



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
DOMESTIC WASTEWATER PERMIT APPLICATION

**DOMESTIC TECHNICAL REPORT 1.0**

The Following Is Required For All Applications  
Renewal, New, And Amendment

**Section 1. Permitted or Proposed Flows (Instructions Page 51)**

**A. Existing/Interim I Phase**

Design Flow (MGD): 0.25

2-Hr Peak Flow (MGD): 1.0

Estimated construction start date: N/A

Estimated waste disposal start date: 3/30/2019

**B. Interim II Phase**

Design Flow (MGD): 01.50

2-Hr Peak Flow (MGD): 5.25

Estimated construction start date: 2020

Estimated waste disposal start date: 2021

**C. Final Phase**

Design Flow (MGD): 2.0

2-Hr Peak Flow (MGD): 7.0

Estimated construction start date: 2025

Estimated waste disposal start date: 2027

**D. Current operating phase: Existing/Interim I Phase**

Provide the startup date of the facility: 04/02/2019

**Section 2. Treatment Process (Instructions Page 51)**

**A. Treatment process description**

Provide a detailed description of the treatment process. **Include the type of**

**treatment plant, mode of operation, and all treatment units.** Start with the plant's head works and finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed in the permit, a description of *each phase* must be provided.** Process description:

See attachment 8

Port or pipe diameter at the discharge point, in inches: 30 inches

**B. Treatment Units**

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) of each treatment unit, accounting for *all* phases of operation.

*Table 1.0(1) - Treatment Units*

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
See attachment 9		

**C. Process flow diagrams**

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

**Attachment:** 10

### Section 3. Site Drawing (Instructions Page 52)

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or disposal site.

#### Attachment: 11

Provide the name and a description of the area served by the treatment facility.

Martinez IV Wastewater Treatment Facility serving East Bexar County

### Section 4. Unbuilt Phases (Instructions Page 52)

Is the application for a renewal of a permit that contains an unbuilt phase or phases?

Yes  No

**If yes**, does the existing permit contain a phase that has not been constructed within five years of being authorized by the TCEQ?

Yes  No

**If yes**, provide a detailed discussion regarding the continued need for the unbuilt phase. Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases.

New developments are being added within the treatment plant's service area and population growth is projected to increase beyond the plant's current capacity. The newly built plant average daily flow after the fourth month of operation is 112,007 gallons per day. This average does not reflect water reuse, which drives the treated gallons per day higher than the actual discharge. Flow is increasing more rapidly than initially projected.

## Section 5. Closure Plans (Instructions Page 53)

Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years?

Yes  No

If yes, was a closure plan submitted to the TCEQ?

Yes  No

If yes, provide a brief description of the closure and the date of plan approval.

N/A

## Section 6. Permit Specific Requirements (Instructions Page 53)

For applicants with an existing permit, check the *Other Requirements* or *Special Provisions* of the permit.

### A. Summary transmittal

Have plans and specifications been approved for the existing facilities and each proposed phase?

Yes  No

If yes, provide the date(s) of approval for each phase: N/A

Provide information, including dates, on any actions taken to meet a requirement or provision pertaining to the submission of a summary transmittal letter. Provide a copy of an approval letter from the TCEQ, if applicable.

N/A

### B. Buffer zones

Have the buffer zone requirements been met?

Yes  No

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

N/A

**C. Other actions required by the current permit**

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

Yes  No

If yes, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision*.

See comments on attachment 12 A, B, and C

**D. Grit and grease treatment**

***1. Acceptance of grit and grease waste***

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

Yes  No

If No, stop here and continue with Subsection E. Stormwater Management.

***2. Grit and grease processing***

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

### **3. Grit disposal**

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?

Yes  No

**If No**, contact the TCEQ Municipal Solid Waste team at 512-239-0000. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

### **4. Grease and decanted liquid disposal**

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-0000.

Describe how the decant and grease are treated and disposed of after grit separation.

## **E. Stormwater management**

### **1. Applicability**

Does the facility have a design flow of 1.0 MGD or greater in any phase?

Yes  No

Does the facility have an approved pretreatment program, under 40 CFR Part 403?

Yes  No

If no to both of the above, then skip to Subsection F, Other Wastes Received.

## 2. MSGP coverage

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

Yes  No

If yes, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 [REDACTED] or TXRNE [REDACTED]

If no, do you intend to seek coverage under TXR050000?

Yes  No

## 3. Conditional exclusion

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

Yes  No

If yes, please explain below then proceed to Subsection F, Other Wastes Received:

N/A
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## 4. Existing coverage in individual permit

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

Yes  No

If yes, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

N/A

**5. Zero stormwater discharge**

Do you intend to have no discharge of stormwater via use of evaporation or other means?

Yes  No

**If yes, explain below then skip to Subsection F. Other Wastes Received.**

N/A

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

**6. Request for coverage in individual permit**

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

Yes  No

**If yes, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you intend to divert stormwater to the treatment plant headworks and indirectly discharge it to water in the state.**



N/A

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

**F. Discharges to the Lake Houston Watershed**

Does the facility discharge in the Lake Houston watershed?

Yes  No

If yes, a Sewage Sludge Solids Management Plan is required. See Example 5 in the instructions.

**G. Other wastes received including sludge from other WWTPs and septic waste**

***1. Acceptance of sludge from other WWTPs***

Does the facility accept or will it accept sludge from other treatment plants at the facility site?

Yes  No

**If yes, attach sewage sludge solids management plan. See Example 5 of the instructions.**

In addition, provide the date that the plant started accepting sludge or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD<sub>5</sub> concentration of the sludge, and the design BOD<sub>5</sub> concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

## 2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

Yes  No

If yes, does the facility have a Type V processing unit?

Yes  No

If yes, does the unit have a Municipal Solid Waste permit?

Yes  No

If yes to any of the above, provide a the date that the plant started accepting septic waste, or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD<sub>5</sub> concentration of the septic waste, and the design BOD<sub>5</sub> concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

N/A

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

## 3. Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)

Is the facility accepting or will it accept wastes that are not domestic in nature excluding the categories listed above?

Yes  No

If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or other physical characteristic of the waste. Also note if this information has or has not changed since the last permit action.

N/A

## Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 58)

Is the facility in operation?

Yes  No

If **no**, this section is not applicable. Proceed to Section 8.

If **yes**, provide effluent analysis data for the listed pollutants. **Wastewater treatment facilities** complete Table 1.0(2). **Water treatment facilities** discharging filter backwash water, complete Table 1.0(3).

Note: The sample date must be within 1 year of application submission.

**Table 1.0(2) - Pollutant Analysis for Wastewater Treatment Facilities**

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
CBOD <sub>5</sub> , mg/l	2	2	1	COMP	4/24/19, 7:30 AM
Total Suspended Solids, mg/l	2	2	1	COMP	4/24/19, 7:30 AM
Ammonia Nitrogen, mg/l	0.3	0.3	1	COMP	4/24/19, 7:30 AM
Nitrate Nitrogen, mg/l	13.5	13.5	1	COMP	4/24/19, 7:30 AM
Total Kjeldahl Nitrogen, mg/l	2	2	1	COMP	4/24/19, 7:30 AM
Sulfate, mg/l	205	205	1	COMP	4/24/19, 7:30 AM
Chloride, mg/l	317	317	1	COMP	4/24/19, 7:30 AM
Total Phosphorus, mg/l	3.23	3.23	1	COMP	4/24/19, 7:30 AM
pH, standard units	7.34 MIN	7.89 MAX	7	GRAB	MAY 2019
Dissolved Oxygen*, mg/l	4.23 MIN	6.62 MAX	16	GRAB	MAY 2019
Chlorine Residual, mg/l	N/A	N/A	N/A	N/A	N/A
<i>E.coli</i> (CFU/100ml) freshwater	1	5	23	GRAB	MAY 2019
Enterococci (CFU/100ml) saltwater	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids, mg/l	1052	1052	1	COMP	4/24/19, 7:30 AM
Electrical Conductivity, $\mu$ mohs/cm, †	1928	1928	1	COMP	4/24/19, 7:30 AM

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Oil & Grease, mg/l	5	5	1	GRAB	4/24/19, 8:35 AM
Alkalinity (CaCO <sub>3</sub> )*, mg/l	184	184	1	COMP	4/24/19, 7:30 AM

**SEE ATTACHMENT 13**

\*TPDES permits only

†TLAP permits only

***Table 1.0(3) - Pollutant Analysis for Water Treatment Facilities***

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l			N/A		
Total Dissolved Solids, mg/l			N/A		
pH, standard units			N/A		
Fluoride, mg/l			N/A		
Aluminum, mg/l			N/A		
Alkalinity (CaCO <sub>3</sub> ), mg/l			N/A		

## **Section 8. Facility Operator (Instructions Page 60)**

Facility Operator Name: Clairissa Flores

Facility Operator's License Classification and Level: Class B Wastewater

Facility Operator's License Number: WW0058136

## **Section 9. Sewage Sludge Management and Disposal (Instructions Page 60)**

### **A. Sludge disposal method**

Identify the current or anticipated sludge disposal method or methods from the following list. Check all that apply.

- Permitted landfill
- Permitted or Registered land application site for beneficial use

- Land application for beneficial use authorized in the wastewater permit
- Permitted sludge processing facility
- Marketing and distribution as authorized in the wastewater permit
- Composting as authorized in the wastewater permit
- Permitted surface disposal site (sludge monofill)
- Surface disposal site (sludge monofill) authorized in the wastewater permit
- Transported to another permitted wastewater treatment plant or permitted sludge processing facility. If you selected this method, a written statement or contractual agreement from the wastewater treatment plant or permitted sludge processing facility accepting the sludge must be included with this application. **SEE ATTACHMENT 14**
- Other: Hauled to permitted compost facility for compost and sale

**B. Sludge disposal site**

Disposal site name: Republic, Tessman Rd Landfill/Gardenville-Martinez II

WWTP Compost Facility/Martinez II WWTP/Upper Martinez WWTP

TCEQ permit or registration number: 1410/WQ0010749-004/WQ0010749-004/WQ0010749-003

County where disposal site is located: Bexar/Bexar/Bexar/Bexar

**C. Sludge transportation method**

Method of transportation (truck, train, pipe, other): Truck/Trailer

Name of the hauler: San Antonio River Authority

Hauler registration number: 21858

Sludge is transported as a:

Liquid       semi-liquid       semi-solid       solid

**Section 10. Permit Authorization for Sewage Sludge Disposal**

## (Instructions Page 60)

### A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

Yes  No

If yes, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

Yes  No

If yes, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

Yes  No

### B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting Yes  No

Marketing and Distribution of sludge Yes  No

Sludge Surface Disposal or Sludge Monofill Yes  No

Temporary storage in sludge lagoons Yes  No

If yes to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

Yes  No

## Section 11. Sewage Sludge Lagoons (Instructions Page 61)

Does this facility include sewage sludge lagoons?

Yes  No

If yes, complete the remainder of this section. If no, proceed to Section 12.

### A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map:

**Attachment:**

- USDA Natural Resources Conservation Service Soil Map:

**Attachment:**

- Federal Emergency Management Map:

**Attachment:**

- Site map:

**Attachment:**

Discuss in a description if any of the following exist within the lagoon area.  
Check all that apply.

- Overlap a designated 100-year frequency flood plain
- Soils with flooding classification
- Overlap an unstable area
- Wetlands
- Located less than 60 meters from a fault
- None of the above

**Attachment:**

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

### **B. Temporary storage information**

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in Section 7 of Technical Report 1.0.

Nitrate Nitrogen, mg/kg:

Total Kjeldahl Nitrogen, mg/kg:

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg:

Phosphorus, mg/kg:

Potassium, mg/kg:

pH, standard units:

Ammonia Nitrogen mg/kg:

Arsenic:

Cadmium:

Chromium:

Copper:

Lead:

Mercury:

Molybdenum:

Nickel:

Selenium:

Zinc:

Total PCBs:

Provide the following information:

Volume and frequency of sludge to the lagoon(s):

Total dry tons stored in the lagoons(s) per 365-day period:

Total dry tons stored in the lagoons(s) over the life of the unit:

### C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec?

Yes  No

If yes, describe the liner below. Please note that a liner is required.

### D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):



Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)  
**Attachment:** [REDACTED]
- Copy of the closure plan  
**Attachment:** [REDACTED]
- Copy of deed recordation for the site  
**Attachment:** [REDACTED]
- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons  
**Attachment:** [REDACTED]
- Description of the method of controlling infiltration of groundwater and surface water from entering the site  
**Attachment:** [REDACTED]
- Procedures to prevent the occurrence of nuisance conditions  
**Attachment:** [REDACTED]

**E. Groundwater monitoring**

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

Yes  No

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

**Attachment:** [REDACTED]

**Section 12. Authorizations/Compliance/Enforcement  
(Instructions Page 63)**

**A. Additional authorizations**

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

Yes  No

If yes, provide the TCEQ authorization number and description of the authorization:

N/A

**B. Permittee enforcement status**

Is the permittee currently under enforcement for this facility?

Yes  No

Is the permittee required to meet an implementation schedule for compliance or enforcement?

Yes  No

If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

N/A

**Section 13. RCRA/CERCLA Wastes (Instructions Page 63)**

**A. RCRA hazardous wastes**

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

Yes  No

**B. Remediation activity wastewater**

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

Yes  No

**C. Details about wastes received**

If yes to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment: N/A

## Section 14. Laboratory Accreditation (Instructions Page 64)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

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

The applicant should review *30 TAC Chapter 25* for specific requirements.

The following certification statement shall be signed and submitted with every application. See the *Signature Page* section in the Instructions, for a list of designated representatives who may sign the certification.

### CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

Printed Name: Suzanne B. Scott

Title: General Manager

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# DOMESTIC TECHNICAL REPORT 1.1

The following is required for new and amendment applications

## Section 1. Justification for Permit (Instructions Page 66)

### A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

A master plan for Martinez IV WWTP was conducted by Freese and Nichols to evaluate the capacity of the existing wastewater system and recommend a Capital Improvement Plan. The projected growth rates were calculated using historical data, and future lands use plans provided by Bexar County, the City of Schertz, and San Antonio River Authority. Growth for the area is projected to increase 65% in 2019, 39% in 2020, 28% in 2021, 22% in 2022, 18% in 2023, 15% in 2024, and 13% in 2025. Flow is increasing more rapidly than initially projected, and interim II phase and final build out construction dates have already been moved up, with anticipation of needing buildout capacity by 2027.

### B. Regionalization of facilities

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

#### 1. Municipally incorporated areas

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

Yes  No  Not Applicable

If yes, within the city limits of: City of Schertz

If yes, attach correspondence from the city.

Attachment: 15

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment: Facility already constructed and in operation

#### 2. Utility CCN areas

Is any portion of the proposed service area located inside another utility's CCN area?

Yes  No

**If yes**, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.

**Attachment:** 16

### ***3. Nearby WWTPs or collection systems***

Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?

Yes  No

**If yes**, attach a list of these facilities that includes the permittee's name and permit number, and an area map showing the location of these facilities.

**Attachment:** N/A

**If yes**, attach copies of your certified letters to these facilities **and** their response letters concerning connection with their system.

**Attachment:** N/A

Does a permitted domestic wastewater treatment facility or a collection system located within three (3) miles of the proposed facility currently have the capacity to accept or is willing to expand to accept the volume of wastewater proposed in this application?

Yes  No

**If yes**, attach an analysis of expenditures required to connect to a permitted wastewater treatment facility or collection system located within 3 miles versus the cost of the proposed facility or expansion.

**Attachment:**

## **Section 2. Organic Loading (Instructions Page 67)**

Is this facility in operation?

Yes  No

**If no**, proceed to Item B, Proposed Organic Loading.

If yes, provide organic loading information in Item A, Current Organic Loading

**A. Current organic loading**

Facility Design Flow (flow being requested in application): 0.25 MGD

Average Influent Organic Strength or BOD<sub>5</sub> Concentration in mg/l: 200

Average Influent Loading (lbs/day = total average flow X average BOD<sub>5</sub> conc. X 8.34): 417

Provide the source of the average organic strength or BOD<sub>5</sub> concentration.

<u>Estimate</u>
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**B. Proposed organic loading**

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

**Table 1.1(1) - Design Organic Loading**

Source	Total Average Flow (MGD)	Influent BOD <sub>5</sub> Concentration (mg/l)
Municipality	N/A	
Subdivision		
Trailer park - transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park,		

Source	Total Average Flow (MGD)	Influent BOD <sub>5</sub> Concentration (mg/l)
overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources		
AVERAGE BOD <sub>5</sub> from all sources		

**Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 68)**

**A. Existing/Interim I Phase Design Effluent Quality**

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 3

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0

Other: E. coli 126 MPN/100 mL (geometric mean), pH 6.0 MIN - 9.0 MAX standard units

### B. Interim II Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 3

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0

Other: E. coli 126 MPN/100 mL (geometric mean), pH 6.0 MIN - 9.0 MAX standard units

### C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: 3

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: 4.0

Other: E. coli 126 MPN/100 mL (geometric mean), pH 6.0 MIN - 9.0 MAX standard units

### D. Disinfection Method

Identify the proposed method of disinfection.

- Chlorine: [redacted] mg/l after [redacted] minutes detention time at peak flow  
Dechlorination process: [redacted]
- Ultraviolet Light: 8.71 seconds contact time at peak flow
- Other: [redacted]

## Section 4. Design Calculations (Instructions Page 68)

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

**Attachment:** 17



## Section 5. Facility Site (Instructions Page 68)

### A. 100-year floodplain

Will the proposed facilities be located above the 100-year frequency flood level?

Yes  No

If **no**, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

N/A

Provide the source(s) used to determine 100-year frequency flood plain.

FIRM panel 48029C0455F on SARA Floodplain Viewer an interactive map of FEMA National Flood Hazard Layer (NFHL) Data

For a new or expansion of a facility, will a wetland or part of a wetland be filled?

Yes  No

If **yes**, has the applicant applied for a US Corps of Engineers 404 Dredge and Fill Permit?

Yes  No

If **yes**, provide the permit number:

If **no**, provide the approximate date you anticipate submitting your application to the Corps:

### B. Wind rose

Attach a wind rose. **Attachment:** 18

## Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 69)

### A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?

Yes  No

If **yes**, attach the completed Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)

**Attachment:** N/A

### **B. Sludge processing authorization**

Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:

- Sludge Composting
- Marketing and Distribution of sludge
- Sludge Surface Disposal or Sludge Monofill

If **any of the above** sludge options are selected, attach a completed DOMESTIC WASTEWATER PERMIT APPLICATION: SEWAGE SLUDGE TECHNICAL REPORT (TCEQ Form No. 10056).

**Attachment:**

## **Section 7. Sewage Sludge Solids Management Plan (Instructions Page 69)**

Attach a solids management plan to the application.

**Attachment:** 19

The sewage sludge solids management plan must contain the following information:

- Treatment units and processes dimensions and capacities
- Solids generated at 100, 75, 50, and 25 percent of design flow
- Mixed liquor suspended solids operating range at design and projected actual flow
- Quantity of solids to be removed and a schedule for solids removal
- Identification and ownership of the ultimate sludge disposal site
- For facultative lagoons, design life calculations, monitoring well locations and depths, and the ultimate disposal method for the sludge from the facultative lagoon

An example of a sewage sludge solids management plan has been included as Example 5 of the instructions.

Length of stream evaluated, in feet: 2,640

Number of lateral transects made: 4

Average stream width, in feet: 10

Average stream depth, in feet: 1.578

Average stream velocity, in feet/second: 0.6395

Instantaneous stream flow, in cubic feet/second: 1.50

Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): FlowTracker

Size of pools (large, small, moderate, none): None

Maximum pool depth, in feet: N/A