-1 | 10 | 624 |
| Chloroethane | 75-00-3 | 50 | 624 |
| 2-Chloroethylvinyl ether | 110-75-8 | 10 | 624 |
| Chloroform  [Trichloromethane] | 67-66-3 | 10 | 624 |
| p-Chloro-m-cresol | 59-50-7 | 10 | 625 |
| 2-Chloronaphthalene | 91-58-7 | 10 | 625 |
| 2-Chlorophenol | 95-57-8 | 10 | 625 |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | 10 | 625 |
| Chlorpyrifos | 2921-88-2 | 0.05 | 1657 |
| Chromium, total | 7440-47-3 | 3 | 200.8 |
| Chromium, hexavalent | 18540-29-9 | 3 | 218.6, rev. 3.3 |
| Chromium, trivalent | 16065-83-1 | \*\*\* | \*\*\* |
| Chrysene | 218-01-9 | 5 | 625 |
| Cobalt, total | 7440-48-4 | 0.3 | 200.8 |
| Copper, total | 7440-50-8 | 2 | 200.8 |
| Coumaphos | 56-72-4 | 0.025 | 1657 |
| Cresols (all isomers) | 1319-77-3 | 10 | 625 |
| m-Cresol  [3-Methylphenol] | 108-39-4 | 10 | 625 |
| o-Cresol  [2-Methylphenol] | 95-48-7 | 10 | 625 |
| p-Cresol  [4-Methylphenol] | 106-44-5 | 10 | 625 |
| Crotonaldehyde | 4170-30-3 | 10 | 1624 |
| Cyanide, total | 57-12-5 | 10 | 335.4, 4500-CN D, or 4500-CN E |
| Cyanide, free or available | 57-12-5 | 10 | 4500-CN G |
|  | 57-12-5 | 2 | OIA-1677 |
| Cyclohexane | 110-82-7 | 5 | 1666 |
| 4,4'-DDD | 72-54-8 | 0.1 | 608 |
| 4,4'-DDE | 72-55-9 | 0.1 | 608 |
| 4,4'-DDT | 50-29-3 | 0.02 | 608 |
| 2,4-D | 94-75-7 | 0.7 | 615 or SM6640B |
| Danitol  [Fenpropathrin] | 39515-41-8 | † | † |
| Demeton | 8065-48-3 | 0.20 | 1657 |
| Diazinon | 333-41-5 | 0.5 | 1657 |
|  |  | 0.1 | 614 |
| Dibenzo(a,h)anthracene | 53-70-3 | 5 | 625 |
| 1,2-Dibromoethane | 106-93-4 | 10 | 1624 |
| Dicamba | 1918-00-9 | 0.110 | 1658 |
| Dichlone | 117-80-6 | — | 1656 |
| m-Dichlorobenzene  [1,3-Dichlorobenzene] | 541-73-1 | 10 | 624 |
| o-Dichlorobenzene  [1,2-Dichlorobenzene] | 95-50-1 | 10 | 624 |
| p-Dichlorobenzene  [1,4-Dichlorobenzene] | 106-46-7 | 10 | 624 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 5 | 625 |
| 1,1-Dichloroethane | 75-34-3 | 10 | 624 |
| 1,2-Dichloroethane | 107-06-2 | 10 | 624 |
| 1,1-Dichloroethene  [1,1-Dichloroethylene] | 75-35-4 | 10 | 624 |
| Dichloromethane  [Methylene chloride] | 75-09-2 | 20 | 624 |
| 2,4-Dichlorophenol | 120-83-2 | 10 | 625 |
| 1,2-Dichloropropane | 78-87-5 | 10 | 624 |
| 1,3-Dichloropropene  [1,3-Dichloropropylene] | 542-75-6 | 10 | 624 |
| 2,2-Dichloropropionic acid  [Dalapon] | 75-99-0 | 2 | 615 |
| Dichlorvos | 62-73-7 | 0.004 | 1657 |
| Dicofol  [Kelthane] | 115-32-2 | 1 | ASTM D5812-96(02) |
| Dieldrin | 60-57-1 | 0.02 | 608 |
| Diethyl amine | 109-89-7 | 50 mg/L | 1671 |
| Diethyl phthalate | 84-66-2 | 10 | 625 |
| Dimethyl amine | 124-40-3 | 50 mg/L | 1671 |
| 2,4-Dimethylphenol | 105-67-9 | 10 | 625 |
| Dimethyl phthalate | 131-11-3 | 10 | 625 |
| Di-n-butyl phthalate | 84-74-2 | 10 | 625 |
| Dinitrobenzene | 25154-54-5 | 10 | 1625 |
| 4,6-Dinitro-o-cresol | 534-52-1 | 50 | 625 |
| 2,4-Dinitrophenol | 51-28-5 | 50 | 625 |
| 2,4-Dinitrotoluene | 121-14-2 | 10 | 625 |
| 2,6-Dinitrotoluene | 606-20-2 | 10 | 625 |
| Di-n-Octyl phthalate | 117-84-0 | 10 | 625 |
| **Dioxins/Furans (TCDD Equivalents)** | (see below) | (see below) | (see below) |
| 2,3,7,8-TCDD | 1746-01-6 | 10 ppq | 1613B |
| 1,2,3,7,8-PeCDD | 40321-76-4 | 50 ppq | 1613B |
| **2,3,7,8-HxCDDs** | (see below) | (see below) | (see below) |
| 1,2,3,4,7,8-HxCDD | 39227-28-6 | 50 ppq | 1613B |
| 1,2,3,6,7,8-HxCDD | 57653-85-7 | 50 ppq | 1613B |
| 1,2,3,7,8,9-HxCDD | 19408-74-3 | 50 ppq | 1613B |
| 1,2,3,4,6,7,8 HpCDD | 35822-46-9 | 50 ppq | 1613B |
| OCDD | 3268-87-9 | 100 ppq | 1613B |
| 2,3,7,8-TCDF | 51207-31-9 | 10 ppq | 1613B |
| 1,2,3,7,8-PeCDF | 57117-41-6 | 50 ppq | 1613B |
| 2,3,4,7,8-PeCDF | 57117-31-4 | 50 ppq | 1613B |
| **2,3,7,8-HxCDFs** | (see below) | (see below) | (see below) |
| 1,2,3,4,7,8-HxCDF | 70648-26-9 | 50 ppq | 1613B |
| 1,2,3,6,7,8-HxCDF | 57117-44-9 | 50 ppq | 1613B |
| 1,2,3,7,8,9-HxCDF | 72918-21-9 | 50 ppq | 1613B |
| 2,3,4,6,7,8-HxCDF | 60851-34-5 | 50 ppq | 1613B |
| **2,3,4,7,8-HpCDFs** | (see below) | (see below) | (see below) |
| 1,2,3,4,6,7,8-HpCDF | 67562-39-4 | 50 ppq | 1613B |
| 1,2,3,4,7,8,9-HpCDF | 55673-89-7 | 50 ppq | 1613B |
| OCDF | 39001-02-0 | 100 ppq | 1613B |
| 1,2-Diphenylhydrazine  (as Azobenzene) | 122-66-7 | 20 | 1625 |
| Diquat | 2764-72-9 | 1.5 | 549, 549.1 |
| Disulfoton | 298-04-4 | 0.032 | 1657 |
| Diuron | 330-54-1 | 0.090 | 632 |
| Endosulfan I (alpha) | 959-98-8 | 0.01 | 608 |
| Endosulfan II (beta) | 33213-65-9 | 0.02 | 608 |
| Endosulfan sulfate | 1031-07-8 | 0.1 | 608 |
| Endrin | 72-20-8 | 0.02 | 608 |
| Endrin aldehyde | 7421-93-4 | 0.1 | 608 |
| Epichlorohydrin  [1-Chloro-2,3-epoxypropane] | 106-89-8 | — | 624.1 ‡ |
| Ethion | 563-12-2 | 0.02 | 1657 |
| Ethylbenzene | 100-41-4 | 10 | 624 |
| Ethylene Glycol | 107-21-1 | — | TBD ‡‡ |
| Fluoranthene | 206-44-0 | 10 | 625 |
| Fluorene | 86-73-7 | 10 | 625 |
| Fluoride | 16984-48-8 | 500 | 300.0, 300.1 |
| Formaldehyde | 50-00-0 | 50 | 1667 |
| Furfural | 98-01-1 | 50 mg/L | 1667 |
| Guthion  [Azinphos methyl] | 86-50-0 | 0.1 | 1657 |
| Heptachlor | 76-44-8 | 0.01 | 608 |
| Heptachlor epoxide | 1024-57-3 | 0.01 | 608 |
| Hexachlorobenzene | 118-74-1 | 5 | 625 |
| Hexachlorobutadiene | 87-68-3 | 10 | 625 |
| Hexachlorocyclohexane (alpha) | 319-84-6 | 0.05 | 608 |
| Hexachlorocyclohexane (beta) | 319-85-7 | 0.05 | 608 |
| Hexachlorocyclohexane (gamma)  [Lindane] | 58-89-9 | 0.05 | 608 |
| Hexachlorocyclohexane (delta) | 319-86-8 | 0.05 | 608 |
| Hexachlorocyclopentadiene | 77-47-4 | 10 | 625 or 1625B |
| Hexachloroethane | 67-72-1 | 20 | 625 |
| Hexachlorophene | 70-30-4 | 10 | 604.1 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 5 | 625 |
| Iron, total | 7439-89-6 | 7 | 200.7 |
| Isophorone | 78-59-1 | 10 | 625 |
| 4,4’-Isopropylidenediphenol  [bisphenol A] | 80-08-7 | 1.0 | ASTM D-7065-17 |
| Kepone | 143-50-0 | 0.3 | 1656 |
| Lead, total | 7439-92-1 | 0.5 | 200.8 |
| Magnesium, total | 7439-95-4 | 20 | 200.7 |
| Malathion | 121-75-5 | 0.1 | 1657 or SM6630C |
| Manganese, total | 7439-96-5 | 0.5 | 200.8 |
| Mercaptodimethur [Methiocarb] | 2032-65-7 | 0.06 | 632 |
| Mercury, total | 7439-97-6 | 0.005 | 245.7, Rev. 2.0 |
|  | 7439-97-6 | 0.0005 | 1631E |
| Methoxychlor | 72-43-5 | 2.0 | 617 or SM6630B and C |
| Methyl bromide  [Bromomethane] | 74-83-9 | 50 | 624 |
| Methyl chloride  [Chloromethane] | 74-87-3 | 50 | 624 |
| Methyl ethyl ketone | 78-93-3 | 50 | 624 |
| Methyl methacrylate | 80-62-6 | 10 | 1624 |
| Methyl tert-butyl ether (MTBE) | 1634-04-4 | — | 624.1 ‡ |
| Mevinphos | 7786-34-7 | 0.2 | 1657 |
| Mexacarbate | 315-18-4 | 1.5 | 632 |
| Mirex | 2385-85-5 | 0.02 | SM6630B and C |
| Molybdenum, total | 7439-98-7 | 1 | 200.8 |
| Monomethylamine | 74-89-5 | 50 mg/L | 1667 |
| Naled | 300-76-5 | 0.05 | 1657 |
| Naphthalene | 91-20-3 | 10 | 625 |
| Nickel, total | 7440-02-0 | 2 | 200.8 |
| Nitrate-nitrogen | 14797-55-8 | 100 | 300.0, Rev. 2.1  300.1, Rev. 1.0 |
| Nitrobenzene | 98-95-3 | 10 | 625 |
| 2-Nitrophenol | 88-75-5 | 20 | 625 |
| 4-Nitrophenol | 100-02-7 | 50 | 625 |
| N-Nitrosodiethylamine | 55-18-5 | 20 | 625 |
| N-Nitrosodimethylamine | 62-75-9 | 50 | 625 or 1625B |
| N-Nitroso-di-n-butylamine | 924-16-3 | 20 | 625 |
| N-Nitrosodi-n-propylamine | 621-64-7 | 20 | 625 or 1625B |
| N-Nitrosodiphenylamine | 86-30-6 | 20 | 625 or 1625B |
| Nonylphenol | 25154-52-3 | 333 | 1625 |
| Para-Nonylphenol | 84852-15-3 | 333 | 1625 |
| Parathion (ethyl) | 56-38-2 | 0.1 | 1657 or SM6630C |
| Pentachlorobenzene | 608-93-5 | 20 | 625 |
| Pentachlorophenol | 87-86-5 | 5 | 625 |
| Phenanthrene | 85-01-8 | 10 | 625 |
| Phenol, total | 108-95-2 | 10 | 625 |
| **Polychlorinated Biphenyls (PCBs)** | 1336-36-3 | (see below) | (see below) |
| PCB 77 | 32598-13-3 | 0.0005 | 1668B †† |
| PCB 81 | 70362-50-4 | 0.0005 | 1668B †† |
| PCB 126 | 57465-28-8 | 0.0005 | 1668B †† |
| PCB 169 | 32774-16-6 | 0.0005 | 1668B †† |
| PCB 1016 | 12674-11-2 | 0.2 | 608 |
| PCB 1221 | 11104-28-2 | 0.2 | 608 |
| PCB 1232 | 11141-16-5 | 0.2 | 608 |
| PCB 1242 | 53469-21-9 | 0.2 | 608 |
| PCB 1248 | 12672-29-6 | 0.2 | 608 |
| PCB 1254 | 11097-69-1 | 0.2 | 608 |
| PCB 1260 | 11096-82-5 | 0.2 | 608 |
| Propargite | 2312-35-8 | 0.02 | GCMS |
| Propylene oxide | 75-56-9 | 25 | 624 Heated Purge |
| Pyrene | 129-00-0 | 10 | 625 |
| Pyrethrin I | 121-21-1 | 3.1 | 1660 |
| Pyrethrin II | 121-29-9 | 3.3 | 1660 |
| Pyridine | 110-86-1 | 20 | 625 |
| Quinoline | 91-22-5 | 1 mg/L | ASTM D-4763 |
| Resorcinol | 108-46-3 | 100 | 1625 |
| Selenium, total | 7782-49-2 | 5 | 200.8 |
| Silver, total | 7440-22-4 | 0.5 | 200.8 |
| Strontium | 7440-24-6 | 1.0 | 200.7 |
| Strychnine | 57-24-9 | 40 | 1625 |
| Styrene | 100-42-5 | 10 | 1625 |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 20 | 1625 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 10 | 624 |
| Tetrachloroethene  [Tetrachloroethylene] | 127-18-4 | 10 | 624 |
| Thallium, total | 7440-28-0 | 0.5 | 200.8 |
| Tin, total | 7440-31-5 | 5 | 200.7, 200.9 |
| Titanium, total | 7440-32-6 | 30 | 283.2 |
| Toluene | 108-88-3 | 10 | 624 |
| Toxaphene | 8001-35-2 | 0.3 | 608 |
| 2,4,5-TP  [Silvex] | 93-72-1 | 0.3 | SM6640B |
| 1,2-Trans-Dichloroethylene  [1,2-Trans-Dichloroethene] | 156-60-5 | 10 | 624 |
| Tributyltin | 688-73-3 | 0.01 | TCEQ 1001 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 625 |
| 1,1,1-Trichloroethane | 71-55-6 | 10 | 624 |
| 1,1,2-Trichloroethane | 79-00-5 | 10 | 624 |
| Trichloroethene  [Trichloroethylene] | 79-01-6 | 10 | 624 |
| Trichlorfon | 52-68-6 | 0.45 | 1657 |
| 2,4,5-Trichlorophenol | 95-95-4 | 50 | 1625 |
| 2,4,6-Trichlorophenol | 88-06-2 | 10 | 625 |
| Triethylamine | 121-44-8 | 50 mg/L | 1667 |
| **TTHM (Total Trihalomethanes)** | (see below) | (see below) | (see below) |
| Bromodichloromethane | 75-27-4 | 10 | 624 |
| Dibromochloromethane | 124-48-1 | 10 | 624 |
| Tribromomethane (Bromoform) | 75-25-2 | 10 | 624 |
| Trichloromethane (Chloroform) | 67-66-3 | 10 | 624 |
| Trimethylamine | 75-50-3 | — | 1666 |
| Uranium, total | 7440-61-1 | 0.5 | 200.8 |
| Vanadium, total | 7440-62-2 | 5 | 200.8 |
| Vinyl acetate | 108-05-4 | 50 | 1624 |
| Vinyl chloride | 75-01-4 | 10 | 624 |
| Xylenes, total | 1330-20-7 | 10 | 624 |
| Xylenol | 1300-71-6 | 30 | 1624C |
| Zinc, total | 7440-66-6 | 5.0 | 200.8 |
| Zirconium | 7440-67-7 | 100 | 1620 |

— MAL not yet developed. When no MAL is established, any result will be treated as a hard value and cannot be reported as ‘zero’ or ‘non-detect’ for application screening purposes. Non-detectable results should be entered as “< #” where # is the numerical concentration of the quantitation level achieved.

\* Chemical Abstracts Service Registry Number

\*\* Hydrolyzes in water. No analysis required at this time.

\*\*\* Trivalent Chromium (Cr) determined by subtracting Hexavalent Cr from Total Cr.

† EPA procedure not approved. TCEQ will not require applicants to analyze at this time.

†† Until Method 1668B or equivalent method to measure PCB congeners is approved in 40 CFR Part 136, compliance with PCB criteria is determined using Arochlor data or any alternate method listed in a TCEQ-approved Quality Assurance Plan.

‡ This pollutant is approved in EPA Method 624.1; however, there is no method detection limit or minimum level provided for this pollutant in the method.

‡‡ To be determined (TBD). There is no approved method listed in 40 CFR Part 136 for this pollutant. TCEQ has requested EPA to provide suggested methods. Applicants may use any suitable analytical method in compliance with 40 CFR §122.21(e)(3).

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.0 LAND APPLICATION OF EFFLUENT

Worksheet 3.0 **is required** for all applications for a permit to dispose of wastewater by land application.

1. Type of Disposal System

Check the box next to the type of existing/proposed system utilized for land disposal of treated effluent. If the method utilized is not listed, select **Other** and describe the disposal system in detail.

1. Land Application Area

Complete the table with the following information regarding the land application area:

the volume of effluent routed for irrigation/land disposal in gpd;

the total number of acres irrigated;

a description of the land use (e.g., golf course, landscape, pastureland, agricultural land, etc.) and the type of warm and cool season crops (e.g., bermudagrass, ryegrass, alfalfa, cotton, native vegetation, etc.); and

whether the irrigation/land disposal site has or will have public access.

**NOTE:** Public access is not limited to the general public (e.g., controls need to be in place at a golf course so that irrigation does not occur while people are playing golf).

1. Annual Cropping Plan

Attach an annual cropping plan which includes, but is not limited to:

All types of crops and acreage irrigated for each crop, including warm and cool season crops

A breakdown of the acreage and the percent of the total acreage for each crop grown on the disposal areas

Growing seasons for each crop including months the field is left fallow (no crops)

Harvesting method and number of harvests per year for each crop

The minimum and maximum harvest height of the crop (i.e., mowing height for grasses)

Anticipated or actual crop yields (in the appropriate units) for each crop for each disposal site

Soil map

Nitrogen requirements for each crop in lbs/acre/year

Additional fertilizer requirements for each crop, proposed additional fertilizer applications for each crop, and methods of fertilizer application for each crop, based on annual soil sampling and analysis

Supplemental watering requirements for each crop

Salt tolerances of each crop in mmhos/cm

If the proposed crop is existing native vegetation that will not be harvested, include a justification why the non-removal of crops will not lead to a buildup in nutrients

1. Well and Map Information
2. Attach a USGS topographic map (7.5-minute scale) with the following information and check the box next to each piece of information requested to confirm it has been included in the attachment:

the exact boundaries of the land application area;

on-site buildings;

waste disposal or treatment facilities;

effluent storage and tail water control facilities;

buffer zones;

all surface waters in the state on-site and within 500 feet of the property boundaries;

all water wells within ½-mile of the disposal site, wastewater ponds, or property boundaries; and

all springs and seeps onsite and located within 500 feet of the property boundaries.

Provide a scale drawing to show details of the above items.

**NOTE:** Copies of the original USGS quadrangle maps with the appropriate information may suffice provided that they are color copies of original quality and scale and all the features of the original map and the information required by this item are legible and can be clearly deciphered.

1. Complete the Well and Map Information table with the following information for all known water wells located on or within 500 feet of the disposal site, wastewater ponds, or property boundaries:

a unique ID for each well which can be cross referenced from the map to the table;

the well use (private, public, livestock, etc.);

whether the well is producing (**Y** for yes, **N** for no, or **U** for unknown);

whether the well is open, cased, capped, or plugged; and

the proposed best management practice for that well (e.g., buffer, plug, etc.).

Attach copies of State Water Well Reports (driller’s logs, completion data) and data on depths to groundwater for water wells on or within 500 feet of the property line. Water well reports and groundwater information from TWDB, Texas Department of Licensing and Registration, and TCEQ records files can be obtained by accessing the [TWDB Water Data Interactive (WDI)](https://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer) website.

1. If groundwater monitoring wells or lysimeters are/will be installed around the land application site or wastewater ponds, check **yes**. Otherwise, check **no**.

If **yes**, attach the following information:

a map identifying the existing/proposed location of the monitoring wells or lysimeters (may be identified on the map submitted to satisfy Item 4.a); and

information on the existing/proposed depth of the wells or lysimeters, sampling schedule, and monitoring parameters for review, possible modification, and approval.

1. Attach a short groundwater technical report, using 30 TAC § 309.20(a)(4) as guidance, which:

fully assesses impact(s) of the waste disposal operation on the uses of local groundwater resources;

includes a description of the local groundwater that may be used as a domestic supply (including a summary of the depth to groundwater and existing groundwater quality); and

assesses how the proposed wastewater irrigation methods and application rates, as well as the wastewater ponds, are protective of groundwater.

1. Soil Map and Soil Information

Attach the following information and check the box next to each item to confirm it was included.

1. Accurately locate the area to be used for land application on a USDA NRCS Soil Survey Map. Updated soil information may be obtained from the [NRCS website](http://www.nrcs.usda.gov/wps/portal/nrcs/site/tx/home/)[[24]](#footnote-25) or from the [NRCS Web Soil Survey](http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)[[25]](#footnote-26). The map should accurately indicate the location of the crops being grown with the locations identified by fields and crops. Include engineering properties (no. 200 sieve, liquid limit, plasticity), soil permeability for each texture class, and information on any seasonal high-water table.
2. Provide a breakdown of each soil type for the irrigated areas and indicate the percentage of the total irrigated area for each soil type.
3. Provide analyses of the soil in the land application area for the following constituents:

pH [2:1 (volume/volume) water/soil mixture];

electrical conductivity [2:1 (volume/volume) water/soil mixture];

sodium adsorption ratio (SAR-not to exceed 10) from a water saturated paste and its constituent parameters (water-soluble Na, Ca and Mg reported in mg/L);

total Kjeldahl nitrogen (TKN);

total nitrogen (organic-nitrogen + nitrate-nitrogen + ammonium-nitrogen);

nitrate-nitrogen (from a 1 N KCl soil extract);

potassium;

phosphorus;

calcium;

magnesium;

sulfur; and

sodium.

Analyze the nutrient parameters on a plant-available basis. Analyze phosphorus according to the Mehlich III procedure with inductively coupled plasma; potassium, calcium, magnesium, sodium, and sulfur may also be analyzed in the Mehlich III soil extract. Report plant-available phosphorus, potassium, calcium, magnesium, sodium, and sulfur on a dry-weight basis in mg/kg. Report electrical conductivity in mmho/cm [same as deciSiemens/meter (dS/m)]. Report pH in standard units. When reporting the results, include all information concerning fertilizer recommendations. Provide a copy of this plan to the analytical laboratory prior to sample analysis.

**NOTE:** Composite or benchmark sampling techniques should be used when sampling the soils of the wastewater application area. Individual soil types, as defined by the USDA NRCS Soil Survey, should be sampled individually at zones 0-6, 6-18, and 18-30 inches. Each composite sample shall represent no more than 80 acres, with no less than 15 subsamples representing each composite sample. Each benchmark sample shall represent no more than 80 acres with at least 7 subsamples for each benchmark composite sample. Subsamples shall be composited by individual site, zone, and soil type for analysis and reporting.

**NOTE:** Soil evaluations for SADDSs will be provided with all the information required in 30 TAC § 222.73. See Instructions for Worksheet 3.3, Item 3, Required Plans.

1. Effluent Monitoring Data

**Completion** of Table 14 **is required** for all **renewal** and **major** **amendment** TLAP applications.

Check the box next to the appropriate sample type, either composite or grab. Complete Table 14 with monitoring data from the previous two years (for a minimum of 24 months) for **all parameters regulated in the current permit**. An additional table is provided for parameters that are listed in the top table but are regulated in the current permit. Provide the daily average data if the permit includes a daily average limit. If the permit includes only a single grab limit, provide the maximum single grab value for the month. Monitoring data is not required for a new applications unless the facility’s permit expired and operation continued.

Attach an explanation of any persistent excursions and discuss any corrective actions for the parameter(s) shown in Table 14.

1. Pollutant Analysis

**NOTE: Analytical data provided with this application must be from a sampling event(s) conducted no more than one year prior to the date the application is submitted to TCEQ.**

1. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (i.e., 05/01/2018-05/30/2018).
2. Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
3. **Completion** of Tables 15 and 16 **is required** for all TLAP applications. For pollutants not currently regulated in an existing permit, provide at least four separate analytical results obtained from four grab or composite samples collected at a frequency of once per week for a period of four weeks from the wastewater stream unless otherwise specified in the application or approved by TCEQ. Indicate by checking the box whether the samples are composites or grabs. Approval to submit less than four samples must be obtained from TCEQ prior to application submittal. Complete the tables as outlined in the General Testing Requirements for Worksheet 2.0 (see instructions, pages 54-56).

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.1 SURFACE LAND APPLICATION AND EVAPORATION

Worksheet 3.1 **is required** for all applications for a permit to dispose of wastewater by surface land application or evaporation. Complete the applicable section(s) and provide water balance and storage calculations, as needed.

**Recommended Data Sources:** Net evaporation data may be obtained from the [Texas Water Development Board’s Evaporation/Precipitation Data for Texas](https://waterdatafortexas.org/lake-evaporation-rainfall)[[26]](#footnote-27) website. Evapotranspiration data may be obtained from the following documents: [Bulletin 6019 - Consumptive Use of Water by Major Crops in Texas](https://www.twdb.texas.gov/publications/reports/bulletins/doc/B6019/B6019.pdf)[[27]](#footnote-28), TWDB, November 1960, or John Borelli, Clifford B. Fedler and James M. Gregory [Mean Crop Consumptive Use and Free-Water Evaporation for Texas](http://www.twdb.texas.gov/publications/reports/contracted_reports/doc/95483137.pdf)[[28]](#footnote-29), TWDB, February 1, 1998. Provide appropriate documentation if data utilized in the water balance/storage calculations are from other sources.

1. Edwards Aquifer

The Edwards Aquifer boundaries are viewable on the [Edwards Aquifer Map Viewer](https://www.tceq.texas.gov/permitting/eapp/viewer.html)[[29]](#footnote-30) on the TCEQ website.

1. If the waste disposal activities are subject to 30 TAC Chapter 213, Subchapters A and B, Edwards Aquifer Rules, check **yes** and complete Items 1.b and 1.c. Otherwise, check **no** and proceed to Item 2.
2. Check the box next to the applicable subchapter. If both subchapters apply, check both boxes.
3. If 30 TAC Chapter 213, Subchapter A applies, attach **either**: 1) a Geologic Assessment (if conducted in accordance with 30 TAC § 213.5) **or** 2) a report that contains the following information: i) a description of the surface geological units within the proposed land application site and wastewater pond area; ii) the location and extent of any sensitive recharge features in the land application site and wastewater pond area; and iii) a list of any proposed BMPs to protect the recharge features.
4. Surface Spray/Irrigation
5. Provide the following information, as applicable for the method of irrigation disposal utilized:

acres irrigated;

design application rate in acre-feet/acre/year;

design application frequency in hours per day and days per week;

design total nitrogen loading rate in pounds nitrogen/acre/ year;

average and maximum slope of the irrigation site;

estimated irrigation efficiency (85% will be used unless a more specific value is provided.)

effluent conductivity in mmhos/cm;

soil conductivity in mmhos/cm;

curve number; and

a description of the application method and equipment (e.g., row irrigation, spray irrigation using a center pivot sprinkler system, etc.).

1. Attach a separate engineering report which includes a water balance, storage volume calculations, and a nitrogen balance for the crop system using 30 TAC § 309.20, Subchapter C, Land Disposal of Sewage Effluent as guidance. **NOTE:** See Appendix 6 for an example water balance and storage volume calculation. See 30 TAC § 309.20(b)(3)(C) for an example of a nitrogen balance.

Irrigation must be limited to prevent excessive nitrogen application. The annual liquid loading must not exceed that which would introduce more nitrogen than is annually required by the crop plus 20% volatilization. Values for crop nitrogen requirements must be justified in the design report. The application rate must be calculated by the formula L = N/2.7C, where L is the annual liquid loading in acre-feet, C is the effluent nitrogen concentration in mg/L, and N is the annual crop requirement of nitrogen plus 20% volatilization in pounds per acre per year.

1. Evaporation Ponds
2. Provide the actual/proposed daily average effluent flow into the pond(s) in gpd.
3. Attach a separate engineering report of evaporation calculations for average long-term and worst-case critical conditions (i.e., maximum rainfall and minimum evaporation from the past 25 years of climatological data). **NOTE:** See Appendix 7 for an example. This report is necessary to determine the maximum feasible long-term disposal volume under average conditions to prevent effluent accumulation and the adequacy of the system under extreme conditions of maximum rainfall and minimum evaporation.
4. Evapotranspiration Beds
5. Provide the following information on the evapotranspiration beds:

number of beds;

area of bed(s) in acres;

depth of bed(s) in feet;

void ratio of soil in the beds;

storage volume within the beds and provide the units; and

a description of any lining to protect groundwater.

Visit the [Texas A&M Agrilife Extension](https://ossf.tamu.edu/evapotranspiration-bed/)[[30]](#footnote-31) for additional information on evapotranspiration beds.

1. Attach a certification by a licensed Texas professional engineer that the liner meets TCEQ requirements.
2. Attach a separate engineering report of water balance and storage volume calculations.
3. Overland Flow
4. Provide the following information on the overland flow:

area used for application in acres;

slopes for application area as a percent;

design application rate in gallons per minute per foot of slope width;

slope length in feet;

design BOD5 loading rate in pounds of BOD5 per acre per day;

design application frequency in hours per day; and

design application frequency in days/week.

1. Attach a separate engineering report describing the method of application and design requirements according to 30 TAC § 217.212, Overland Flow Process.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.2 SUBSURFACE IRRIGATION (NON-DRIP)

Worksheet 3.2 **is required** for all applications for a permit to dispose of wastewater by subsurface land application.

This worksheet is not required for systems that meet the definition of a SADDS as defined in 30 TAC Chapter 222. Complete Worksheet 3.3 if the system meets the definition of a SADDS.

Check the box to confirm the Class V Injection Well Inventory/Authorization Form (Worksheet 9.0) for this type of disposal system has been submitted to TCEQ’s UIC Permits Team as directed.

1. Edwards Aquifer

The Edwards Aquifer boundaries are viewable on the [Edwards Aquifer Map Viewer](https://www.tceq.texas.gov/permitting/eapp/viewer.html) on the TCEQ website.

1. If the subsurface system is located on the Edwards Aquifer Recharge Zone as designated in 30 TAC Chapter 213, Edwards Aquifer Rules, check **yes**. Otherwise, check **no**.
2. If the subsurface system is located on the Edwards Aquifer Transition Zone as designated in 30 TAC Chapter 213, Edwards Aquifer Rules, check **yes**. Otherwise, check **no**.

If **yes** to either Item 1.a **or** 1.b, then the system may be prohibited by 30 TAC § 213.8. Contact the Water Quality Assessment Section to determine if the proposed activity is affected by this rule.

1. Subsurface Application
2. For subsurface soil absorption that does not meet the definition of a SADDS provided in 30 TAC Chapter 222, check the type of system being used/proposed.
3. Provide the following information that is specific to the type of system used/proposed:

application area in acres;

area of drainfield in square feet;

application rate in gallons per square feet per day;

depth to groundwater in feet;

area of trench in square feet;

dosing duration per area in hours;

number of beds;

dosing amount per area in inches per day;

soil infiltration rate in inches per hour;

storage volume in gallons;

area of bed(s) in square feet; and

soil classification.

1. Attach a separate engineering report using 30 TAC § 309.20, Subchapter C, Land Disposal of Sewage Effluent as guidance, excluding items 30 TAC § 309.20(b)(3)(A), water balance, and 30 TAC § 309.20(b)(3)(B), storage calculations. On a case-by-case basis TCEQ may request these items. Include a description of the schedule of dosing basin rotation.

**NOTE:** For all proposed and existing subsurface disposal systems, the Class V Injection Well Inventory/Authorization Form (Worksheet 9.0) must be submitted in accordance with 40 CFR § 144.1(g)(iv). See the instructions for Worksheet 9.0 on page 101 for further guidance.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.3 SUBSURFACE AREA DRIP DISPERSAL SYSTEMS

Worksheet 3.3 **is required** for all applications for a permit to dispose of wastewater using a system which meets the definition of a SADDS located at 30 TAC Chapter 222, Subsurface Area Drip Dispersal Systems.

Check the box to confirm the Class V Injection Well Inventory/Authorization Form (Worksheet 9.0) for this type of disposal system has been submitted to TCEQ’s UIC Permits Team as directed.

1. Edwards Aquifer

The Edwards Aquifer boundaries can be viewed on the [Edwards Aquifer Map Viewer](http://www.tceq.texas.gov/field/eapp/viewer.html) on the TCEQ website.

1. If the SADDS is/will be located on the Edwards Aquifer Recharge Zone as designated in 30 TAC Chapter 213, Edwards Aquifer Rules, check **yes**. Otherwise, check **no**.
2. If the SADDS is/will be located on the Edwards Aquifer Transition Zone as designated in 30 TAC Chapter 213, Edwards Aquifer Rules, check **yes**. Otherwise, check **no**.

If **yes** to either Item 1.a **or** 1.b, the system may be prohibited by 30 TAC § 213.8. Contact the Water Quality Assessment Section to determine if the proposed activity is affected by this rule.

1. Administrative Information

TCEQ is required to prepare a compliance history for the owner of the WWTF, the owner of the land where the WWTF is/will be located, the owner of the SADDS, and the owner of the land where the SADDS is/will be located.

1. Identify the legal name of all corporations or other business entities that are related to the owner of the treatment facility. The business entities would share the same owner(s) or partial owner(s); or the same member(s) of a partnership; or each business entity that is managed by the owner of the treatment facility.
2. If the owner of the land where the treatment facility is/will be located is the same as the owner of the treatment facility, check **yes**. Otherwise, check **no**.

If **no**, provide the legal name of all corporations or other business entities that are related to the owner of the land where the treatment facility is located. The business entities would share the same owner(s) or partial owner(s); or the same member(s) of a partnership; or each business entity that is managed by the owner of the land where the treatment facility is/will be located.

1. Identify the owner of the SADDS.
2. If the owner of the subsurface area drip dispersal system is the same as the owner of the treatment facility, check **yes**. Otherwise, check **no**.

If **no**, provide the legal name of all corporations or other business entities that are related to the owner of the SADDS (Item2.c), check **yes**. Otherwise, check **no**. The business entities would share the same owner(s) or partial owner(s); or the same member(s) of a partnership; or each business entity that is managed by the owner of the SADDS (Item 2.c).

1. Identify the owner of the land where the SADDS is/will be located.
2. If the owner of the land where the subsurface area drip dispersal is/will be located is the same as the owner of the treatment facility, check **yes**. Otherwise, check **no**.

If **no**, provide the legal name of all corporations or other business entities that are related to the owner of the land where the SADDS is located (Item 2.e). The business entities would share the same owner(s) or partial owner(s); or the same member(s) of a partnership; or each business entity that is managed by the owner of the land where the subsurface dispersal system is/will be located (Item 2.e).

1. SADDS
2. Identify the type of SADDS used/proposed at this facility by checking the appropriate box.
3. Attach the following information, at a minimum, describing the SADDS used/proposed:

remote control capability of the automated drip dispersal system;

description of the filters prior to entering the dispersal system;

distance between drip lines;

distance between emitters in a drip line;

rating of each emitter in gallons per hour (gal/hr);

flushing capability of the dispersal system;

placement of drip lines [surface or below ground level (depth)];

number of dosings or cycles per day;

duration of each dosing;

time elapsed between the end of one dosing and the beginning of the next dosing;

number of dispersal zones; and

days per week that irrigation is proposed.

1. For the information regarding irrigation operations, provide the following information:

acres irrigated;

infiltration rate of the soils;

the average and maximum slope of the irrigation site;

storage volume;

major soil series;

depth to groundwater; and

the effluent conductivity in dS/m (deciSiemen per meter, which is the same as mmhos/cm).

1. **If the facility is/will be located west of the boundary shown in** 30 TAC § 222.83 **and using a vegetative cover of non-native grasses overseeded with cool-season grasses, check yes. Otherwise, check no.**

**If yes, the facility may propose a hydraulic application rate not to exceed 0.1 gal per square foot per day.**

1. **If the facility is/will be located east of the boundary shown in** 30 TAC § 222.83 **or is using/proposing any crop other than non-native grasses, check yes. Otherwise, check no.**

**If yes, the facility must use the formula in** 30 TAC § 222.83 **to calculate the maximum hydraulic application rate**

1. **If the facility has or plans to submit an alternative method to calculate the hydraulic application rate for approval by the executive director, check yes. Otherwise, check no.**

**If yes, provide the hydraulic application rate and the nitrogen application rate, in gallons per square foot per day.**

1. **Provide the following dosing information:**

**number of doses per day;**

**dosing duration per area in hours;**

**rest period between doses in hours;**

**dosing amount per area in inches per day; and**

**number of zones.**

1. **If the system is or will be a surface drip irrigation system using existing native vegetation as a crop, check yes. Otherwise, check no.**

**If yes, attach the following information and provide the attachment numbers:**

**a vegetation survey by a certified arborist describing the percent canopy cover and relative percentage of major overstory and understory plant species; and**

a separate engineering report using 30 TAC § 309.20, Subchapter C, Land Disposal of Sewage Effluent as guidance, excluding items 30 TAC § 309.20(b)(3)(A), water balance, and 30 TAC § 309.20(b)(3)(B), storage calculations. On a case-by-case basis TCEQ may request these items. Include a description of the schedule of dosing basin rotation.

**NOTE:** For all proposed and existing subsurface area drip disposal systems, the Class V Injection Well Inventory/Authorization Form (Worksheet 9.0) must be submitted in accordance with 40 CFR § 144.1(g)(iv). See the instructions for Worksheet 9.0 on page 101 for further guidance.

1. Required Plans
2. For **new** or **amendment** applications proposing a(n) new/expansion of a SADDS, attach a soil evaluation with all information required in 30 TAC § 222.73. The soil evaluation shall contain, at a minimum, the following information:

at least one profile hole per soil type and its description;

total depth of the profile hole;

primary rooting depth (depth where most plant roots are concentrated);

secondary rooting depth (base of primary rooting depth to the depth where plant roots are no longer discernible);

description of each soil horizon to include description of its depth, texture, structure, color, presence of mottling and percent coarse fragments;

boundary descriptions;

restrictive horizons;

potential water bearing zones; and

active water bearing zones.

Soil evaluations are to be performed by a licensed Texas professional geoscientist or engineer qualified in the subject.

1. For new or amendment applications proposing a(n) new/expansion of a SADDS, attach a Site Preparation Plan with all information required in 30 TAC § 222.75. This plan must list the soil limitations of the affected area and describe how each limitation will not restrict the intended use of the affected area. This plan must include the following information, if applicable:

a site plan to minimize rainfall run-on and maximize rainfall runoff from the dispersal zones;

design criteria to compensate for any restrictive horizon within the soil column;

soil importation with descriptions of the chemical and physical characteristics of the proposed import material; and

and any planned removal of existing vegetation and large stones from the terrain surface to 12 inches below the proposed placement of the drip lines.

1. For new or amendment applications proposing a(n) new/expansion of a SADDS, attach a Recharge Feature Plan with all information required in 30 TAC § 222.79.
2. For new or amendment applications proposing a(n) new/expansion of a SADDS, attach the soil sampling and testing with all information required in 30 TAC § 222.157.
3. Flood and Run-On Protection
4. If the SADDS is/will be within the 100-year frequency flood level, check **yes**. Otherwise, check **no**.

If **yes**, list the source of data used to make the determination. If the site is within the 100-year frequency flood level, provide a description of how the site will be protected from inundation.

1. If the SADDS is/will be within a designated floodway, check **yes**. Otherwise, check **no**. New or expanding SADDS are not permitted in a designated floodway.

If **yes**, provide the source of data used to determine the floodway.

1. Surface Waters in the State
2. Attach a buffer map which shows the appropriate buffers on surface waters in the state, water wells, and springs/seeps.
3. If the facility has or plans on requesting a buffer variance from water wells or waters in the state, check **yes**. Otherwise, check **no**.

If **yes**, attach the additional information required in 30 TAC § 222.81(c).

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 4.0 RECEIVING WATERS

Worksheet 4.0 **is required** for all TPDES applications.

Worksheet 4.0 **is not required** for applications for a permit to dispose of all wastewater by land disposal.

**All applications** for a TPDES permit **must submit USGS quadrangle maps** showing: 1) the location of the facility **and** 2) the discharge point(s). The USGS quadrangle maps must depict the discharge route for three miles from the point of discharge or until a classified segment is reached as defined in 30 TAC Chapter 307, Appendix C, TSWQS, whichever occurs first. Use **highlighter** (not black marker) to show the discharge route.

**NOTE:** The map(s) submitted as part of the Administrative Report 1.0 may be used for this worksheet. Copies of the original USGS quadrangle maps with the appropriate information may suffice provided that they are color copies of original quality and scale and all the features of the original map and the information provided are legible and can be clearly deciphered. The permittee should retain a copy of the information for reference in subsequent applications.

If the facility has/is proposing multiple points of discharge (outfalls) which do/will not enter the same receiving water, attach additional sheets for each outfall. The outfalls that flow into each receiving water should be listed.

1. Domestic Drinking Water Supply

If a surface water intake for domestic drinking water supply is located within five miles downstream of the existing/proposed outfall(s), check **yes**. Otherwise, check **no**.

If **yes**, identify the owner and accurately locate and label all surface water intakes for domestic drinking water supply located within five miles downstream from the existing/proposed point of discharge on the USGS 7.5-minute topographic map. Check the box to confirm the information was provided.

1. Discharge Into Tidally Influenced Waters
2. Provide the width of the receiving water at the outfall in feet.
3. If oyster reefs are/will be located in the vicinity of the discharge, check **yes**. Otherwise, check **no.**

**If yes,** provide the approximate distance (in feet) and direction from the outfall to the oyster reefs.

1. If sea grasses are/will be located in the vicinity of the discharge, check **yes**. Otherwise, check **no.**

**If yes,** provide the approximate distance (in feet) and direction from the outfall to the sea grasses.

1. Classified Segment

If the discharge is/will be directly into (or within 300 feet of) a classified segment as defined in Appendix C of the TSWQS (30 TAC § 307.10), check **yes**. Otherwise, check **no**. Contact the Standards Implementation Team of the Water Quality Assessment Section for assistance with determining if the receiving water is a classified segment.

If **yes**, stop here. Do not complete Items 4 and 5 of this worksheet or Worksheet 4.1.

If **no** **and** the discharge is/will be into a watercourse such as a creek, ditch, or series of tributaries prior to flowing into a classified segment, complete Items 4 and 5 and Worksheet 4.1 may be required.

1. Description of Immediate Receiving Waters
2. Provide the name of the immediate receiving waters. If unnamed, enter the designation which best describes the immediate receiving water body (e.g. unnamed tributary, unnamed ditch, flood control ditch, etc.).
3. These items refer to the **immediate** receiving water (at the point the treated effluent is/will be discharged). Check the box next to only one item which best describes the first receiving water into which the discharge will flow after it leaves the outfall.

If the immediate receiving water is/will be a lake, TCEQ permits typically require the point of discharge to the main body of the lake to be at a point not less than 10 feet below the surface (at normal elevation) and not less than 50 feet from the shoreline.

If a **Man-Made Channel or Ditch** or **Stream or Creek** was selected in Item 4.b, answer Items 4.c – 4.g.

1. For **existing discharges**, check the box next to only one characteristic which best describes and characterizes the area **upstream** of the discharge point.

For **new discharges**, check the box next to only one characteristic which best describes and characterizes the area **downstream** of the proposed discharge.

Indicate the source(s) used to determine the characteristic for describing the area upstream or downstream.

1. List the names of all perennial streams that join the receiving water (discharge route) within three miles downstream of the existing or proposed point of discharge.
2. If the receiving water characteristics change within three miles downstream of the point of discharge, check **yes**. Otherwise, check **no**.

If **yes**, provide a discussion of how the characteristics change.

1. Provide general observations of the water body during normal dry weather conditions.
2. If the water body was influenced by stormwater runoff during observations, check **yes**. Otherwise, check **no**.

If **yes**, provide a description of the influence from stormwater runoff.

1. General Characteristics of Water Body

These items refer to the **immediate** receiving water (e.g., a drainage ditch, a stream, a lake, a bay, etc.).

1. Check all of the activities that influence the area upstream of the existing or proposed point of discharge. If **other** is checked, describe the influence.
2. Check all of the uses and activities that are known or observed to occur on the water body receiving the discharge, both upstream and down. If **other** is checked, describe the use or activity.
3. Check only one description which best describes the aesthetics of the receiving water and surrounding area, both upstream and down.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 4.1 WATERBODY PHYSICAL CHARACTERISTICS

Worksheet 4.1 **is required** for the following types of permit applications.

New permit applications

All EPA-designated majors

Amendment applications requesting the addition of a new outfall

Worksheet 4.1 **is required** for the following types of streams (as identified in Worksheet 4.0, Item 4.b).

Perennial

Intermittent with persistent (perennial) pools (including impoundments)

Worksheet 4.1 **is not required** for TPDES permit applications applying for individual permit coverage for discharges of stormwater runoff only.

Worksheet 4.1 **is not required** if the discharge is:

directly to a classified segment as defined in Appendix C of the TSWQS (30 TAC § 307.10)

directly to an intermittent stream

**NOTE: Even if the information required in this section has been provided in a previous application, please resubmit the information.**

Contact the Standards Implementation Team of the Water Quality Assessment Section with any questions on conducting a stream assessment or completing this worksheet.

1. Data Collection

Items 1.a through 1.f are for general information and observations made over the entire reach and Item 1.g is for measurements and observations made at specific transect locations.

Transect measurements are usually made beginning at the point of discharge (outfall) and continuing downstream. Once these are completed, the general observations are made over the reach while returning to the point of discharge. **NOTE: Conduct the physical assessment downstream of a proposed outfall and upstream of an existing outfall.**

General observations: Observe or measure stream widths at a minimum of four and a maximum of ten equally spaced locations over a 0.5-mile reach. The number of transects depends upon width variability. At each point where width measurements are made, also measure the water depth at four to ten points across the transect. Include transects within each habitat type (i.e., pool, riffle, run, or glide) if they exist. If pools are present, include measurements across the deepest area to determine the maximum pool depth within the reach. Show the locations of the transects on the USGS map and the proposed point of discharge.

Characterize each transect site as riffle, run, glide or pool. (See the General Definitions section.)

After finishing the transect measurements, complete the general observations (Items 1.a through 1.f) and then complete the Stream Transect Data table (Item 1.g).

1. Provide the following information:

Date the data was collected for the worksheet.

Time the data was collected for the worksheet.

Waterbody name. If the waterbody is unnamed, enter “unnamed tributary of <downstream creek>”, “unnamed ditch”, “unnamed impoundment”, etc. If the waterbody is a ditch controlled by a flood control district and has a designation, enter that designation.

General location where the data was collected. For example, “100 meters upstream to 0.5 mile downstream of the discharge point,” “upstream of Highway 345 road crossing.”

1. Check the box next to the type of stream upstream of an existing discharge or downstream of a proposed discharge (i.e., perennial, intermittent with perennial pools, or impoundment).
2. Count the number of stream bends and determine their definition (i.e., well, moderate, poor - see General Definitions section of these Instructions).
3. Count the number of riffles.
4. Estimate the magnitude of flow fluctuations.

Look for evidence of debris in bank trees or its position on stream banks (i.e., upper, middle, or lower). Another indication of flow fluctuations is how well stream flow covers the channel. If water has receded from banks exposing bottom substrates, fluctuations may be severe. The best source of evidence is historical USGS stream flow records, if available.

1. Indicate observed channel obstructions (e.g., fences, log jams, culverts, low water bridges, beaver dams, etc.) and channel modifications (e.g., channelized, cleared, leveed, concrete lined, rip-rapping, etc.).
2. Complete the Stream Transect Data table with the location, habitat type, water surface width (in feet) and stream depths for each transect measurement.
3. Summarize Measurements

Provide the following information regarding the transect measurements:

* The stream bed slope over the entire reach assessed. This can be calculated from USGS maps by measuring the drop in elevation over the reach assessed and dividing it by the total length of the reach assessed (feet/foot).
* From the USGS or county map, approximate the drainage area above the most downstream transect.
* The length in feet of the stream reach assessed.
* The total number of lateral transects made across the stream.
* The average stream width in feet by averaging all transect stream widths.
* The average stream depth in feet by averaging all transect stream depths recorded.
* The average stream velocity (in cubic feet per second).
* The instantaneous stream velocity (in cubic feet per second) at an appropriate point in the reach assessed. This should be done when the transects are made.
* The type of flow meter or method used to determine the instantaneous stream velocity, such as floating chip times over a fixed distance, etc. **NOTE: It is very important to identify the flow measurement method.**
* Describe the flow fluctuations over the reach (i.e., minor, moderate, or severe). See general observations made in Item 1.
* Describe the size of the pools (i.e., large, moderate, small, or none)
* The maximum pool depth (in feet)
* The number of stream bends:
* The number of well-defined stream bends.
* The number of moderately-defined stream bends.
* The number of poorly-defined stream bends.
* The total number of riffles in the reach assessed.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 5.0 SEWAGE SLUDGE MANAGEMENT AND DISPOSAL

Worksheet 5.0 **is required** for all TPDES permit applications that meet the conditions as outlined in Technical Report 1.0, Item 7.

1. Sewage Sludge Solids Management Plan
2. If this is a new or an amendment permit application, check **yes**. Otherwise, check **no**.
3. If the facility currently/proposes to discharge(s) in the Lake Houston watershed, check **yes**. Otherwise, check **no**.

**NOTE:** The Lake Houston Watershed is defined in 30 TAC § 311.31 as the entire drainage area of Lake Houston, with the exception of that portion of the drainage basin of the West Fork of the San Jacinto River that lies upstream of the Lake Conroe Dam. The Lake Houston Watershed includes all permit applications for facilities that discharge to Segment Numbers 1002, 1003, 1004, 1008, 1009, 1010, 1011, and 1015.

If **yes** to either Item a **or** b, attach a solids management plan, which includes the following:

* the dimensions (length × width × height) and capacities (in gallons or cubic feet) of all sewage sludge handling and treatment units and processes;
* calculations showing the amount of solids generated at design flow and at 75 percent, 50 percent and 25 percent of design flow;
* operating range for MLSS in the treatment process based on the projected actual and design flow expected at the facility;
* a description of the procedure and method of solids removal from both the wastewater and sludge treatment processes;
* quantity of solids to be removed from the process and schedule for removal of solids designed to maintain an appropriate solids inventory;
* identification and ownership of the ultimate disposal site and a system of documenting the amount of solids disposed of in dry weight form; and
* if the treatment system uses facultative lagoons, provide calculations describing the design life of the sludge holding volume in the ponds. Provide the location and depth of any monitoring wells located in the area of, and adjacent to, the facultative lagoons. Describe how the sludge will ultimately be disposed of upon reaching the design life of the facultative lagoons and other ponds, if utilized.

**NOTE:** An example of a solids management plan is provided in Appendix 4 of these Instructions.

1. Sewage Sludge Management and Disposal
2. Check all of the sewage sludge disposal methods authorized under the facility’s existing permit.

**Permitted landfill**

**Marketing and distribution by the permittee** – If the existing permit authorizes marketing and distribution of treated sewage sludge, Form **TCEQ-00551 is required**.

**Registered Land Application Site** – If there is a septic tank system at the facility and the existing permit authorizes land application of waste from this septic tank on land located at the facility, Form **TCEQ-00565 is required**.

**Processing by the Permittee** – If the existing permit authorizes on-site processing (e.g., composting, lime stabilization, heat palletization, belt press, etc.) of sewage sludge, Form **TCEQ-00744 is required**.

**Surface disposal site (sludge monofill)** – If the existing permit authorizes on-site disposal of sewage sludge, Form **TCEQ-00744 is required**.

**Transported to another WWTP** – If the facility currently transports sewage sludge to another WWTP for treatment and disposal.

**Beneficial land application as authorized in the existing permit** – If the existing permit authorizes on-site beneficial land application of sewage sludge, Form **TCEQ-10451 is required**.

**Incineration** – If the existing permit authorizes one-site incineration of sewage sludge, Form **TCEQ-00744 is required**.

Based on the selection(s) made above, complete and attach any required TCEQ forms, as directed. Failure to submit the required TCEQ form will result in delays in processing the application

1. Provide detailed site information for each disposal site, including: the name of the site; the site’s Registration/Permit Number; and the county in which the disposal site(s) is located.
2. Provide the method of transportation used to haul sludge to the disposal site and the hauler’s Registration Number, if applicable.
3. Indicate whether the sludge is transportd in liquid, semi-liquid, semi-solid, or solid form.
4. If the sewage sludge is **land applied**, check whether it is used for land reclamation or soil conditioning. If sewage sludge is not land applied, select N/A.
5. If sewage sludge is **transported to another WWTP** for further treatment, attach a written statement or a copy of contractual agreements confirming that the WWTP identified above will accept and be responsible for the sludge from the plant for the life of the permit (at least five years). If such a statement or contract is not provided, authorization for such an activity cannot be included in a permit.
6. Authorization for Sewage Sludge Disposal

If this is a **new** or **major amendment** application, check all new sewage disposal methods requested:

**Marketing and distribution by the permittee** - If this application requests authorization for marketing and distribution of treated sewage sludge, Form **TCEQ-00551 is required**

**Processing by the permittee** - If this application requests authorization for on-site processing (e.g., composting, lime stabilization, heat palletization, belt press, etc.) of sewage sludge, Form **TCEQ-10056 is required**.

**Surface disposal site (sludge monofill)** - If this application requests authorization for surface dispose sewage sludge at this site or site under this facility’s direct control, Form **TCEQ-10056 is required**

**Beneficial land application** – If this application requests authorization for disposal of sewage sludge generated at this facility by beneficially land applying the sewage sludge at this site or a site under this facility’s direct control, Form **TCEQ-10451 is required**.

**Incineration** - If this application requests authorization to incinerate sewage sludge at this site or site under this facility’s direct control, Form **TCEQ-10056 is required**.

Based on the selection(s) made above, complete and attach any required TCEQ forms, as directed. Failure to submit the required TCEQ form will result in delays in processing the application.

Adding new authorization for beneficial land application, surface disposal, or incineration of sewage sludge to a permit requires a major amendment. Authorization for composting of sewage sludge requires a major amendment if the composting operation has the potential to cause a degradation of water quality or the addition of treatment units will encroach upon the buffer zone. Contact the Biosolids Team of the Water Quality Assessment Section for help with determining whether a major amendment is required.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 6.0 INDUSTRIAL WASTE CONTRIBUTION

Worksheet 6.0 **is required** for all publicly-owned treatment works (POTWs).

Worksheet 6.0 **is not required** for privately-owned facilities.

For an explanation of the terms used in Worksheet 6.0 and its instructions (e.g., Industrial User (IU), Categorical Industrial User (CIU), Significant Industrial User (SIU), interference, pass-through, etc.), please refer to the General Definitions on pages 4-12 and the Definitions Relating to Pretreatment on pages 13-14 of these Instructions.

1. All POTWs
2. Complete the Industrial User Information Table with: 1) the number of each of the listed types of IUs that discharge to the POTW and 2) the total daily average flow of wastewater (in gpd) discharged to the POTW from each type of IU. The wastewater flow discharged from each IU should include process and non-process wastewater.
3. If the POTW has experienced treatment plant interference in the past three years, check **yes**. Otherwise, check **no**.

If **yes**, provide the following information: 1) the date(s), 2) the duration, 3) a description of the interference, and probable cause(s), and 4) possible source(s) of each interference event, including the name(s) of the IU(s) that may have caused the interference event. Include a separate attachment, if necessary, and provide the attachment number instead.

1. If the POTW has experienced treatment plant pass-through in the past three years, check **yes**. Otherwise, check **no**.

If **yes**, provide the following information: 1) the date(s), 2) the duration, 3) description(s) of pollutants passing through the treatment plant, probable cause(s), and 4) possible source(s) of each pass-through event, including the name(s) of the IU(s) that may have caused the pass-through event. Submit a separate attachment, if necessary, and provide the attachment number instead.

1. If the POTW has an approved pretreatment program or is developing an approved pretreatment program, check **yes**. Otherwise, check **no**.

If **yes**, answer all questions in Item 2, but skip Item 3.

If **no**, skip Item 2 and answer all questions in Item 3 for each SIU and CIU.

1. POTWs With Approved Programs or Those Required to Develop A Pretreatment Program
2. If there have been any substantial modifications to the POTW’s approved pretreatment program that have not been submitted to the Approval Authority (TCEQ) for approval according to 40 CFR § 403.18, check **yes**. Otherwise, check **no**.

If **yes**, identify all substantial modifications that have not been submitted to the Approval Authority (TCEQ), including the purpose of the modification(s), and include as an attachment.

1. If there have been any nonsubstantial modifications to the POTW’s approved pretreatment program that have not been submitted to the Approval Authority (TCEQ), check **yes**. Otherwise, check **no**.

If **yes**, identify all nonsubstantial modifications that have not been submitted to the Approval Authority (TCEQ), including the purpose of the modification(s), and include as an attachment.

1. List any and all parameters measured above the MAL in the POTW’s effluent monitoring during the past three years according to the requirements in the pretreatment section of the existing TPDES permit. If retests were done following the above testing for any parameters identified in the POTW’s effluent above the MAL, identify all retest parameters, concentrations, MALs, and dates. Attach additional sheets as necessary.
2. If any SIU, CIU, or other IU has caused or contributed to any other problem(s) (excluding interference or pass through), check **yes**. Otherwise, check **no**.

If **yes**, provide information concerning any problems the treatment works have experienced that are attributable to discharges from SIUs, CIU, or other IUs. Problems may include corrosion in the collection system or other similar events. Include the name(s) of the SIU(s)/CIU(s)/other IU(s) that may have caused or contributed to the problem(s).

1. Significant Industrial User and Categorical Industrial User Information

POTWs that **do not** have an approved pretreatment program **are required** to complete Item 3.

POTWs that have an approved pretreatment program do not need to complete Item 3 **unless** this is a new or expanding WWTP or SIUs have commenced discharge to an existing plant where none have been discharging previously.

1. Provide the name and contact information for each SIU and CIU, as defined in 40 CFR Chapter 403, discharging to the POTW. Include a separate attachment, if necessary.
2. Describe (rather than simply listing) the actual process(es), operations, and other activities at the SIU/CIU that affect or contribute to the discharge from the SIU/CIU. For example, in describing a metal finishing operation, include such information as how the product is cleaned prior to finishing, what types of plating baths are in operation (e.g., nickel, chromium), how paint is applied, and how the product is polished. Attach additional information and process flow diagrams, if necessary.
3. List principal products that the SIU/CIU generates or the services that it performs, the raw materials and the rate at which those raw materials are used to manufacture the products.
4. Flow rate information.

Provide the average daily volume (in gpd) of process wastewater and non-process wastewater that the SIU/CIU discharges into the POTW’s collection system. [**NOTE**: Process wastewater means any water which, during manufacturing or processing, comes in direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.]

Specify whether discharges are continuous, batch, or intermittent.

If continuous, specify the daily duration of the discharge (i.e., 10,000 gpd over an eight-hour time period, five days per week).

If batch or intermittent discharge, specify the basis for calculating the average daily flow (e.g., frequency, volume per batch, and duration). For example, the IU batch average daily discharge is 40,000 gpd (e.g., 10 batches per one eight-hour shift per day at 400 gallons per batch, or the IU discharges 500 gpm for eight-hours per day).

1. Pretreatment Standards
2. If the SIU/CIU is subject to technically based local limits (TBLLs), check **yes**. Otherwise, check **no**. Technically based local limits are enforceable local requirements developed by a POTW to address federal standards as well as state and local regulations and requirements.
3. If the SIU is subject to categorical pretreatment standards, check **yes**. Otherwise, check **no**. Categorical pretreatment standards are national technology-based standards developed by the EPA, setting industry-specific effluent limits. These standards are implemented by 40 CFR Parts 403-471.

If **yes**, provide the category and subcategory or subcategories.

1. If the SIU or CIU caused or contributed to any problem(s) (e.g., interferences, pass through, odors, corrosion, blockages, etc.) at the POTW in the past three years, check **yes**. Otherwise, check **no**.

If **yes**, provide information concerning any problem(s) the POTW has experienced that are attributable to discharges from the SIU(s)/CIU(s). Problems may include upsets, interferences or pass through at the plant, odors, corrosion, or blockages in the collection system, or other similar events. Include the name(s) of the SIU(s)/CIU(s) that may have caused or contributed to the problem.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 7.0 STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

Worksheet 7.0 **is required** for all TPDES permit applications for individual permit coverage for discharges consisting of **either**: 1) solely of stormwater discharges associated with industrial activities **or** 2) stormwater discharges associated with industrial activities and any of the listed allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6.

Discharges of stormwater (including stormwater runoff, snow melt runoff, and surface runoff and drainage) associated with industrial activities, as defined in 40 CFR § 122.26 (b)(14)(i-xi), must be authorized under a TPDES permit. Authorization may be obtained by either applying for coverage under an industrial general TPDES permit (sometimes referred to as the MSGP) or under an individual TPDES permit.

Discharges of stormwater as defined in 40 CFR § 122.26 (b)(13) are not required to obtain authorization under a TPDES permit (see exceptions at 40 CFR §§ 122.26(a)(1) and (9)). Authorization for discharge may be required from a local MS4.

1. Applicability

If discharges from any of the existing/proposed outfalls consist either 1) solely of stormwater discharges associated with industrial activities **or** 2) stormwater discharges associated with industrial activitiescommingled with any allowable non-stormwater wastestreams, check **yes**. Otherwise, check **no**.

The allowable non-stormwater wastestreams are listed in the MSGP, Part II, Section A, Item 6, and below:

* discharges from emergency firefighting activities and uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);
* potable water sources (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);
* lawn watering and similar irrigation drainage, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
* water from the routine external washing of buildings, conducted without the use of detergents or other chemicals;
* water from the routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed);
* uncontaminated air conditioner condensate, compressor condensate, and steam condensate, and condensate from the outside storage of refrigerated gases or liquids;
* water from foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials, solvents, and other pollutants);
* uncontaminated water used for dust suppression;
* springs and other uncontaminated groundwater;
* incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but excluding intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains); and
* other discharges described in Part V of TXR050000 that are subject to effluent guidelines and effluent limitations.

If **yes**, proceed as directed. If **no**, stop here.

1. Stormwater Outfall Coverage

List each existing/proposed stormwater outfall and indicate whether authorization for discharge is/will be covered under the MSGP (TPDES general permit) or if authorization is/will be covered under an individual TPDES permit. If all existing/proposed stormwater outfalls are covered under the MSGP, **no further information is required**. If seeking authorization under an individual permit for any existing/proposed stormwater outfall, proceed as directed.

**NOTE:** **The following information is required for each existing/proposed outfall** that discharges/proposed to discharge either 1) solely stormwater discharges associated with industrial activitiesor 2) stormwater discharges associated with industrial activitiescommingled with any allowable non-stormwater wastestreams **and** for which the facility is seeking individual permit authorization under this application.

1. Site Map

Attach a site map or maps (drawn to scale) of the entire facility that includes the following information:

* the location of each stormwater outfall to be covered by the permit;
* an outline of the drainage area that is within the facility’s boundary and that contributes stormwater to each outfall to be covered by the permit;
* connections or discharge points to municipal separate storm sewer systems;
* locations of all structures (e.g. buildings, garages, storage tanks);
* structural control devices that are designed to reduce pollution in stormwater discharges associated with industrial activities;
* process wastewater treatment units (including ponds);
* bag house and other air treatment units exposed to precipitation or runoff;
* landfills, scrapyards, and surface water bodies (including wetlands);
* vehicle and equipment maintenance areas;
* physical features of the site that may influence stormwater runoff or contribute a dry weather flow;
* locations where spills or leaks of reportable quantity (as defined in 30 TAC § 327.4) have occurred during the three years before this application was submitted to obtain coverage under an individual permit; and
* processing areas, storage areas, material loading/unloading areas, and other locations where significant materials are exposed to precipitation or runoff.

Check the box next to each item to confirm it was provided on a facility site map(s). The site map must clearly show the flow of stormwater runoff from each of these locations so that the final outfall where the discharge leaves the facility’s boundary is apparent. A series of maps must be developed where the amount of information would cause a single map to be difficult to read and interpret.

1. Facility/Site Information
2. Provide the area of impervious surface and total area drained by each outfall that discharges stormwater for which an individual authorization under this permit application is sought. Include the units used.
3. Provide the following local area rainfall information and the source of the information: 1) the wettest month of the year (e.g., January, February, etc.); 2) the average total rainfall in inches in the wettest month of the year; and 3) the 25-year, 24-hour rainfall amount in inches.
4. Provide an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. Include an attachment, if necessary, and provide the attachment number instead.
5. Provide narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff. The description should include, for example, the following types of areas and reference the locations where these activities occur so that the locations are apparent when referencing the required site map. Include an attachment, if necessary, and provide the attachment number instead.

loading and unloading areas (including areas where chemicals and other materials are transferred)

outdoor storage areas

outdoor processing areas

dust producing activities

onsite waste disposal areas

vehicle/equipment maintenance, cleaning, and fueling areas

liquid storage tank areas

railroad sidings, tracks, and rail cars

1. Provide a description of any BMPs and controls that are used/proposed at the facility to prevent or effectively reduce pollution in stormwater discharges from the facility. Include an attachment, if necessary, and provide the attachment number instead.
2. Pollutant Analysis

Tables 17 and 18 must be completed for each outfall that discharges stormwater associated with industrial activities (discharges may also include any of the non-stormwater discharges from the list in Section 1 of this worksheet) that is not authorized by the MSGP. The discharge must be sampled and analyzed for all of the specified pollutants at least once by either 1) a grab sample during the first 30 minutes or 2) a flow-weighted composite sample if equipment is available for compositing by flow.

1. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (i.e., 05/01/2018-05/30/2018).
2. Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
3. Table 17: Include results for all pollutants listed in the table.
4. Table 18: Include results for pollutants as specified below. **Do not include pollutants listed previously in Table 17.**
5. Include each pollutant that is limited in an EPA categorical effluent guideline to which the facility is subject (40 CFR Parts 400 - 471) except those for which the monitoring frequency is less than once per month.
6. Include each pollutant that is limited for process wastewater in an existing TCEQ, NPDES, or TPDES permit for the facility except those for which the monitoring frequency is less than once per month.
7. Include each pollutant from **Worksheet 2.0, Tables 3, 4, and 5** that is used at the facility as a feedstock, intermediate, product, co-product, by-product, or maintenance chemical or that could in any way contribute to contamination of stormwater runoff.
8. Include each pollutant from **Worksheet 2.0, Tables 6, 8, 9, 10, 11, 12, and 13** (Instructions, pages 56-61) that is known or there is reason to believe is present in outfalls containing only stormwater runoff.

For pollutants listed from **Table 6**, either report quantitative data from the analysis of a grab sample or a flow-weighted composite sample or briefly describe the reasons the pollutant is expected to be discharged.

For pollutants listed from **Tables 8, 9, 10, and 11** (except for: acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol) that are expected to be discharged in concentrations of **10 ppb or greater**, quantitative data from the analysis of at least one grab sample or one flow-weighted composite sample must be submitted.

For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, quantitative data must be submitted if any of these four pollutants is expected to be discharged in concentrations of 100 ppb or greater.

For every pollutant listed from **Tables 8, 9, 10, and 11** expected to be discharged in concentrations **greater than 10 ppb** (or 100 ppb for the four pollutants listed above) either quantitative data must be submitted or a brief explanation of why the pollutant is expected to be discharged.

For pollutants listed from **Table 13** (Instructions, pages 60-61), explain why the pollutant is believed to be present and report any analytical data available. No additional analysis is required.

Review the following table to find the SIC codes or codes that applies to each outfall discharging stormwater. If the facility is subject to any of the following SIC Codes, the required analyses in Table 18 must be included.

Table 2: SIC Codes

| **SIC Code or**  **Major Group** | **Industrial Activity Description** | **Required Analyses** |
| --- | --- | --- |
| 24xx (except 2434) | Lumber and wood products (except wood kitchen cabinets) | n/a |
| 26xx (except 265x, 267x) | Paper and allied products (except paperboard containers and products) | Chemical oxygen demand |
| 28xx (except 283x, 285x) | Chemicals and allied products (except drugs and paints) | Phosphorous  Nitrate-nitrite  Iron  Aluminum |
| 29xx | Petroleum refining industries | n/a |
| 311x | Leather tanning and finishing | n/a |
| 32xx (except 323x), 33xx | Stone/clay/glass and concrete products (except glass products made of purchased glass); Primary metal industries | Aluminum  Iron |
| 3441, 373x | Fabricated structural metals; Ship and boat building and repairing | n/a |
| 10xx | Metal mining | Nitrate-nitrite  Turbidity  Hardness (as CaCO3)  Antimony |
| 12xx | Coal mining | Aluminum  Iron |
| 13xx | Oil and gas extraction | n/a |
| 14xx | Nonmetallic minerals | Nitrate-nitrite |
| HZ | Hazardous waste treatment, storage, or disposal facilities | Aluminum  Magnesium  Cyanide |
| LF | Landfills, land application sites, or open dumps that receive or have received industrial waste | Iron |
| 5015 | Motor vehicles parts, used | Aluminum  Iron |
| 5093 | Scrap and waste materials | Aluminum  Iron |
| SE | Steam electric power generating facilities, including coal handling sites | Iron |
| 40xx, 41xx, 42xx (except 4221-4225), 43xx, 5171 | Certain transportation facilities | n/a |
| 44xx | Water transportation | Aluminum  Iron |
| 45xx | Transportation by air | BOD5  Ammonia |
| TW; 20xx-23xx, 2434, 25xx, 265x, 267x, 27xx, 283x, 285x, 30xx, 31xx (except 311x), 323x, 35xx, 36xx, 37xx (except 373x), 38xx, 39xx, 4221-4225 | Treatment works treating domestic sewage or other sewage sludge or wastewater treatment device or system, related to municipal or domestic sewage; certain light industry | n/a |
| 34xx (except 3441) | Fabricated metal products (except fabricated structural metal) | Iron  Aluminum  Nitrate-nitrite |

1. Storm Event Data

Please provide the following data in the spaces provided for the storm event(s) which resulted in the maximum values for the analytical data submitted:

* date of storm event
* duration of storm event (minutes)
* total rainfall during storm event (inches)
* number of hours between beginning of storm measured and end of previous measurable rain event
* maximum flow rate during rain event (gallons/minute)
* total stormwater flow from rain event (gallons)
* description of the method of flow measurement or estimate

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 8.0 AQUACULTURE

Worksheet 8.0 **is required** for all TPDES permit applications for individual permit coverage for discharges of aquaculture wastewater.

Discharges of wastewater associated with aquaculture activities, as defined by 40 CFR § 122.24, must be authorized under a TPDES permit. Authorizations may be obtained by either applying for coverage under the Aquaculture General Permit (TPDES Permit TXG130000) or under an individual TPDES permit. Pursuant to Senate Bill 873, TCEQ shall consider sensitive habitat guidelines in evaluating applications for all new and expanding facilities located within the coastal zone.

1. Facility/Site Information
2. Provide the following information regarding production ponds, raceways, and fabricated tanks.

**Production ponds:** Production ponds include all outdoor ponds which are used to raise fish or other aquatic species. In the first column, provide the number of production ponds for each dimension. In the second column, provide the pond dimensions in feet. In the third column, calculate the surface area for a single pond (in acres). Calculate the total surface area of the production ponds.

**Raceways:** In the first column, provide the number of raceways. In the second column, provide the raceway dimensions in feet.

**Fabricated tanks:** In the first column, provide the number of species tanks. In the second column, provide the diameter of the species tank in feet.

Example: A facility has four ponds with dimensions of 300 feet wide and 600 feet long; two ponds with dimensions of 100 feet wide and 225 feet long; two raceways that are 4 feet by 50 feet; four raceways that are 4 feet by 60 feet; three tanks 10 feet tall with a 10 ft. diameter; and one tank 8 feet tall with a 12 ft. diameter. Completed tables appear as follows:

Production Pond Descriptions - Example

| **Number of Ponds** | **Dimensions**  **(include units)** | **Area of Each Pond (include units)** | **Number of Ponds × Area of Ponds**  **(include units)** |
| --- | --- | --- | --- |
| 4 | 300'×600' | 4.1 acres | 16.4 |
| 2 | 100'×225' | 0.5 acre | 1.0 |
| Total surface area of all ponds: |  |  | 17.4 |

Descriptions - Example

| **Number of Raceways** | **Dimensions (include units)** |
| --- | --- |
| 2 | 4'×50' |
| 4 | 4'×60' |

Fabricated Tank Descriptions - Example

| **Number of Tanks** | **Dimensions (include units)** |
| --- | --- |
| 3 | 10'×10' diameter |
| 1 | 8'×12' diameter |

1. If the facility has developed a Texas Parks and Wildlife Department (TPWD)-approved emergency plan, check **yes**. Otherwise, check **no**.

If **yes**, attach a copy of the approved plan.

1. If the facility has an aquatic plant transplant authorization, check **yes**. Otherwise, check **no**.

If **yes**, attach a copy of the authorization letter.

1. Provide the number of aquaculture facilities within 25-miles of the facility.
2. Species Identification

Complete the Species Identification table with the following information:

* each species being raised,
* the supplier of the stock,
* the water body of origin of the stock, and original supplier, if known,
* the status of disease testing and results of the stock, and
* if applicable, note any authorizations that were obtained for the stock, such as a stocking authorization or exotic species permit, and attach copies of current authorizations and permits.

Species Identification

| **Species** | **Source of Stock** | **Origin of Stock** | **Disease Status** | **Authorizations** |
| --- | --- | --- | --- | --- |
| Exotic species example:  P. vannamei  Pacific white shrimp | Harlingen Shrimp Farm | Pacific Ocean - Oceanic Institute – Hawaii | Provide copy of letter from TVMDL | Provide copy of Exotic Species Permit No. 0000 |
| Native species example:  Ictalurus punctatus  Channel catfish | Delta Farms | Pearl River | N/A – no information | N/A – no information |
| Native species example:  Sciaenops ocellatus  Red drum | Red Fish Unlimited | Matagorda Bay | N/A – no information | Provide copy of Stocking Authorization letter |

1. Stock Management Plan

Attach a detailed description of the maintenance and harvesting procedures at the facility. The stock management plan shall include the following information for each species:

* Total harvest weight in pounds. This is the live weight prior to processing from the last year of production. For a new facility the production weight may be estimated based upon stocking rates, feed rates, management practices, or production from similar facilities.
* Density of the stock in lbs/acre or in number/acre.
* Sizes upon stocking and subsequent life stages of the stock while maintained at the facility.
* Composition of the feed and feed management.
* Method of harvesting (e.g., seining).
* Stocking dates and production months prior to harvest.
* Months in which harvest occurs.
* Medications and or supplements. Attach manufacturer’s product label or material safety data sheet (MSDS) for each drug, medication, or chemical utilized.
* Disease monitoring procedures.
* Frequency and duration of medical treatments.

1. Water Treatment And Discharge Description

Attach a detailed description of the water treatment process and discharge practices during a typical wastewater discharge schedule for a full year of production. The water treatment and discharge description must include:

* Water exchange process and percentages of the water exchanged.
* Characterizations of variations in the quality and quantity of the discharge throughout the growing season.
* Annual average, daily average, and daily maximum flow volumes.
* Estimated number of days of discharge per year and months or seasons in which discharge occurs.
* Cleaning and disinfection process of containment structures. Identify each chemical utilized, such as chlorine solutions and detergents, and attach the manufacturer’s product label or MSDS for each.
* Water treatment and maintenance chemicals. Identify chemicals utilized such as fertilizers, flocculants, and algicides. Attach manufacturer’s product label or MSDS for each chemical utilized.
* Frequency and duration of water treatments.
* Descriptions of each wastewater treatment unit and process unit.

1. Solid Waste Management

Attach a detailed description of the facility’s solid waste disposal practices. The solid waste management description must include:

* identification of sources of solid wastes such as uneaten food and plant and animal waste;
* disposal of dead animals; and
* sludge removal practices.

1. Site Assessment Report

**NOTE:** This item is only applicable to new and expanding commercial shrimp facilities located within the coastal zone, which are required to complete a Site Assessment Report to identify sensitive aquatic habitats within the coastal zone. TCEQ will only consider items required in the Site Assessment Report which are within the scope of its regulatory authority under the TPDES program.

Attach a Site Assessment Report, if required, which includes the following information:

1. **Facility Location**

Identify the facility location, intake structures, and outfalls on the appropriate USGS 7.5' topographical map in the “Oil Spill Prevention and Response Atlas”.

Provide the priority designation for the area(s) identified in the “Data Supplement” and “Data Supplement Addendum” accompanying the map.

Provide a description of the organisms and habitat for the area(s) identified in the “Data Supplement Addendum” accompanying the map.

1. **Flushing Rate** - Describe local circulation patterns, tidal height fluctuations, prevailing wind direction and velocity, and prevailing current direction and velocity in the vicinity of the discharge and mixing zone.
2. **Reefs** - Describe the proximity and size of nearby reefs, whether natural or artificially constructed, and known or expected uses of the reefs (e.g., commercial harvest of oysters or recreational fishing).
3. **Endangered or Threatened Species** - Provide information about the documented presence of endangered or threatened species or species of concern within the vicinity of the facility and discharge. Identify any preferred habitats of threatened or endangered species or species of concern in relation to the facility, the discharge location, and intake structures.
4. **Spawning** - Provide available information about spawning of fish, shellfish and marine organisms in the vicinity of the discharge location and intake structures.
5. **Nesting** - Identify colonial nesting water birds, and other birds, mammals, reptiles, or amphibians that are recreationally, ecologically, or economically important, which nest in the vicinity of the facility and intake and discharge locations.
6. **Bird Roosts** - Identify colonial water bird roosts in the vicinity of the facility, intake, and discharge locations.
7. **Recreational Use** - Identify the known or expected contact and noncontact recreational uses of coastal habitat in the vicinity of the facility.
8. **Nursery Habitat** - Identify known nursery habitat for juvenile aquatic organisms in the vicinity of the discharge and the mixing zone. Determine whether seagrasses are present within 2500 feet of the discharge point. If they are present, estimate the density, for example “scattered plants,” “scattered small patches (<2-5 m2 per patch),” “semi-continuous (open areas are common),” or “continuous.” Identify any intertidal marshes in the vicinity.
9. **Discharge Characterization** - Provide the following information regarding the wastes and potential impacts of the facility upon the coastal environment:

Oxygen Demand - Identify expected sources, such as feces, uneaten food, and algae, and concentrations of oxygen-demanding wastes within the effluent. Describe how oxygen-demanding waste concentrations will vary with time and identify factors that may influence these variations.

Salinity - Describe expected salinities of the discharge and receiving waters. Characterize any differences between them and describe how those differences may change with time.

Solids - Describe solids control activities during facility construction, operation, and maintenance to ensure minimal solids movement into the coastal environment. Solids control activities must be adequate to ensure that solids will not be released during construction operations and wastewater discharge activities will not cause erosion to discharge ditches.

Disease - Describe anticipated and known pathogens which could infect the facility. Determine whether the same pathogens may infect native populations. Describe how the facility monitors and controls pathogens and how pathogen controls may affect the adjacent coastal ecosystem.

Exotic species - Provide information regarding non-native species expected to be cultured, likelihood of survival following escape, and potential impact of escaped species upon the coastal ecosystem. Potential impacts may include out-competing native species for food and habitat, hybridization with native species, disease transfer, and destruction of habitat.

Nutrients - Identify expected sources and concentrations of nutrients, particularly nitrogen and phosphorus, within the effluent. Describe how nutrient concentrations will vary with time and identify factors that may influence these variations.

Noise - Describe equipment and activities which will be expected to generate noise, noise levels expected, how noise levels will vary with time of day and season, and what actions the facility will take to minimize noise impacts on the coastal ecosystem.

Shoreline modifications - Describe how facility modifications and construction activities will impact the coastal environment.

Impingement and entrainment of native species - Describe the type(s) of intake structure, water intake processes, and techniques utilized to ensure minimal entrainment and impingement of recreationally, ecologically, or economically important species.

Cumulative waste/loading impacts - Identify possible cumulative impacts from the combined effects of the proposed facility with impacts from nearby activities and wastewater discharges.

Mitigation - Describe how the facility proposes to mitigate impacts to the coastal environment due to facility operations and construction activities.

RESOURCES

The “[Oil Spill Prevention and Response Atlas](http://www.glo.texas.gov/coast/oil-spill/toolkit/index.html)”[[31]](#footnote-32) can be viewed online on the Texas General Land Office (GLO) website or by contacting the GLO or the Texas Parks and Wildlife Department (TPWD).

TEXAS PARKS AND WILDLIFE DEPARTMENT

| Resource Protection Division  Lower Coast Regional Office  Dustin Windsor, Manager  TAMU-Corpus Christi Natural Resources Center,  Suite 2501  6300 Ocean Drive  Corpus Christi, TX 78412  Phone: (830) 570-3795 | Upper Laguna Madre Ecosystem Office  Faye Grubbs, Program Leader  TAMU-Corpus Christi Natural Resources Center,  Suite 2500  6300 Ocean Drive  Corpus Christi, TX 78412  Phone: (361) 463-7757 |
| --- | --- |
| Upper Coast Regional Office  Woody Woodrow, Manager  1502 Pine Drive (FM 517)  Dickinson, TX 77539  Phone: (281) 534-0131 | Lower Laguna Madre Ecosystem Office  Jason Ferguson, Program Leader  95 Fish Hatchery Road  Brownsville, TX 78520  Phone: (956) 350-4490 |
| Coastal Fisheries Division  Galveston Bay Ecosystem Office  Rebecca Hensley, Program Leader  1502 Pine Drive (FM 517)  Dickinson, TX 77539  Phone: (281) 534-0108 | Aransas Bay Ecosystem Office  Christopher Mace, Program Leader  702 Navigation Circle  Rockport, TX 78382  Phone: (361) 729-5429 |
| Lake Sabine Ecosystem Office  Jerry Mambretti, Program Leader  601 Channel View Dr.  Port Arthur, TX 77640  Phone: (281) 534-0101 | Corpus Christi Bay Ecosystem Office  Brian Bartram, Program Leader  702 Navigation Circle  Rockport, TX 78382  Phone: (36) 729-2328 |
| Matagorda Bay Ecosystem Office  Leslie Hartman, Program Leader  2200 Harrison  Palacios, TX 77465  Phone: (361) 972-6253 | Wildlife Division  Wildlife – Region 4  Len Polasek  715 S. Highway 35  Rockport, Texas 78382  Phone: (361) 790-0306 |
| San Antonio Bay Ecosystem Office  Norman Boyd, Program Leader  P. O. Box 688, 16th and Maple  Port O'Connor, TX 77982  Phone: (361) 983-4425 | Wildlife Diversity Program – endangered and threatened species and species of concern  Megan Nelson  3000 S. IH-35,  Suite 100  Austin, Texas 78704  Phone: (512) 912-4481 |

TEXAS GENERAL LAND OFFICE

| Oil Spill Prevention and Response Atlas - Information  Steve Buschang  1700 N. Congress Avenue,  Room 340  Austin, Texas 78701-1495  Phone: (512) 475-4611 | Oil Spill Prevention and Response Atlas - Ordering  Stephanie Crenshaw  1700 N. Congress Avenue,  Room 340  Austin, Texas 78701-1495  Phone: 512-463-6556 |
| --- | --- |

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION   
WORKSHEET 9.0 CLASS V INJECTION WELL

Worksheet 9.0 **is required** for all applications to dispose of treated effluent via subsurface disposal.

Submit an original and one copy of the inventory/authorization form to:

UIC Permits Team, MC-233

Radioactive Materials Division

P.O. Box 13087

Austin, Texas 78711-3087

As stated in 30 TAC § 331.21, “All geoscientific information submitted to the agency under this chapter shall be prepared by, or under the supervision of, a licensed professional geoscientist or a licensed professional engineer and shall be signed, sealed, and dated by the licensed professional geoscientist or licensed professional engineer in accordance with the Texas Geoscience Practice Act and the Texas Engineering Practice Act.” Any application submitted shall be signed, sealed, and dated on the cover letter. In addition to the inventory/authorization form, TCEQ requires that a Core Data Form (Form 10400) be submitted with all incoming applications.

**NOTE:** If the facility is applying for two or more Class V Injection Wells that are of similar construction at the same facility the applicant may use one form.

**NOTE:** If the facility is applying for Class V Injection Wells of different construction or at different facilities, use one form per construction type and facility.

Use the Class V Injection Well designation key provided at the end of the worksheet to determine the type of injection well for which the application is being submitted and provide the designation code on the top of the application form (Reg No. 5).

Complete **Section I for all notifications and Sections II through V as appropriate**.

For additional information on form, please contact the Waste Permits Division or visit [the Class V Injection Wells](https://www.tceq.texas.gov/permitting/waste_permits/uic_permits/UIC_Guidance_Class_5.html)[[32]](#footnote-33) webpage on the TCEQ website.

**PLEASE READ**

The purpose of this form is to serve as the means for the Class V Injection Well owner or operator to provide notice to the UIC Program of intent to construct, operate, and/or convert a well in accordance with the inventory and approval requirements of 30 TAC § 331.10. No Class V injection well may be constructed, operated, and/or converted without prior approval from the ED. For questions regarding this worksheet, please contact the UIC Permit Team at (512) 239-6466.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 10.0 QUARRIES IN THE JOHN GRAVES SCENIC RIVERWAY

Worksheet 10.0 **is required** for a municipal solid waste or mining facility that is/will be located within a Water Quality Protection Area in the John Graves Scenic Riverway and is applying for an individual TPDES permit or TLAP.

30 TAC Chapter 311, Subchapter H establishes requirements for quarries located within a water quality protection area in the John Graves Scenic Riverway. The subchapter also requires municipal solid waste and other mining facilities to maintain on-site documentation of exclusion from the requirements of 30 TAC Chapter 311, Subchapter H.

Definitions of “John Graves Scenic Riverway,” “quarry,” and “water quality protection area” are found in 30 TAC § 311.71 as follows:

John Graves Scenic Riverway – 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, Texas, and extending to the county line between Parker and Hood Counties, Texas. [30 TAC § 311.71(5)]

Quarry – The site from which aggregates for commercial sale are being, or have been, removed or extracted from the earth to form a pit, including the entire excavation, stripped areas, haulage ramps, and the immediately adjacent land on which the plant processing the raw material is located. The term does not include any land owned or leased by the responsible party not being currently used in the production of aggregates for commercial sale or an excavation to mine clay or shale for use in manufacturing structural clay products. [30 TAC § 311.71(12)]

Water quality protection area – The Brazos River and its contributing watershed within Palo Pinto and Parker Counties, Texas, downstream from the Morris Shepard Dam, and extending to the county line between Parker and Hood Counties, Texas. [30 TAC § 311.71(20)]

**Thoroughly review 30 TAC §§ 311.71 - 311.82 prior to completing any portion of this worksheet.**

1. Exclusions:
2. If this facility is a municipal solid waste facility, regardless of whether the facility includes a pit or a quarry, check **yes**. Otherwise, check **no**.
3. If this facility is a quarry, or associated processing plant, that has been in regular operation since on or before January 1, 1994 without cessation of operation for more than 30 consecutive days and under the same ownership (including the construction or modification of associated equipment at such a quarry or associated processing plant), check **yes**. Otherwise, check **no**.
4. If this facility is a coal mine regulated under Natural Resources Code, Texas Surface Coal Mining and Reclamation Act, Chapter 134, check **yes**. Otherwise, check **no**.
5. If this facility mines clay and shale for use in the manufacturing of structural clay products, check **yes**. Otherwise, check **no**.

If **no** to **all** of these questions, proceed to Item 2, this worksheet is required.

If **yes** to **any** of Items 1.a - 1.d above, this facility is subject an exclusion listed at 30 TAC § 311.72(b) and the remainder of this worksheet is not required. The facility **is required** to maintain documentation on-site at the facility demonstrating these exclusions. Acceptable forms of documentation are outlined in 30 TAC § 311.72(c) as follows:

* Documentation demonstrating ownership including, but not limited to: 1) deeds, 2) property tax receipts, 3) leases, or 4) insurance records.
* Documentation demonstrating continuous operation without cessation of operation for more than 30 consecutive days beginning on or before January 1, 1994, including, but not limited to: 1) production records, 2) sales receipts, 3) payroll records, 4) sales tax records, 5) income tax records, or 6) financial statements/reports.
* Documentation demonstrating the construction or operation of a municipal solid waste facility; any activity, facility, or operation regulated under Natural Resources Code, Texas Surface Coal Mining and Reclamation Act, Chapter 134; or quarries mining clay and shale for use in manufacturing structural clay products including, but not limited to, any permit issued by TCEQ, RRC, or EPA.

1. Location of the Quarry

Check the appropriate box for the distance between the quarry and the nearest navigable water body. “Navigable” is defined at 30 TAC § 311.71(7) as:

Navigable – Designated by the USGS as perennial on the most recent topographic maps(s) published by the USGS, at a scale of 1:24,000.

Definitions for [topographic map symbols](http://pubs.usgs.gov/gip/TopographicMapSymbols/topomapsymbols.pdf)[[33]](#footnote-34) can be accessed on the [USGS website](https://www.usgs.gov/).

The distance between the navigable water body and the quarry is measured from the gradient boundary of the water body to the perimeter of the quarry. The quarry may fall within multiple applicability zones.

**Operation of a quarry within 200 feet of a navigable water body is prohibited by 30 TAC § 311.73(a). A permit that authorizes operation within this area will not be issued.**

1. Additional Requirements

Review the Additional Application Requirements table below to determine which additional application requirements must be submitted based on the location of the quarry. Some or all of the following attachments will be required: Restoration Plan, Financial Assurance for Restoration, Technical Demonstration, Reclamation Plan, and Financial Assurance for Reclamation. If an additional requirement is not applicable to the facility, enter N/A instead.

Additional Application Requirements

| **Application Requirement** | **200 feet – 1,500 feet** | **1,500 feet – 1 mile** | **> 1 mile** |
| --- | --- | --- | --- |
| Restoration Plan | Yes | Yes | Yes |
| Financial Assurance for Restoration | Yes | Yes | Yes |
| Technical Demonstration | Yes | Not required | Not required |
| Reclamation Plan | Yes | Not required | Not required |
| Financial Assurance for Reclamation | Yes | Not required | Not required |

1. **Restoration Plan**

The Restoration Plan is a proposed plan of action that explains how the responsible party will restore the receiving waters to background conditions in the event of an unauthorized discharge that affects those receiving waters.

**If** **required**, attach a Restoration Plan which addresses each of the following items, as required by 30 TAC § 311.76:

Certified by a licensed Texas professional engineer or a licensed Texas professional geoscientist, within the appropriate area or discipline

Identifies receiving waters at risk of an unauthorized discharge from the quarry and includes a proposed plan of action for restoration

Describes the process(es) used in documenting existing physical, chemical, or biological background conditions of each of the receiving waters

Provides a schedule for updating background conditions, as appropriate

Identifies the goals and objectives of potential restoration actions

Provides a reasonable range of restoration alternatives and identifies the preferred restoration alternative

Describes the process for monitoring the effectiveness of the preferred restoration action. This includes identifying performance criteria used to determine the success of the restoration or need for interim site stabilization.

Identifies a process for public involvement in the selection of the restoration alternative

Provides a detailed cost estimate of the maximum probable costs required to complete a restoration action based on the costs to a third party conducting the action without a financial interest or ownership in the quarry

1. **Financial Assurance for Restoration**

If a Restoration Plan is required, enter the amount of financial assurance provided and the financial assurance mechanism used. The amount of financial assurance required is determined by the cost estimate provided with the Restoration Plan, as required by 30 TAC § 311.76(a)(8).

1. **Technical Demonstration**

**If required**, attach a Technical Demonstration which addresses each of the following items, as required by 30 TAC § 311.77:

Certification by a licensed Texas professional engineer or a licensed Texas professional geoscientist, within the appropriate area or discipline.

A time schedule for the quarry from initiation to termination of operations, including reclamation.

A detailed description of the type of quarrying to be conducted and processes/methods employed.

A geological description of the quarry area, including the material deposit: type, geographical extent, depth, and volume; and a description of the general area geology.

A detailed description of any other operations on-site, include raw-material processing and secondary products processing.

A topographic map representing the quarry operation and all of the following within the boundaries of the quarry:

* water bodies;
* existing and proposed roads including quarry access roads;
* existing and proposed railroads;
* the 100 year floodplain boundaries;
* structures;
* the location of all know wells including water wells, oil wells, and unplugged and abandoned wells;
* active, post, and reclaimed quarry areas;
* buffer area;
* raw material, intermediate material, final product, waste product, byproduct, or ancillary material storage and processing areas;
* chemical and fuel storage areas;
* vehicle/equipment maintenance, cleaning, and fueling areas;
* vehicle/equipment loading and unloading areas;
* baghouses and other air treatment units exposed to precipitation; and
* waste-disposal areas.

Surface Water Drainage and Water Accumulation Plan (SWDAP) that:

* describes the use and monitoring of structural controls and best management practices designed to control erosion, siltation, and runoff; and
* provides a topographic map, at a scale appropriate to represent the quarry operation and all of the following within the boundaries of the quarry:

the location of each process wastewater and stormwater outfall;

an outline of the drainage area that contributes stormwater to each outfall;

treatment, detention, and water storage tanks and ponds;

structural controls for managing stormwater and process wastewater; and

physical features of the site that would influence stormwater runoff or contribute a dry weather flow.

Best Available Technology Evaluation (BATE) that:

* assesses the use of structural controls and best management practices;
* evaluates performance criteria outlined at 30 TAC § 311.79 and § 311.80; and
* includes structural control design and construction plan/specification that is certified by a licensed Texas professional engineer and must be maintained on site.

A procedure and schedule for reviewing the Technical Demonstration for consistency with quarry operations and site conditions and effectiveness in controlling erosion, siltation, and runoff.

1. **Reclamation Plan**

**If required**, attach a Reclamation Plan which addresses the following items, as required by 30 TAC § 311.78.

Certification by a licensed Texas professional engineer or a licensed Texas professional geoscientist, within the appropriate area or discipline.

A description of the proposed use for the disturbed area following reclamation.

A site-specific standard for reclamation appropriate to the end use that addresses the following items:

* removal or final stabilization of all raw material, intermediate material, final product, waste product, byproduct, and ancillary material;
* removal of waste or closure of all waste-disposal areas;
* removal of structures, where appropriate;
* removal and reclamation of all temporary roads and railroads;
* backfilling, regarding, and recontouring;
* slope stability for remaining highwalls and detention ponds;
* revegetation of the reclaimed area giving consideration to species diversity and the use of native species;
* establishment of wildlife habitat;
* establishment of drainage patterns;
* establishments of permanent control structures, where necessary, to address erosion, siltation, and runoff from post quarrying and reclaimed areas; and
* removal of all equipment.

A description of how reclamation will be conducted and a timetable for the completion of reclamation activities

1. **Financial Assurance for Reclamation**

If a Reclamation Plan is required, enter the amount of financial assurance provided and the financial assurance mechanism used. The amount of financial assurance required is determined by the cost estimate provided with the Reclamation Plan, as required at 30 TAC § 311.78(a)(2).

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 11.0 COOLING WATER SYSTEM INFORMATION

This worksheet **is** **required** for all TPDES permit applications that **meet the conditions outlined in Technical Report 1.0, Item 12**.

Completion of this worksheet satisfies the application requirements at 40 CFR §§ 122.21(r)(2), (3), (5), and (8). Application waivers will **not** be applied to Worksheet 11.0, in accordance with 40 CFR § 125.95.

1. Cooling Water System Data
2. The Cooling Water System Data table must be completed with the following information on the CWS.

**Total DIF** - Enter the total DIF for the CWS in million gallons. The total DIF is the value assigned to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody. The facility's CWS total DIF may be adjusted to reflect permanent changes to the maximum capabilities of the cooling water intake system to withdraw cooling water, including pumps permanently removed from service, flow limit devices, and physical limitations of the piping. The CWS’s total DIF does not include values associated with emergency and fire suppression capacity or redundant pumps (i.e., back-up pumps).

**Total AIF** - Enter the total AIF for the CWS in million gallons. The total AIF is the average volume of water withdrawn on an annual basis by all facility CWIS(s) over the past three years (a minimum of 36 months), measured at a location within the CWIS that the Director deems appropriate. The calculation of AIF includes days of zero flow. The CWS’s total AIF does not include flows associated with emergency and fire suppression capacity.

**Intake Flow Uses** - Enter the intake flow uses for the cooling water system. Provide the percent contribution of intake flow uses for contact cooling water, non-contact cooling water, process uses, and other uses. The percentages must total 100%.

1. Attach the following information:
2. A narrative description of the design and operation of the facility’s cooling water system and its relationship to the CWIS(s). This description must include seasonal changes in operation, if applicable, and information regarding reductions in total water withdrawals including cooling water intake flow reductions already achieved through minimization of process water withdrawals.
3. A scaled map depicting the location of each CWIS, impoundment, intake pipe, and canals, pipes, or waterways used to convey cooling water to, or within, the cooling water system. Provide the latitude and longitude for each CWIS and any intake pipe(s) on the map. Indicate the position of the intake pipe within the water column.
4. A description of:

water reuse activities, if applicable (e.g., cooling water reused as process water, process water and/or gray water reused for cooling, etc.);

reductions in total water withdrawals, including cooling water intake flow reductions already achieved through minimized process water withdrawals; and

the proportion of the source waterbody withdrawn (on a monthly basis).

1. Design and engineering calculations of the CWS prepared by a qualified professional, and data to support the information provided in above Item a.
2. Previous year (a minimum of 12 months) of CWS total AIF data, measured at a frequency of 1/day, on days of operation. This data can be estimated.
3. A narrative description of existing or proposed impingement and entrainment technologies or operation measures, and a summary of their performance, including, but not limited to, reductions in impingement mortality and entrainment due to intake location and reductions in total water withdrawals and usage. The description should also include discussion of impacts on impingement mortality and entrainment resulting from periods of unusually high or low flow, if any, during the years under consideration for mean annual flow.
4. Cooling Water Intake Structure(S) Data
5. The Cooling Water Intake Structure(s) Data table must be completed with the following information regarding each individual CWIS that provides cooling water to the facility’s CWS (this includes primary and make-up CWIS(s))

**CWIS ID** - Enter the CWIS ID number. The CWIS ID number should correspond to each CWIS identified on the USGS map provided for item 1.b.2 above.

**DIF** - Provide the DIF for the CWIS(s) in MG. The CWIS DIF means the value assigned during the CWIS design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody. The facility's CWIS DIF may be adjusted to reflect permanent changes to the maximum capabilities of the cooling water intake system to withdraw cooling water, including pumps permanently removed from service, flow limit devices, and physical limitations of the piping. CWIS DIF does not include values associated with emergency and fire suppression capacity or redundant pumps (i.e., back-up pumps).

**AIF** - Provide the AIF for the CWIS(s) in MG. The CWIS AIF means average volume of water withdrawn on an annual basis by the CWIS over the past three years (a minimum of 36 months). The CWIS AIF is measured at a location within the CWIS that the Director deems appropriate. The calculation of AIF includes days of zero flow. CWIS AIF does not include flows associated with emergency and fire suppression capacity.

**Intake Flow Uses** - Enter the cooling water structure intake flow uses. Provide the percent contribution of intake flow uses for contact cooling water, non-contact cooling water, process uses, and other uses. The percentages must total 100%.

**Latitude** - Provide the [latitude](https://www.tceq.texas.gov/gis/sqmaview.html) of the CWIS’s intake pipe in decimal degrees to at least six places.

**Longitude** - Provide the [longitude](https://www.tceq.texas.gov/gis/sqmaview.html) of the CWIS’s intake pipe in decimal degrees to at least six places.

1. Attach the following information:
2. A narrative description of the configuration and operation, including any seasonal changes, for each CWIS and where it is located in the waterbody and in the water column.
3. Engineering calculations for each CWIS.
4. Source Water Physical Data
5. The Source Waterbody Data table must be completed with the following information regarding the CWIS source waterbody (this includes primary and make-up CWIS(s))

**Source waterbody** - Provide the name(s) of the source water for the CWIS(s).

**Mean annual flow** - Enter the mean annual flow of the source waterbody(s), measured in the vicinity of the intake pipe.

**Determination source** - Provide the data source used to determine the mean annual flow of the source waterbody(s).

1. Attach the following information:
2. A narrative description of the source water for each CWIS, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports the determination of the waterbody type where each cooling water intake structure is located.
3. A narrative description of the source waterbody's hydrological and geomorphological features.
4. Scaled drawings showing the physical configuration of all source water bodies used by the facility, including the source waterbody's hydrological and geomorphological features. **NOTE**: The source waterbody's hydrological and geomorphological features may be included on the map submitted for item 1.b.ii of this worksheet.
5. A description of the methods used to conduct any physical studies to determine the intake's area of influence within the waterbody and the results of such studies.
6. Operational Status
7. If this application is for a power production or steam generation facility, check **yes**. Otherwise, check **no** and proceed to Item 4.b.

If **yes**, attach the following information:

1. A description of the operating status of each individual unit, including age of each unit, capacity utilization rate (or equivalent), for the previous five years (a minimum of 60 months).
2. A description of any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors.
3. Identify any operating unit with a capacity utilization rate of less than 8 percent averaged over a contiguous period of two years (a minimum of 24 months).
4. Describe any major upgrades completed within the last 15 years, including but not limited to boiler replacement, condenser replacement, turbine replacement, or changes to fuel type.
5. Process Units
6. If this application is for a facility which has process units that use cooling water other than for power production or steam generation, check **yes**. Otherwise, check **no**.
7. If this is an application for a facility which has process units that use cooling water other than for power production or steam generation, check **yes** if the facility uses or intends to use reductions in flow or changes in operations to meet the requirements of 40 CFR § 125.94(c). Otherwise, check **no** and proceed to Item 4.c.

If **yes**, attach the following information:

A description of individual production processes and product lines.

A description of the operating status, including age of each line and seasonal operation.

Describe any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors.

Describe any major upgrades completed within the last 15 years and plans or schedules for decommissioning or replacement of process units or production processes and product lines.

1. If this application is for a nuclear power production facility, check **yes**. Otherwise, check **no**.

If **yes**, attach a description of completed, approved, or scheduled upgrades and Nuclear Regulatory Commission relicensing status of each unit at the facility

1. If this application is for a manufacturing facility, check **yes**. Otherwise, check **no**.

If **yes**, attach descriptions of current and future production schedules and any plans or schedules for any new units planned within the next five years (a minimum of 60 months).

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 11.1 IMPINGEMENT MORTALITY

This worksheet **is required** for all TPDES permit applications that **meet the conditions outlined in Technical Report 1.0, Item 12**.

Complete one copy of this worksheet for each individual CWIS the facility uses or proposes to use. Completion of this worksheet satisfies application requirements in 40 CFR § 122.21(r)(6).

Enter the CWIS ID Number. The CWIS ID Number(s) should correspond to the CWIS(s) identified on the USGS topographic map provided for Worksheet 11.0, Item 1.b.2.

1. Impingement Compliance Technology Option Selection

Check the box next to the method of compliance with the Impingement Mortality Standard selected for the CWIS.

If the facility selected 0.5 ft/s Through-Screen Design Velocity [40 CFR § 125.94(c)(2)] or existing offshore velocity cap [40 CFR § 125.94(c)(4)] as the method of compliance, proceed directly to Worksheet 11.2; otherwise, continue to Item 2.

1. Impingement Compliance Technology Information

Complete the following sections based on the selection made for item 1 above. Complete only the sections that apply to this facility CWIS.

1. CCRS [40 CFR § 125.94(c)(1)]

Check the box to confirm the CWS meets the definition of CCRS located at 40 CFR § 125.91(c) and provide a response to the questions within this section.

1. If the facility uses or proposes to use a CWIS to replenish water losses to the CWS, check **yes**. Otherwise, check **no** and proceed to Item a.2.

If **yes**, attach the following information:

Provide the CWIS ID. The CWIS ID(s) should correspond to the CWIS(s) identified on the USGS map provided for Worksheet 11.0, item 1.b.2.

Previous year (a minimum of 12 months) of intake flow data, measured at a frequency of 1/day for any CWIS used for make-up intake flows to replenish cooling water losses, excluding intakes for losses due to blowdown, drift, or evaporation

A detailed narrative description of any physical or operational measures taken to minimize make-up withdraws.

**NOTE:** A separate Worksheet 11.1 is not required for a CWIS used to replenish water losses to the CWS.

1. If the facility uses or proposes to use cooling towers, check **yes**. Otherwise, check **no** and proceed to Worksheet 11.2.

If **yes**, provide the following information and proceed to Worksheet 11.2.

Enter the average number of cycles of concentration (COCs) prior to blowdown for each cooling tower into Table 22. Additionally, provide COC monitoring data for the previous year (a minimum of 12 months) for each cooling tower, measured at a frequency of 1/day, as an attachment to the application and include the attachment number in the space provided in the application.

Enter the maximum number of COCs that each cooling tower can accomplish based on the design of the system.

Describe conditions that may limit the number of COCs prior to blowdown, if any, including but not limited to permit conditions in the space provided.

1. 0.5 ft/s Through Screen Actual Velocity [40 CFR § 125.94(c)(3)]

Attach intake flow monitoring data for the previous year (a minimum of 12 months), taken at a frequency of 1/day and proceed to Worksheet 11.2.

1. Modified traveling screens [40 CFR § 125.94(c)(5)]

Attach the following information and proceed to Worksheet 11.2.

1. A description of the modified traveling screens and associated equipment.
2. A site-specific impingement technology performance optimization study that includes a narrative description of the biological data collection methods.
3. Biological sampling data from the previous two years (a minimum of 24 months).
4. System of technologies [40 CFR § 125.94(c)(6)] or impingement mortality performance standard [40 CFR § 125.94(c)(7)]

Attach the following information and proceed to Worksheet 11.2.

1. A description of the system of technologies used or proposed for use by the facility to achieve compliance with the impingement mortality standard.
2. A site-specific impingement technology performance optimization study that includes a narrative description of the biological data collection methods.
3. Biological sampling data from the previous two years (a minimum of 24 months). Refer to 40 CFR § 122.21(r)(6) for a list of sampling requirements.
4. De minimis rate of impingement [40 CFR § 125.94(c)(11)]

Attach the following information and proceed to Worksheet 11.2.

1. Intake flow monitoring data from the previous year (a minimum of 12 months) measured at a frequency of 1/day on days of operation.
2. If the rate of impingement caused by the CWIS is extremely low (as an organism or age-one equivalent count), include supplemental information to Worksheet 11.0, item 2.b.6. to support this determination.

This information should take into account factors such as the CWIS screen mesh opening size[[34]](#footnote-35), data collection, the zone of influence of the CWIS for clearly defined life stages and taxa of impinge-able organisms, and population abundances within the zone of influence of the CWIS.

1. Low capacity utilization power-generation facilities [40 CFR § 125.94(c)(12)]

Attach monthly utilization data for the previous two years (a minimum of 24 months) for each operating unit and proceed to Worksheet 11.2.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 11.2 SOURCE WATER BIOLOGICAL DATA

This worksheet **is required** for all TPDES permit applications that **meet the conditions outlined in Technical Report 1.0, Item 12**.

Complete one copy of this worksheet for each source waterbody of a CWIS that the facility has selected an Impingement Mortality Technology Option described at 40 CFR §§ 125.94(c)(1)-(7). Completion of this Worksheet satisfies the application requirements in 40 CFR § 122.21(r)(4).

Provide the full name of source waterbody.

1. Species Management

The following **is required** for all TPDES permit applications that withdraw surface water for cooling purposes.

1. If the facility has obtained an incidental take permit for its CWIS(s) from the USFWS or the NMFS, check **yes**. Otherwise, check **no**.

If **yes**, attach any information submitted in order to obtain that permit. This information may be used to satisfy the permit application information requirement at paragraph 40 CFR § 125.95(f).

1. If the facility requesting a waiver from application requirements at 40 CFR § 122.21(r)(4) in accordance with 40 CFR § 125.95 for any CWIS(s) that withdraw from a man-made reservoir that is stocked and managed by a state or federal natural resources agency or the equivalent, check **yes**. Otherwise, check **no**.

If **yes**, attach a copy of the most recent managed fisheries report, completed within the last three years, submitted to TPWD, or equivalent. If the most recent report is older than three years, provide a detailed justification for why the information contained within the report is still valid.

1. If no one at the facility has any knowledge of the presence of any federally listed threatened or endangered species or critical habitat designations for the source waterbody, check **true**. If anyone at the facility has any knowledge of the presence of federally listed threatened or endangered species or critical habitat designations for the source waterbody, check **false**.
2. Source Water Biological Data

New Facilities (Phase I, Track I and II)

* Provide responses to all items in this section and stop.

Existing Facilities (Phase II)

* If the answer to **Item 1.b** above was **no**, provide responses to all the following items and proceed to Worksheet 11.3.
* If the answer to **Item 1.b** was **yes** and **Item 1.c** was **true**, proceed directly to Worksheet 11.3.
* If the answer to **Item 1.b** was **yes** and **Item 1.c** was **false**, attach responses for any item below that is not contained within the most recent TPWD, or equivalent, report. Proceed to Worksheet 11.3.

1. A list of the data requested at 40 CFR § 122.21(r)(4)(ii) through (vi) that are not available and efforts made to identify sources of the data.
2. A list of species (or relevant taxa) in the vicinity of the CWIS and identify the following information regarding each species listed:

all life stages and their relative abundance,

identification of all species and life stages that would be most susceptible to impingement and entrainment,

forage base,

significance to commercial fisheries,

significance to recreational fisheries,

primary period of reproduction,

larval recruitment, and

period of peak abundance for relevant taxa.

1. Data representative of the seasonal and daily activities (i.e., feeding and water column migration) of biological organisms in the vicinity of the CWIS.
2. Identify and list all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at each CWIS.
3. Documentation of any public participation or consultation with federal or state agencies undertaken.

The following information is required for existing facilities only:

1. Identify any protective measures and stabilization activities that have been implemented, and provide a description of how these measures and activities affected the baseline water condition in the vicinity of the intake.
2. A list of fragile species, as defined at 40 CFR § 125.92(m), at the facility. The applicant need only identify those species not already identified as fragile at 40 CFR § 125.92(m).

**NOTE:** New units at an existing facility are not required to resubmit this information if the cooling water withdrawals for the operation of the new unit are from an existing intake.

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 11.3 ENTRAINMENT MORTALITY

This worksheet **is** **required** for all TPDES permit applications that **meet the conditions outlined in Technical Report 1.0, Item 12**.

Complete one copy of this worksheet for each individual CWIS the facility uses or proposes to use. Completion of this Worksheet satisfies the application requirements in 40 CFR § 122.21(r)(7) and (9)-(13).

Enter the CWIS ID No. The CWIS ID number(s) should correspond to the CWIS(s) identified on the USGS map provided for Worksheet 11.0, Item 1.b.

1. Applicability

If the AIF of the CWIS is greater than or equal to 125 MGD, check **yes**. Otherwise, check **no**.

* If **no**, complete Item 2 and stop.
* If **yes** and the facility **is seeking a waiver** from application requirements in accordance with 40 CFR § 125.95 for any CWIS(s) that withdraw from a man-made reservoir that is stocked and managed by a state or federal natural resources agency or the equivalent, complete Item 2 and stop.
* If **yes** and the facility **is not seeing a waiver** from application requirements in accordance with 40 CFR § 125.95, complete Item 2 and provide any required studies listed in Item 3. For any required studies in Item 3 that are not complete, provide a detailed explanation for the delay and an anticipated schedule for completion and submittal.

1. Existing Entrainment Performance Studies

Attach any previously conducted studies or studies obtained from other facilities addressing technology efficacy, through-facility entrainment survival, and other entrainment studies with the application. A description of each study, together with underlying data, and a summary of any conclusions or results should be included. Completion of this section satisfies the requirements in 40 CFR § 122.21(r)(7).

**NOTE:** Any studies conducted at other locations must include an explanation as to why the data from other locations are relevant and representative of conditions at the facility. In the case of studies more than 10 years old, the applicant must explain why the data are still relevant and representative of conditions at the facility and explain how the data should be interpreted using the definition of entrainment at 40 CFR § 125.92(h). If no existing studies are available, the facility must provide an explanation of the measures taken located any existing studies or representative data.

1. Facility Entrainment Performance Studies

For additional information regarding applicability of entrainment studies, please contact a member of the Industrial Permits Team at (512) 239-4671.

1. Attach an entrainment characterization study, as described at 40 CFR § 122.21(r)(9).
2. Attach a comprehensive feasibility study, as described as 40 CFR § 122.21(r)(10).
3. Attach a benefits valuation study, as described as 40 CFR § 122.21(r)(11).
4. Attach a non-water quality environmental and other impacts study, as described as 40 CFR § 122.21(r)(12).
5. Attach a peer review analysis, as described as 40 CFR § 122.21(r)(13).

INSTRUCTIONS FOR   
INDUSTRIAL WASTEWATER PERMIT APPLICATION  
WORKSHEET 12.0 OIL AND GAS EXPLORATION, DEVELOPMENT, AND PRODUCTION

This worksheet **is** **required** for all TPDES permit applications thatare subject to Effluent Limitation Guidelines in 40 CFR Part 435.

1. Operational Information
2. If the wastewater from the oil and gas exploration, development, or production facility is/will be located west of the 98th meridian, check yes. Otherwise, check no.

If **yes**, continue to the next question. If **no**, skip to Item 2 relating to Production/Process Data.

1. Provide a justification/description for how the wastewater from an oil and gas exploration, development, or production facility will be used for agriculture or wildlife propagation
2. Production/Process Data

Industrial wastewater must be treated to levels that meet the requirements of applicable EPA Categorical ELGs in 40 CFR Parts 400 - 471. Therefore, the permit application must contain all information necessary to calculate permit limits based on these guidelines.

1. Identify the applicable 40 CFR Part 435 Subpart(s) this facility is subject to, provide a justification for the classification, and describe how the Subpart is applicable to facility operations.
2. Provide a brief description of whether the discharges requested in the permit are from exploration, development, production, or from a combination of more than one of these.
3. List each individual waste-stream to be generated at the facility. Provide information on whether the individual waste-stream listed in the second column is requested to be discharged. Provide the approximate volume and the percentage contribution of the total discharge for each waste-stream. (e.g. for a total flow of 12 MGD – process wastewater: 0.22 MGD/ 18%; boiler blowdown: 0.18MGD/15%; once through cooling water: 0.65 MGD/ 54%; domestic wastewater: 0.15 MGD/13%)
4. Specify which waste-streams generated at the facility are not to be authorized for discharge under this permit and the provide information as to how these waste-streams will be managed. Attach additional pages if necessary.,
5. Provide information on any miscellaneous discharges generated at the facility.
6. List any chemicals that are in use, or will be used, during exploration, development, or production activities, and provide the category of the chemical used (examples of categories include, but are not limited to, acid, biocide, clay stabilizer, pH adjustment agent etc.). Please specify the concentration used and the purpose of using the chemicals. Attach a safety data sheet for each chemical.

For example:

**Chemicals List**

| **Category** | **Chemical Name** | **Concentration (specify units)** | **Purpose** |
| --- | --- | --- | --- |
| Corrosion Inhibitor | Acetaldehyde; formic acid | 0.03 mg/L | Reduces rust formation on steel tubing, well casings, tools, and tanks. |
| pH Adjusting Agent | Acetic acid; Potassium or Sodium carbonate | 5.0 mg/L | Adjusts and controls the pH of the fluid to maximize the effectiveness of other additives such as crosslinkers. |

1. Pollutant Analysis

**Provide the requested information.**

**NOTE:** Analytical data provided with this application must be from a sampling event(s) conducted no more than one year prior to the date the application is submitted to TCEQ.

Tables 1, 2, 6, and 7 located in Worksheet 2.0 and Table 19 in Worksheet 12.0, must be completed for each outfall and submitted with this application. The remaining tables in Worksheet 2.0 are required as applicable.

## TABLE 19

Completion of Table 19 **is required** for all external outfalls that discharge any wastewater other than 1) stormwater runoff only or 2) stormwater commingled with any allowable non-stormwater waste streams.

Completion of Table 19 **is not required** for internal outfalls. Report values in mg/L unless other units are indicated. Provide the analytical results from at least four separate samples collected at a frequency of once per week for a period of four weeks from the wastewater stream unless otherwise specified in the application or approved by TCEQ.

APPENDIX 1 – COMMON PROCESSES AND PROCESS MODIFICATIONS

Conventional plug flow activated sludge - Settled wastewater and recycled activated sludge enter the head end of the aeration tank and are mixed by diffused air or mechanical aeration. Air application is generally uniform throughout tank length. During the aeration period, adsorption, flocculation, and oxidation of organic matter occur. Activated-sludge solids are separated in a secondary settling tank.

Complete-mix activated sludge – The complete-mix process is an application of the flow regime of a continuous-flow stirred-tank reactor. Settled wastewater and recycled activated sludge are introduced typically at several points in the aeration tank. The organic load on the aeration tank and the oxygen demand are uniform throughout the tank length.

Denitrification - Denitrification is the process of converting nitrate nitrogen into nitrogen gas, usually accomplished in the effluent from an activated sludge nitrification process.

Tapered aeration activated sludge - Tapered aeration is a modification of the conventional plug-flow process. Varying aeration rates are applied over the tank length depending on the oxygen demand. Greater amounts of air are supplied to the head of the aeration tank, and the amounts diminish as the mixed liquor approaches the effluent end. Tapered aeration is usually achieved by using different spacing of the air diffusers over the tank length.

Step-feed activated sludge - Step-feed aeration is a modification of the conventional plug-flow process in which the settled wastewater is introduced at several points in the aeration tank to equalize the F/M ratio, thus lowering peak oxygen demand. Generally three or more parallel channels are used. Flexibility of operation is one of the important features of this process.

Modified aeration activated sludge - Modified aeration is similar to the conventional plug-flow process except that shorter aeration times and higher F/M ratios are used. BOD removal efficiency is lower than other activated sludge processes.

Contact stabilization activated sludge - Contact stabilization uses two separate tanks or compartments for the treatment of wastewater and stabilization of activated sludge. Stabilized activated sludge is mixed with influent wastewater in a contact tank. Return sludge is aerated separately in a reaeration tank to stabilize the organic matter.

Extended aeration activated sludge- Extended aeration process is similar to the conventional plug flow process except that it operates in the endogenous respiration phase of the growth curve, which requires a low organic loading and long aeration time. This process is used extensively for prefabricated package facilities for small communities and in oxidation ditch (continuous loop reactor) facilities.

High-rate aeration activated sludge- High-rate aeration is a process modification in which high mixed liquor suspended solids (MLSS) concentrations are combined with high volumetric loadings. This combination allows high F/M ratios and long mean cell-residence times with relatively short hydraulic detention times. Adequate mixing is very important.

Kraus process - Kraus process is a variation of the step aeration process used to treat wastewater with low nitrogen levels. Digester supernatant is added as a nutrient source to a portion of the return sludge in a separate aeration tank designed to nitrify. The resulting mixed liquor is then added to the main plug-flow aeration system.

High-purity oxygen - High-purity oxygen is used instead of air in the activated-sludge process. Oxygen is diffused into covered aeration tanks and is recirculated. A portion of the gas is wasted to reduce the concentration of carbon dioxide. pH adjustment may also be required. The amount of oxygen added is about four times greater than the amount that can be added by conventional aeration systems.

Membrane Bioreactor Systems - Membrane bioreactors combine suspended growth activated sludge treatment with membrane filtration systems, typically in a common basin. High levels of treatment can be achieved without the need for final clarification and effluent filtration.

Nitrification - Nitrification is the biological oxidation of ammonia into nitrites and then nitrates by microorganisms in the activated sludge treatment process.

Nutrient Removal - Nutrient removal generally refers to the removal of nitrogen and/or phos-phorus from wastewater. Biological processes, membrane filtration, sand filtration, or a combi-nation of these processes may be used for nutrient removal.

Oxidation ditch - An oxidation ditch consists of a ring or oval shaped continuous loop activated sludge reactor and is equipped with mechanical aeration devices. Screened wastewater enters the ditch, is aerated, and circulates at a velocity of 0.8 to 1.2 ft/s (0.24 to 0.37 m/s). Oxidation ditches typically operate in the extended aeration mode with long detention and solids retention times.

Sequencing batch reactor – A sequencing batch reactor (SBR) is a fill and draw activated sludge treatment system that is identical to conventional activated sludge systems, except that the processes are carried out sequentially in the same tank. An SBR system has the following five steps that are carried out in sequence: fill, react, settle, draw, and idle. Mixed liquor remains in the reactor during all cycles, thereby eliminating the need for separate secondary sedimentation tanks and return activated sludge pumps.

APPENDIX 2 – COMMON TREATMENT UNITS

LIQUID TREATMENT PROCESSES

Primary Treatment

01 Pumping raw wastewater

02 Preliminary treatment – bar screen

03 Preliminary treatment – grit re-moval

04 Preliminary treatment - commi-nutors

05 Preliminary treatment - others

B1 Imhoff tank

06 Scum removal

07 Flow equalization basins

08 Preaeration

09 Primary sedimentation

D2 Septic tank

A5 Facultative lagoon

Secondary Treatment

10Trickling filter – rock media

11 Trickling filter – plastic media

12 Trickling filter – redwood slats

13 Trickling filter – other media

14 Activate sludge – conventional

15 Activate sludge – complete mix

16 Activate sludge – contact stabilization

17 Activated sludge – extended aeration

18 Pure oxygen activate sludge

19 Bio-Disc (rotating biological filter)

20 Oxidation ditch

21 Clarification using tube settlers

22 Secondary clarification

B6 Constructed wetlands

E5 Natural treatment

E6 Overland flow

Advanced Treatment - Biological

23 Biological nitrification – separate stage

24 Biological nitrification - combined

25 Biological denitrification

26 Post aeration (reaeration)

Advanced Treatment – Physical/Chemical

27 Microstrainers – primary

28 Microstrainers – secondary

D1 Dunbar Beds

29 Sand filters

30 Mix media filters (sand and coal)

31 Other filtrations

B2 Bubble diffuser (compressor)

32 Activated carbon – granular

B3 Mechanical surface aerator

33 Activated carbon-powered

34 Two stage lime treatment of raw wastewater

35 Two stage tertiary lime treatment

36 Single stage lime treatment of raw wastewater

37 Single state tertiary lime treatment

38 Recarbonation

39 Neutralization

40 Alum addition to primary

41 Alum addition to secondary

42 Alum addition to separate state tertiary

43 Ferri-chloride addition to primary

44 Ferri-chloride addition to secondary

45 Ferri-chloride addition to separate stage tertiary

46 Other chemical additions

47 Ion exchange

48 Breakpoint chlorination

49 Ammonia stripping

50 Dechlorination

Disinfection

51 Chlorination for disinfection

52 Ozonation for disinfection

53 Other disinfection

D3 Ultra violet light

Other Treatment

57 Stabilization lagoons

58 Aerated lagoons

59 Outfall pumping

60 Outfall diffuser

61 Effluent to other plants

62 Effluent outfall

63 Other treatment

64 Evapo-transpiration beds

64 Recalcination

Disposal Method

A7 Irrigation – public access

A8 Irrigation – agricultural

B4 Evapo-transpiration beds

B6 Constructed wetlands

C1 Irrigation – pastureland

D4 Pressure dosing system

D5 Percolation system

D8 Other reuse method

E1 Evaporation/plays

E2 Discharge only

E3 Discharge and (use other #)

E4 Injection well(s)

SLUDGE TREATMENT PROCESSES

65 Aerobic digestion – air

66 Aerobic digestion – oxygen

67 Composting

68 Anaerobic digestion

69 Sludge lagoons

70 Heat treatment – dryer

71 Chlorine oxidation of sludge

72 Lime stabilization

73 Wet air oxidation

74 Dewatering – sludge drying beds, sand

F2 Dewatering – sludge drying bed vacuum assted

75 Dewatering – mechanical-vacuum filter

76 Dewatering – mechanical – centrifuge

77 Dewatering – mechanical – filter press

78 Dewatering – others

79 Gravity thickening

80 Air flotation thickening

D6 Sludge holding tank

Incineration

81 Incineration – multiple hearth

82 Incineration – fluidized beds

83 Incineration – rotary kiln

84 Incineration –others

85 Pyrolysis

86 Co-incineration with solid waste

87 Co-pyrolysis with solid waste

88 Co-incineration - others

SLUDGE DISPOSAL METHOD

89 Co-disposal landfill

D7 Sludge – only monofill

90 Land application (permitted)

91 Commercial land application (register)

92 Trenching

B5 Transport to another WWTP

F3 Transport to Regional compost facility

94 Other sludge handling

95 Digest gas utilization facilities

E7 Commercial land application (permit)

F4 Dedicated land disposal

F5 Marketing and distribution composted

F6 Marketing and distribution non-composted

MISCELLANEOUS

96 Control/lab/maintenance buildings

97 Fully automated using digital control computer (computer)

98 Fully automated using analog control

99 Semi-automated plant

A1 Manually operated and controlled plant

A2 Package plant

A3 Semi-package plant

A4 Custom built plant

A7 Irrigation – public access

A8 Irrigation – agriculture

A9 Effluent storage lagoons (irrigation)

C1 Irrigation – pastureland

D8 Other reuse method

D9 Emergency holding lagoons

E1 Evaporation or playa

E8 Monitoring wells

E9 Biomonitoring

F7 Stormwater (SSO)

F8 Unconventional

APPENDIX 3 – EXAMPLE – FLOW DIAGRAM

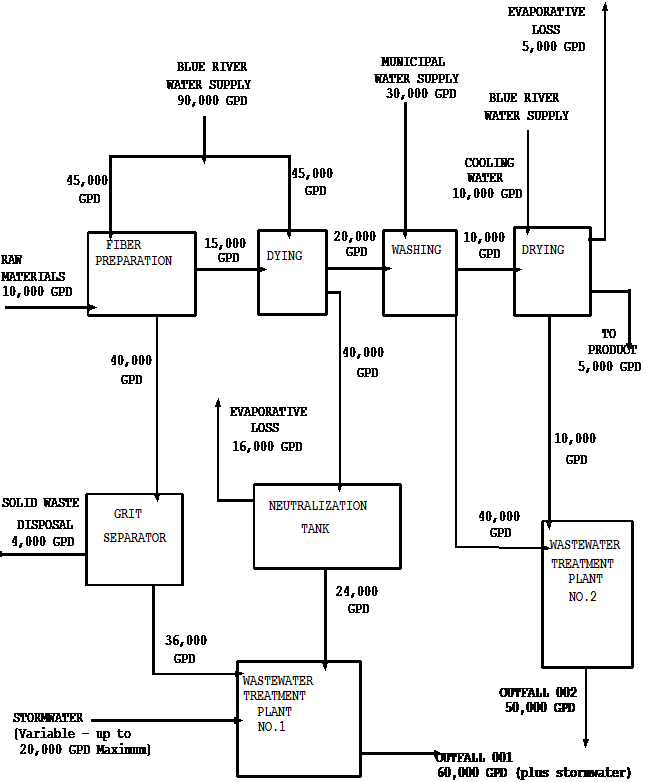


Figure 1: Example - Flow Diagram

APPENDIX 4 – EXAMPLE – SLUDGE MANAGEMENT CALCULATIONS

Influent Design Flow = 0.225 MGD

Influent BOD Concentration = 250 mg/L

Aerobic Digester Volume = 71,950 gallons

Aeration Basin MLSS = 2,000 to 3,000 mg/L

Table 3: Sludge Production

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Solids Generated | 100% flow | 75% flow | 50% flow | 25% flow |
| Pounds Influent BOD5 | 469 | 352 | 235 | 117 |
| Pounds of digested dry sludge produced\* | 164 | 123 | 82 | 41 |
| Pounds of wet sludge produced | 8,210 | 6,157 | 4,105 | 2,052 |
| Gallons of wet sludge produced | 984 | 738 | 492 | 246 |

**\*Assuming 0.35 pounds of digested dry sludge produced per pound of influent BOD5 at average temperatures and 2.0% solids concentration in the digester.**

Sludge will be wasted from the RAS flow stream to the aerobic digester. Sludge solids will be stabilized in the digester; supernatant will be decanted from the digester and returned to the facility headworks for treatment.

Table 4: Sludge Removal Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Removal Schedule (days) | 100% flow | 75% flow | 50% flow | 25% flow |
| Days between Sludge Removal | 7 | 10 | 14 | 30 |

Liquid digested sludge will be removed from the digester for disposal on a regular basis as required. The calculated mean cell residence time (MCRT) for the digester storage volume of 71,950 gal will be approximately 73 days at 100% capacity and annual average digested sludge production of 164 ppd. The digested sludge will be transported by registered hauler, ABC Haulers, Registration # 1234 to XYZ Landfill, Permit No. 9876 in Hays County.

APPENDIX 5 – EXAMPLES – ADJACENT AND DOWNSTREAM LANDOWNERS

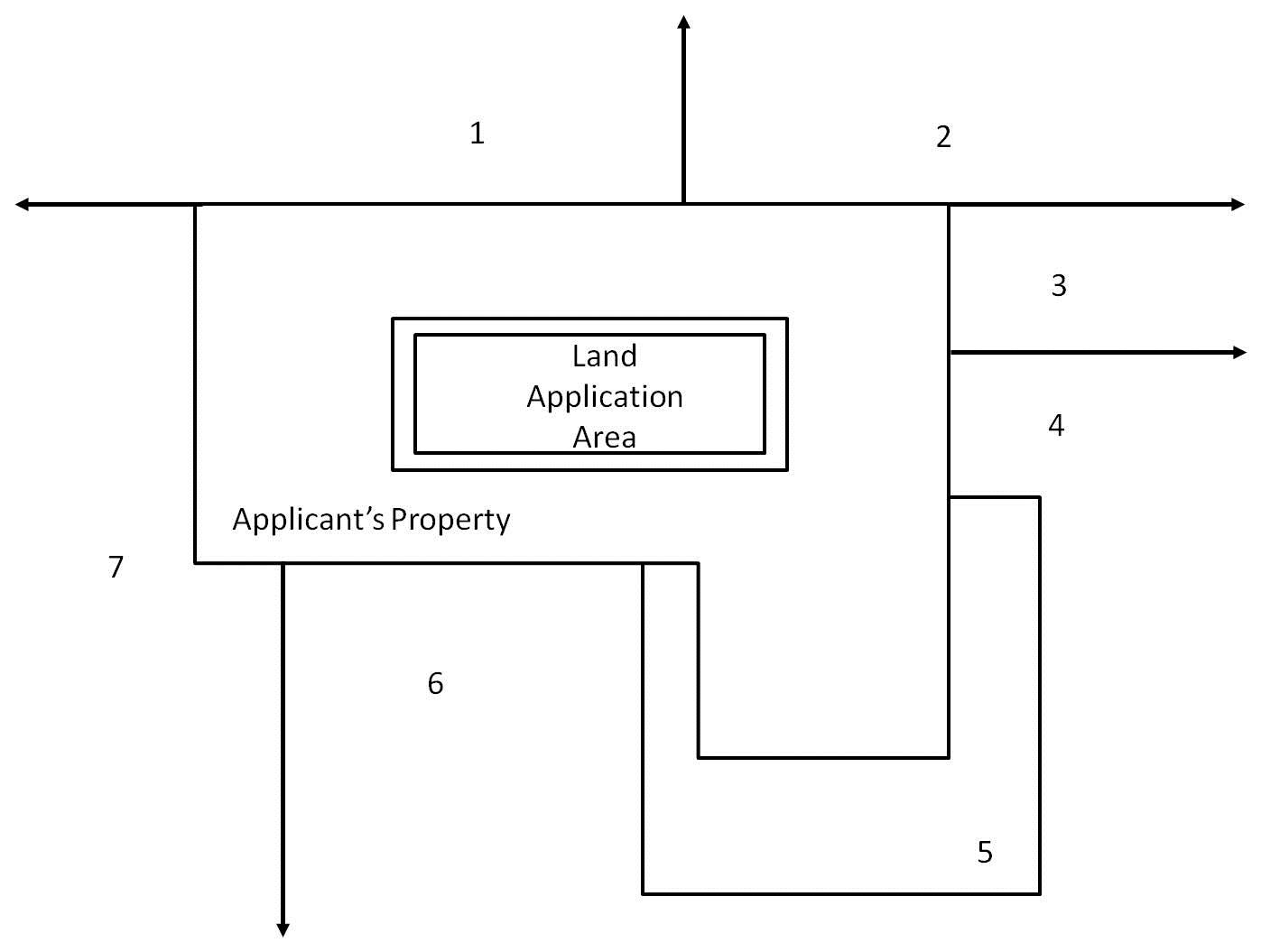


Figure 2: EXAMPLE 5A – For applications proposing land application of effluent

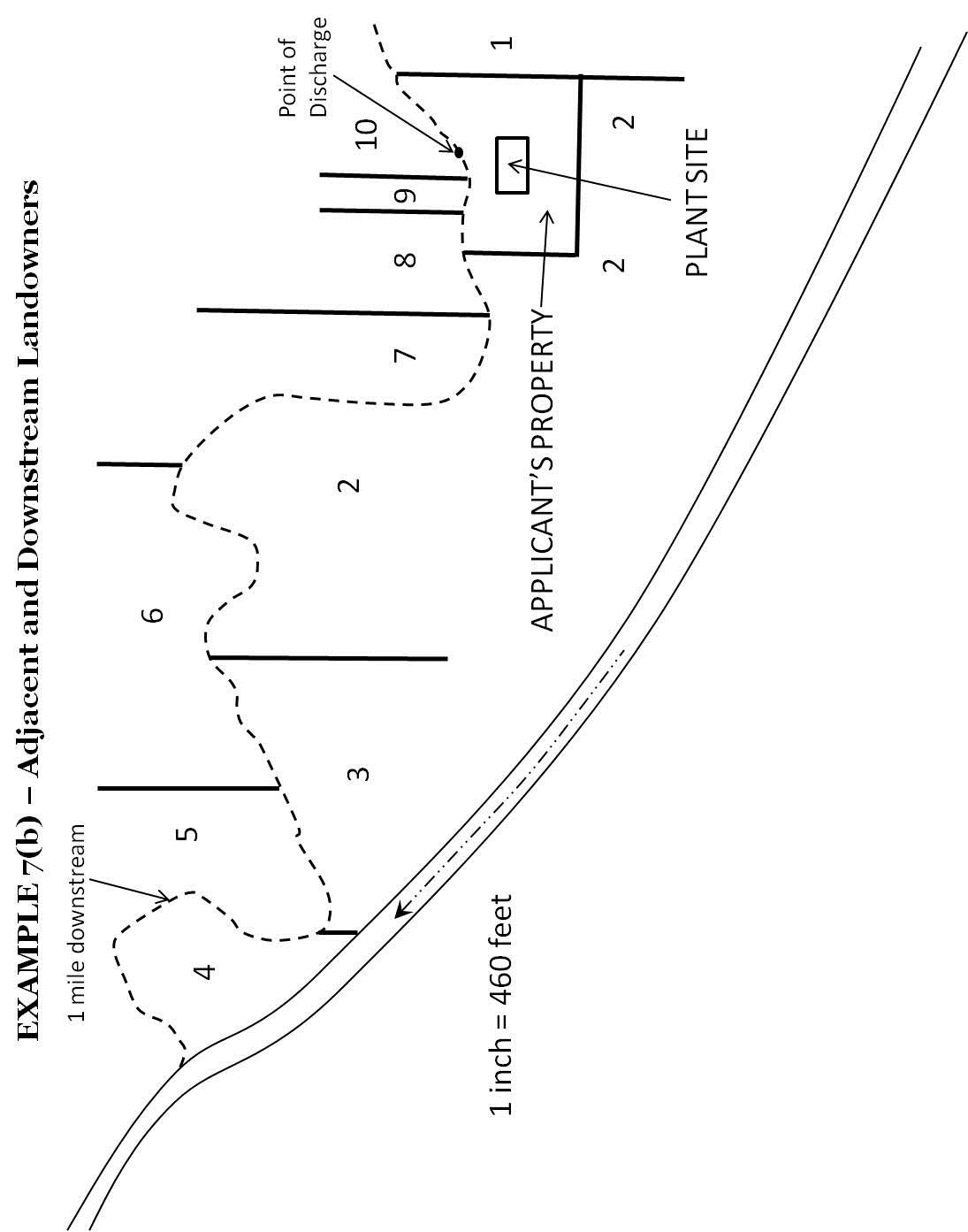


Figure 3: EXAMPLE 5B – For applications proposing land application of effluent

APPENDIX 6 – EXAMPLE – WATER BALANCE AND STORAGE CALCULATIONS

This example includes the two tables that are used to calculate the monthly water balance for a land application permit. It also includes explanation of how the values in the two tables are derived. For this example, assume that the applicant requested a permitted daily average effluent flow of 38,000 gallons per day (gpd), proposed a storage pond with a surface area of 5.5 acres, and proposed to irrigate 58 acres. This value converts to the annual amount of effluent available for land application as follows:

Where,

Annual effluent available = 8.81 inches/year

The monthly effluent available is then calculated by dividing the annual effluent available by 12:

Monthly effluent available = 0.73 inches/month

The monthly effluent available will be used in the water balance and storage calculations.

# EXPLANATION OF TABLE 1

Explanation of Table 1

|  |  |  |
| --- | --- | --- |
| Column | Parameter | Explanation |
| 1 | Month | Water balance and storage calculations are performed for each month. In this example, the month of January is used. |
| 2 | Average Rainfall (inches) | Long-term monthly average rainfall is developed from precipitation data available from the Texas Water Development Board (TWDB) web site. Use data from all years that have both precipitation and evaporation data. The variable “I” is used to represent average rainfall in inches.  For this example, the January average rainfall = 2.39 inches. |
| 3 | Average Runoff (inches) | Average runoff (represented by the variable “Q”) is calculated using the following method, which is found in Soil Conservation Service Technical Note No. 210-18-TX5:  Q = (I - 0.2S)2/(I + 0.8S)  S = (1000/N) - 10  where: I = average rainfall (from Column 2)  S = potential maximum retention after runoff begins  N = curve number (use 78 for this example)  Therefore, S = (1000/78) – 10 = 2.82 inches  The January average runoff is calculated to be:  Q = [2.39 - 0.2(2.82)]2/[2.39 + 0.8(2.82)] = 0.72 inches |
| 4 | Average Rainfall Infiltration (inches) | Average rainfall infiltration (represented by the variable “R”) is calculated as the difference between the average rainfall and the average runoff.  January average rainfall infiltration:  R = 2.39 inches – 0.72 inches = 1.67 inches |
| 5 | Evapo-transpiration (inches) | Evapotranspiration (represented by the variable “E”) data is obtained from the Texas Board of Water Engineers, Bulletin 6019: Consumptive Use of Water by Major Crops in Texas, Table 5. **NOTE**: for Coastal Bermuda Grass, apply 90% of the listed values for alfalfa as noted on the table.  January evapotranspiration:  E = (0.9)×(1.0 inch) = 0.90 inch |
| 6 | Required Leaching (inches) | Required leaching (represented by the variable “L”) is calculated to avoid salinity buildup in soil. The following equation from 30 TAC § 309.20, Table 1.  L = [Ce/(Cl - Ce)]×(E - R),  where: Ce = electrical conductivity of effluent (provided by applicant)  Cl = maximum allowable conductivity of soil solution obtained from 30 TAC § 309.20, Table 3.  If (E - R) is less than zero (<0), then L = 0  For this example, assume the applicant provided an effluent electrical conductivity (Ce) of 5.4 mmhos/cm and that the maximum allowable conductivity of the soil solution is 12.0 mmhos/cm.  Required leaching for January:  L = [(5.4 mmhos/cm)/(12.0 mmhos/cm - 5.4 mhos/cm)] × (0.9 inch - 1.67 inches) =  -0.63 inches  But since (E - R) < 0, L = 0. |
| 7 | Total Water Need (inches) | The total water need is obtained by adding the evapotranspiration (Column 5) and the required leaching (Column 6).  January total water need =  0.90 inch + 0.0 inches = 0.90 inch |
| 8 | Effluent Needed in Root Zone (inches) | The amount of effluent needed in the root zone is obtained by subtracting the average rainfall infiltration (Column 4) from the total water need (Column 7). If the value is less than zero, then a value of zero is used.  January: 0.90 inch - 1.67 inches = -0.77 inch  but -0.77 < 0, therefore the amount of effluent needed in the root zone = 0.0 inches |
| 9 | Net Evaporation from Reservoir (feet) | Long-term monthly average net evaporation is developed from evaporation and precipitation data available from the TWDB web site. Use data from all years that have both precipitation and evaporation data.  For this example, assume the January average net evaporation = 0.05 feet. |
| 10 | Evaporation from Reservoir Surface (inches) | Evaporation from the reservoir surface is calculated by multiplying the net evaporation from reservoir (Column 9) by the ratio of the surface area of the ponds to the irrigation surface area.  January:  = (0.05 feet)×(12 inches/foot)×(5.5 acres/58 acres)  = 0.06 inch |
| 11 | Effluent to be Land Applied (inches) | The amount of effluent to be applied to land is obtained by dividing the effluent needed in root zone (Column 8) by the irrigation efficiency, K. The value of K is normally assumed to be 85%, or 0.85.  January: 0.0 inches/0.85 = 0.0 inches |
| 12 | Consumption from Reservoir (inches) | The consumption from reservoir is obtained by adding the evaporation from reservoir surface (Column 10) and the effluent to be applied to the land (Column 11). This is the maximum hydraulic application rate that can be applied over the irrigated area.  January: 0.06 inch + 0 inches = 0.06 inch |

# EXPLANATION OF TABLE 2

Explanation of Table 2

|  |  |  |
| --- | --- | --- |
| Column | Parameter | Explanation |
| 13 | Month | Water balance and storage calculations are performed for each month. In this example, the month of January is used. |
| 14 | Mean Rainfall Distribution (%) | The long-term mean rainfall distribution is developed from precipitation data available from the TWDB web site. Use data from all years that have both precipitation and evaporation data.  January mean rainfall percentage = 6.4%. |
| 15 | Maximum Rainfall (inches) | Maximum rainfall for each month is calculated by multiplying the mean rainfall distribution (Column 14) by the maximum annual rainfall that occurred in the last 25 years. For this example, assume that the maximum annual rainfall was 51.9 inches.  January: (51.9 inches)×(0.064) = 3.32 inches |
| 16 | Maximum Runoff (inches) | The maximum runoff is calculated using the maximum rainfall values (Column 15) and the same method used in Column 3:  Q = (I - 0.2S)2/(I + 0.8S)  S = (1000/N) - 10  where: I = maximum rainfall (from Column 15)  S = potential maximum retention after runoff begins  N = curve number  For this example, assume that the appropriate curve number is 78.  The value for S is calculated as follows:  S = (1000/78) – 10 = 2.82 inches  The January maximum runoff is calculated to be:  Q = [3.32 - 0.2(2.82)]2/[3.32 + 0.8(2.82)]  Q = 1.36 inches |
| 17 | Maximum Rainfall Infiltration (inches) | The maximum rainfall infiltration is obtained by subtracting the maximum runoff (Column 16) from the maximum rainfall (Column 15).  The January maximum rainfall infiltration is calculated to be:  3.32 inches - 1.36 inches = 1.96 inches |
| 18 | Total Available Water (inches) | The total available water is obtained by adding the amount of effluent received monthly for application or storage (see discussion at the beginning of this example) and the maximum rainfall infiltration (Column 17).  January: 0.73 inch + 1.96 inches = 2.69 inches |
| 19 | Mean Net Evaporation Distribution (%) | The long-term mean net evaporation distribution is developed from evaporation and precipitation data available from the TWDB web site. Use data from all years that have both precipitation and evaporation data.  For this example, the January mean net evaporation percentage = 5.23%. |
| 20 | Minimum Net Evaporation Reservoir Surface (inches) | Minimum net evaporation from the reservoir surface for each month is calculated by multiplying the mean net evaporation distribution (Column 19) by the minimum annual net evaporation that occurred in the last 25 years and then by the ratio of the surface area of the ponds to the irrigation surface area. For this example, assume that the minimum annual net evaporation was 2.01 feet.  The minimum net evaporation from the reservoir surface for January is:  (2.01 feet)×(12 inches/foot)×(0.0523)×(5.5 acres/58 acres) = 0.12 inch |
| 21 | Storage (inches) | The storage needed for each month is obtained as described in 30 TAC § 309.20,  Table 2.  Storage = (Monthly effluent available - Column 20) – [(Column 7 - Column 17)/K]  If [(Column 7 - Column 17)/K] < 0, it is entered as zero, and  Storage = (Monthly effluent available - Column 20)  January storage = (0.73 inch - 0.12 inch) – [(0.9 inch - 1.96 inches)/0.85]  = 0.61 inch - 0 inches  = 0.61 inch |
| 22 | Accumulated Storage (inches) | To allow for the worst-case condition, accumulated storage is obtained by adding the values obtained in Column 21, beginning with the first consecutive month of positive values. In this case, the summation starts in November. The maximum accumulated storage requirement occurs in February.  Accumulated storage = 0.58 inch (Nov) + 0.61 inch (Dec) + 0.61 inch (Jan) + 0.58 inch (Feb) = 2.38 inches |

The total storage required is then calculated as follows:

Total storage required = accumulated storage (inches)×irrigated area (acres)×(1 foot/12 inches)

For this example, then

Total storage required = 2.38 inches × 58 acres × (1 foot/12 inches) = 11.5 acre-feet

# TABLE 1

Monthly water balance (Table 1)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Month | Avg Rain-fall (in.) | Avg Runoff (in.) | Avg Rainfall Infil-tration (in.) | Evapo-trans-piration (in.) | Required Leaching (in.) | Total Water Need (in.) | Effluent Needed in Root Zone (in.) | Net Evapo-ration from Reservoir (ft.) | Evapo-ration from Reservoir Surface (in.) | Effluent to be Land Applied (in.) | Consump-tion from Reservoir (in.) |
| JAN | 2.39 | 0.72 | 1.67 | 0.90 | 0.00 | 0.90 | 0.00 | 0.05 | 0.06 | 0.00 | 0.06 |
| FEB | 2.80 | 0.99 | 1.81 | 1.30 | 0.00 | 1.30 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 |
| MAR | 2.95 | 1.09 | 1.86 | 3.00 | 0.94 | 3.94 | 2.08 | 0.13 | 0.15 | 2.45 | 2.60 |
| APR | 4.04 | 1.92 | 2.12 | 3.50 | 1.13 | 4.63 | 2.51 | 0.10 | 0.11 | 2.95 | 3.06 |
| MAY | 5.10 | 2.80 | 2.30 | 6.50 | 3.43 | 9.93 | 7.63 | 0.14 | 0.16 | 8.98 | 9.14 |
| JUN | 3.04 | 1.16 | 1.88 | 6.70 | 3.94 | 10.64 | 8.76 | 0.34 | 0.39 | 10.30 | 10.69 |
| JUL | 2.24 | 0.62 | 1.62 | 7.40 | 4.73 | 12.13 | 10.52 | 0.56 | 0.64 | 12.37 | 13.01 |
| AUG | 2.21 | 0.61 | 1.60 | 5.10 | 2.86 | 7.96 | 6.36 | 0.58 | 0.66 | 7.48 | 8.14 |
| SEP | 2.97 | 1.11 | 1.86 | 5.30 | 2.81 | 8.11 | 6.25 | 0.37 | 0.42 | 7.35 | 7.77 |
| OCT | 3.43 | 1.44 | 1.99 | 4.20 | 1.81 | 6.01 | 4.03 | 0.27 | 0.31 | 4.74 | 5.05 |
| NOV | 2.97 | 1.11 | 1.86 | 1.70 | 0.00 | 1.70 | 0.00 | 0.14 | 0.16 | 0.00 | 0.16 |
| DEC | 3.31 | 1.35 | 1.96 | 0.72 | 0.00 | 0.72 | 0.00 | 0.07 | 0.08 | 0.00 | 0.08 |
| TOTAL | 37.45 | 14.92 | 22.53 | 46.32 | 21.66 | 67.98 | 48.13 | 2.79 | 3.17 | 56.62 | 59.79 |

(1) Completed in accordance with Table 1 of 30 TAC § 309.20.

# TABLE 2

Monthly water balance (1)

Monthly Water Balance (Table 2)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| Month | Mean Rainfall Distribution (%) | Maximum Rainfall (in.) | Maximum Runoff (in.) | Maximum Rainfall Infiltration (in.) | Total Water Available (in.) | Mean Net Evaporation Distribution (%) | Minimum Net Evaporation Reservoir Surface (in.) | Storage (in.) | Accumulated Storage (in.) |
| JAN | 6.40 | 3.32 | 1.36 | 1.96 | 2.69 | 5.23 | 0.12 | 0.61 | 1.81 |
| FEB | 7.50 | 3.89 | 1.80 | 2.09 | 2.82 | 6.67 | 0.15 | 0.58 | 2.39 |
| MAR | 7.90 | 4.10 | 1.97 | 2.16 | 2.86 | 11.31 | 0.26 | -1.65 | 0.74 |
| APR | 10.80 | 5.61 | 3.23 | 2.37 | 3.10 | 13.51 | 0.31 | -2.23 | 0.00 |
| MAY | 13.60 | 7.06 | 4.53 | 2.53 | 3.26 | 12.65 | 0.29 | -8.27 | 0.00 |
| JUN | 8.10 | 4.20 | 2.05 | 2.15 | 2.88 | 11.81 | 0.27 | -9.52 | 0.00 |
| JUL | 6.00 | 3.11 | 1.21 | 1.90 | 2.63 | 8.76 | 0.20 | -11.50 | 0.00 |
| AUG | 5.90 | 3.06 | 1.17 | 1.89 | 2.62 | 6.21 | 0.14 | -6.55 | 0.00 |
| SEP | 7.90 | 4.10 | 1.97 | 2.13 | 2.86 | 4.88 | 0.11 | -6.41 | 0.00 |
| OCT | 9.20 | 4.77 | 2.52 | 2.25 | 2.98 | 6.96 | 0.16 | -3.85 | 0.00 |
| NOV | 7.90 | 4.10 | 1.97 | 2.13 | 2.86 | 6.66 | 0.15 | 0.58 | 0.58 |
| DEC | 8.80 | 4.57 | 2.35 | 2.22 | 2.95 | 5.35 | 0.12 | 0.61 | 1.19 |
| TOTAL | 100.0 | 51.90 | 26.1 | 25.8 | 34.5 | 100.00 | 2.29 |  | Max = 2.39(2) |

(1) Completed in accordance with Table 2 of 30 TAC § 309.20.

(2) Storage volume requirement = 2.39 inches

= (2.39 inches) × (58 acres) × (1 foot/12 inches)

= 11.5 acre-feet

APPENDIX 7 – EXAMPLE – STORAGE CALCULATION FOR EVAPORATION PONDS WITHOUT IRRIGATION

The procedures used to determine appropriate design for irrigation systems at domestic wastewater treatment plants are found in 30 TAC Chapter 309, Subchapter C. Appropriate evaporation pond sizing is determined based upon these procedures using best professional judgment (BPJ). These procedures consist of two evaluations: critical condition evaluation and average condition evaluation.

The **critical condition evaluation** is designed to evaluate the storage capacity of the pond(s) under a “worst-case scenario.” The worst-case scenario is defined as the 25-year lowest net evaporation assuming daily flow to the pond at the permitted rate. The pond’s storage capacity is considered adequate when the Total Storage Necessary is less than or equal to the Pond Storage Volume (the pond could contain all wastewater discharged when evaporation is lowest).

The **average conditions evaluation** is designed to ensure that the pond(s) have enough surface area to evaporate all the flow to the pond(s) under average rainfall conditions. The pond is considered adequately sized when the Total Storage Necessary is less than or equal to zero. If this value is greater than zero, the pond’s surface must be increased or the effluent flow reduced to ensure that no accumulation occurs during average conditions.

This example includes the two evaluations that are used to calculate the monthly storage calculations for an evaporation-only permit. It also includes explanation of how the values in the two tables are derived. For this example, assume that the applicant requested a permit with the following specifications:

Effluent Flow = 0.00089 MGD

Pond Surface Area = 0.26 acres

Pond Storage Volume = 0.93 acre-feet

# CRITICAL CONDITION EVALUATION

Table 5: Critical Condition Evaluation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | # of Days | Flow to Ponds  (acre-feet) | Lowest Evaporation Rate  (feet) | Evaporation  from Ponds  (acre-feet) | Storage  Requirements  (acre-feet) |
| January | 31 | 0.084658 | 0.086 | 0.022 | 0.062 |
| February | 28 | 0.076465 | 0.102 | 0.026 | 0.050 |
| March | 31 | 0.084658 | 0.189 | 0.049 | 0.035 |
| April | 30 | 0.081927 | 0.233 | 0.061 | 0.021 |
| May | 31 | 0.084658 | 0.181 | 0.047 | 0.038 |
| June | 30 | 0.081927 | 0.269 | 0.070 | 0.012 |
| July | 31 | 0.084658 | 0.330 | 0.086 | -0.001 |
| August | 31 | 0.084658 | 0.281 | 0.073 | 0.012 |
| September | 30 | 0.081927 | 0.167 | 0.044 | 0.038 |
| October | 31 | 0.084658 | 0.150 | 0.039 | 0.046 |
| November | 30 | 0.081927 | 0.125 | 0.032 | 0.049 |
| December | 31 | 0.084658 | 0.087 | 0.023 | 0.062 |
| Total Storage = |  |  |  |  | 0.425 |

The values in the table above are derived as follows:

Flow to Ponds = (Effluent Flow) × (# of Days) × (3.0684)

Evaporation Rate = 25-year lowest net evaporation distributed by month\*

Evaporation from Ponds = (Pond Surface Area) × (Evaporation Rate)

Storage Requirements = (Flow to Ponds) - (Evaporation from Ponds)

Total Storage Necessary = SUM (Storage Requirements)

The Total Storage Necessary is less than the pond storage available; therefore, the evaporation pond size is adequate under critical conditions.

# AVERAGE CONDITION EVALUATION

Table 6: Average Condition Evaluation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | # of Days | Flow to Ponds  (acre-feet) | Evaporation Rate  (feet) | Evaporation  from Ponds  (acre-feet) | Storage  Requirements  (acre-feet) |
| January | 31 | 0.084658 | 0.200 | 0.052 | 0.033 |
| February | 28 | 0.076465 | 0.208 | 0.054 | 0.022 |
| March | 31 | 0.084658 | 0.346 | 0.090 | -0.005 |
| April | 30 | 0.081927 | 0.462 | 0.120 | -0.038 |
| May | 31 | 0.084658 | 0.417 | 0.108 | -0.024 |
| June | 30 | 0.081927 | 0.545 | 0.142 | -0.060 |
| July | 31 | 0.084658 | 0.642 | 0.167 | -0.082 |
| August | 31 | 0.084658 | 0.522 | 0.136 | -0.051 |
| September | 30 | 0.081927 | 0.352 | 0.091 | -0.009 |
| October | 31 | 0.084658 | 0.352 | 0.091 | -0.007 |
| November | 30 | 0.081927 | 0.271 | 0.070 | 0.011 |
| December | 31 | 0.084658 | 0.212 | 0.055 | 0.029 |
| Total Storage = |  |  |  |  | -0.180 |

The values in the table above are derived as follows:

Flow to Ponds = (Effluent Flow) × (# of Days) × (3.0684)

Evaporation Rate = 25-year average monthly net evaporation\*

Evaporation from Ponds = (Pond Surface Area) × (Evaporation Rate)

Storage Requirements = (Flow to Ponds) - (Evaporation from Ponds)

Total Storage Necessary = SUM (Storage Requirements)

The Total Storage Necessary is less than zero; therefore, the evaporation pond size is adequate under average conditions.

**Conclusion**: The existing pond size is adequate under both critical and average conditions.

\* Net evaporation values can be obtained from [Texas Water Development Board’s Evaporation/Precipitation Data for Texas](https://waterdatafortexas.org/lake-evaporation-rainfall).

1. <https://www.tceq.texas.gov/permitting/waste_permits> [↑](#footnote-ref-2)
2. <https://www.tceq.texas.gov/permitting/air/air_permits.html> [↑](#footnote-ref-3)
3. <http://www.sos.texas.gov/tac/> [↑](#footnote-ref-4)
4. <https://www.tceq.texas.gov/rules/current.html> [↑](#footnote-ref-5)
5. <https://dww2.tceq.texas.gov/DWW/> [↑](#footnote-ref-6)
6. <https://www.tceq.texas.gov/search_forms.html> [↑](#footnote-ref-7)
7. <https://www3.tceq.texas.gov/steers/> [↑](#footnote-ref-8)
8. <https://www3.tceq.texas.gov/steers/> [↑](#footnote-ref-9)
9. <https://www3.tceq.texas.gov/epay/index.cfm> [↑](#footnote-ref-10)
10. <https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html> [↑](#footnote-ref-11)
11. <http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch> [↑](#footnote-ref-12)
12. <http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch> [↑](#footnote-ref-13)
13. <https://tools.usps.com/go/ZipLookupAction!input.action> [↑](#footnote-ref-14)
14. <https://www.tceq.texas.gov/permitting/netdmr> [↑](#footnote-ref-15)
15. <https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=3&ti=30&pt=1> [↑](#footnote-ref-16)
16. <http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=regent.RNSearch> [↑](#footnote-ref-17)
17. <https://www.tceq.texas.gov/agency/fees/delin/index.html> [↑](#footnote-ref-18)
18. <https://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer> [↑](#footnote-ref-19)
19. <https://www.tceq.texas.gov/gis/sqmaview.html> [↑](#footnote-ref-20)
20. <http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=addnid.IdSearch> [↑](#footnote-ref-21)
21. <http://www.ecfr.gov/cgi-bin/text-idx?SID=a0bbbe14d9544d6a41fbfb6ec9079069&mc=true&node=se40.24.122_12&rgn=div8> [↑](#footnote-ref-22)
22. <http://www.ecfr.gov/cgi-bin/text-idx?SID=465e9f9a925080753d97a0245acf5a1f&mc=true&node=pt40.24.125&rgn=div5#se40.24.125_186> [↑](#footnote-ref-23)
23. <https://www.ecfr.gov/cgi-bin/text-idx?SID=3721f883c963a34d9f946f8e011a1cf7&mc=true&node=se40.24.125_1134&rgn=div8> [↑](#footnote-ref-24)
24. <http://www.nrcs.usda.gov/wps/portal/nrcs/site/tx/home/> [↑](#footnote-ref-25)
25. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> [↑](#footnote-ref-26)
26. <https://waterdatafortexas.org/lake-evaporation-rainfall> [↑](#footnote-ref-27)
27. <https://www.twdb.texas.gov/publications/reports/bulletins/doc/B6019/B6019.pdf> [↑](#footnote-ref-28)
28. <http://www.twdb.texas.gov/publications/reports/contracted_reports/doc/95483137.pdf> [↑](#footnote-ref-29)
29. <https://www.tceq.texas.gov/permitting/eapp/viewer.html> [↑](#footnote-ref-30)
30. <https://ossf.tamu.edu/evapotranspiration-bed/> [↑](#footnote-ref-31)
31. <http://www.glo.texas.gov/coast/oil-spill/toolkit/index.html> [↑](#footnote-ref-32)
32. <https://www.tceq.texas.gov/permitting/waste_permits/uic_permits/UIC_Guidance_Class_5.html> [↑](#footnote-ref-33)
33. <http://pubs.usgs.gov/gip/TopographicMapSymbols/topomapsymbols.pdf> [↑](#footnote-ref-34)
34. To clarify, where a CWIS screen has an opening size greater than 0.56 inches, the susceptibility to impingement of certain life stages of fish and shellfish should be accounted for when reporting information required under 40 CFR § 122.21(r), and likewise where opening sizes are less than 0.56 inches. In no case should an entrainable life stage of fish or shellfish be represented as impingeable or vice versa. [↑](#footnote-ref-35)