****TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPLICATION FOR A PERMIT

FOR BENEFICIAL LAND USE OF SEWAGE SLUDGE

If you have questions about completing this form please contact the Applications Review and Processing Team at 512-239-4671.

# SECTION 1. TYPE OF APPLICATION

  New (original, site not permitted)

  New (previously permitted but allowed to expire or canceled)

  Major Amendment (including renewals with changes to substantive provisions of the permit)

  Renewal

  Renewal with Minor Amendment

For amendments, describe the proposed changes:

|  |
| --- |
| Click here to enter text. |

For existing permits:

What is the permit number? Click here to enter text.

# SECTION 2. APPLICATION FEE

The application fee varies from $1,000 to $5,000 based on the quantity of sewage sludge to be applied annually. See instructions to determine the appropriate fee.

**Provide your payment information below, for verification of payment**

Check/Money Order Number: Click here to enter text.

Check/Money Order Amount: Click here to enter text.

Name Printed on Check: Click here to enter text.

# SECTION 3. APPLICANT INFORMATION

1. The **site operator** must apply for the permit. What is the legal name of the site operator (applicant)? The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.

Click here to enter text

1. If the applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity. CN Click here to enter text.
2. What is the contact information for this applicant?

Contact Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

# SECTION 4. CO-APPLICANT INFORMATION

Complete this section only if more than one person or entity is a site operator.

1. What is the legal name of the co-applicant? The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.

Click here to enter text.

1. If the co-applicant is an existing TCEQ customer, provide the Customer Number (CN) issued to this entity. CN Click here to enter text.
2. What is the contact information for this applicant?

Contact Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

# SECTION 5. APPLICATION CONTACT INFORMATION

These are the individuals that TCEQ will contact if additional information is needed about this application.

1. Prefix (Mr., Ms., Miss): Click here to enter text.

Application Contact First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

1. Prefix (Mr., Ms., Miss): Click here to enter text.

Application Contact First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

# SECTION 6. PERMIT CONTACT INFORMATION

These are the individuals that TCEQ can contact during the term of the permit.

1. Prefix (Mr., Ms., Miss): Click here to enter text.

Permit Contact First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

1. Prefix (Mr., Ms., Miss): Click here to enter text.

Permit Contact First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

# SECTION 7. BILLING CONTACT INFORMATION

This is the person that TCEQ will contact if additional information is needed about the annual fee invoices.

Prefix (Mr., Ms., Miss): Click here to enter text.

Billing Contact First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

# SECTION 8. REPORTING CONTACT INFORMATION

This is the person that TCEQ will contact if additional information is needed about the annual sludge reports.

Prefix (Mr., Ms., Miss): Click here to enter text.

Reporting Contact First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

# SECTION 9. NOTICE INFORMATION

1. **Individual responsible for publishing the notices in the newspaper**

Prefix (Mr., Ms., Miss): Click here to enter text.

First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Company Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

1. **Method for receiving the notice package for the Notice of Receipt and Intent**

   E-mail: Click here to enter text.

   Fax Number: Click here to enter text.

   Regular Mail:

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

1. **Contact person to be listed in the notice**

Prefix (Mr., Ms., Miss): Click here to enter text.

First and Last Name: Click here to enter text.

Title: Click here to enter text. Credentials: Click here to enter text.

Company Name: Click here to enter text.

Phone Number: Click here to enter text.

1. **Public viewing location**

If the facility is located in more than one county, a public viewing location for each county must be provided.

Public Building Name: Click here to enter text.

Physical Address of Building: Click here to enter text.

City: Click here to enter text. County: Click here to enter text.

Phone Number: Click here to enter text.

1. **Bilingual Notice Requirement**

**For new, major amendment, and renewal applications.** This information can be obtained by contacting the bilingual/ESL coordinator at the nearest elementary or middle school.

1. Is a bilingual education program required by the Texas Education Code at the nearest elementary or middle school to the facility or proposed facility?

Yes    No

(**If No**, alternative language notice publication is not required; skip to Section 10. Regulated Entity (Site) Information.)

1. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

Yes    No

1. Do the students at these schools attend a bilingual education program at another location?

Yes    No

1. Would the school be required to provide a bilingual education program but the school has waived out of this requirement under 19 TAC §89.1205(g)?

Yes    No

1. If the answer is yes to 1, 2, 3, or 4, public notice in an alternative language is required. Which language is required by the bilingual program? Click here to enter text.

# SECTION 10. REGULATED ENTITY (SITE) INFORMATION

1. Site Name: Click here to enter text.
2. If this is an existing permitted site, provide the Regulated Entity Number (RN) issued to this site. RN Click here to enter text.
3. Site Address/Location:

Is the location of the application site used in the existing permit accurate?

   Yes    No

If **YES**, skip to D. If **NO**, or if this application is for a new site, provide the physical address of the site such as: 12100 Park 35 Circle, Austin, TX 78753. If the site does not have a physical address, provide a location description such as: located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1.

Click here to enter text.

1. County where the site is located: Click here to enter text.
2. Latitude: Click here to enter text. Longitude: Click here to enter text.
3. Landowner Information:

Attach an additional sheet if more than one landowner.

Prefix (Mr., Ms., Miss): Click here to enter text.

First and Last Name: Click here to enter text.

Organization Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text.

1. County Judge

Provide the name of the county judge in each county where the site is located. Attach an additional sheet if more than one county.

Prefix (Mr., Ms., Miss): Click here to enter text.

First and Last Name: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text.

Name of County: Click here to enter text.

# SECTION 11. LAND APPLICATION INFORMATION

1. Provide the anticipated date (MM/DD/YY) of the first application of sludge after issuance or re-issuance of the permit. NOTE: This date must be at least 330 days after the date TCEQ receives this application. Click here to enter text.
2. The application area is:

   within the city limit of: Click here to enter text.

   within the extraterritorial jurisdiction of: Click here to enter text.

   outside the extraterritorial jurisdiction of: Click here to enter text.

1. **Types of Sludge**

Identify the types of sludge that will be land applied at this site.

  Wastewater Treatment Plant Sludge

  Water Treatment Plant Sludge

  Domestic Septage

1. **Sources of Sludge**

Provide the sources of generation, any water quality or public water supply permit number issued by TCEQ, and the location of the sources. Complete Table 1 for each source identified below.

| **Facility Name** | **Permit Number** | **Location** |
| --- | --- | --- |
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|  |  |  |

1. **Property Acreage**

Total acreage of the entire property, including the application area and buffer zones: Click here to enter text.

1. **Application Area Acreage**

Total acreage where the sludge may be applied, excluding the buffer zones: Click here to enter text.

# SECTION 12. MISCELLANEOUS INFORMATION

1. Did any person who was formerly employed by the TCEQ represent your company and get paid for service regarding this application?

Yes     No

If yes, provide the name(s) of the former TCEQ employee(s): Click here to enter text.

1. Is the site located on Indian Lands?

Yes     No

1. Is any permanent school fund land affected by this application?

Yes     No

**If yes**, provide the location, forseeable impacts, and effects this application has on the land(s). Click here to enter text.

1. Delinquent Fees and Penalties:

Do you owe fees to the TCEQ? Yes    No

Do you owe any penalties to the TCEQ? Yes    No

If you answered yes to either of the above questions, provide the amount owed, the type of fee or penalty, and an identifying number. Click here to enter text.

# SECTION 13. AFFECTED LANDOWNER INFORMATION

1. Landowner map. Attach a landowner map or drawing. See instructions for information that must be displayed on the map.

Attachment Number: Click here to enter text.

1. Landowner list. Attach a list of the landowners’ names and mailing addresses. The list must be cross-referenced to the letter or number identified on the landowner map.

Attachment Number: Click here to enter text.

1. Landowner list media. Indicate the format of the landowners list.

   Read/Writeable CD

   4 sets of mailing labels

1. Landowner data source. Provide the source of the landowners' names and mailing addresses. Click here to enter text.

# SECTION 14. INSURANCE INFORMATION

This information is not required for an applicant that is a political subdivision (e.g. city, county, state agency, water district, etc.).

1. **Commercial Liability Insurance**

Attach a copy of the certificate of insurance in regard to commercial liability.

Attachment Number: Click here to enter text.

1. **Environmental Impairment Insurance**

Attach a copy of the certificate of insurance in regard to environmental impairment.

Attachment Number: Click here to enter text.

# SECTION 15. MAPS AND ATTACHMENTS

1. **TCEQ Core Data Form**

Complete and submit a TCEQ Core Data Form (TCEQ-10400).

Attachment Number: Click here to enter text.

1. **General Highway (County) Map**

Submit an ORIGINAL General Highway (County) Map. See instructions for information that must be displayed on the map.

Attachment Number: Click here to enter text.

1. **United States Geological Survey (USGS) Topographic Map**

Submit an ORIGINAL United States Geological Survey (USGS) Topographic Map (1:24,000 scale). See instructions for information that must be displayed on the map.

Attachment Number: Click here to enter text.

1. **USDA-NRCS Soil Map**

Submit a legible copy of a USDA-NRCS Soil Map. See instructions for information that must be displayed on the map.

Attachment Number: Click here to enter text.

1. **Federal Emergency Management Agency (FEMA) Map**

Submit a copy of the FEMA map that shows the approximate application area boundaries, the surrounding area within one-quarter mile of the application area, and the appropriate legend.

Attachment Number: Click here to enter text.

1. **Nutrient Management Plan**

Attach a copy of the nutrient management plan that has been prepared by a certified nutrient management specialist, in accordance with the NRCS.

Attachment Number: Click here to enter text.

1. **TCEQ Transporters Registration Approval Documents**

Attach a copy of the TCEQ Transporters Registration approval documents.

Attachment Number: Click here to enter text.

1. **Soil Analysis**

Attach a copy of the soil laboratory analysis for the application area.

Attachment Number: Click here to enter text.

1. **Sludge Analyses**

Attach a sludge laboratory analysis for each source.

Attachment Number: Click here to enter text.

1. **Metal and Nutrient Concentrations (Table 1)**

Use the sludge laboratory analyses to complete Table 1 for each source.

1. **Volume Weighted Averages of Metal and Nutrient Concentrations (Table 2)**

If more than one source of sludge is land applied, complete Table 2.

1. **Agronomic Rate Calculations (Appendix A)**

Determine the agronomic application rate by completing and attaching Appendix A.

1. **Pathogen Reduction Options (Appendix B)**

Identify the pathogen reduction options by completing and attaching Appendix B.

1. **Vector Attraction Reduction Options (Appendix C)**

Identify the vector attraction reduction options by completing and attaching Appendix C.

1. **On-Site Storage (Appendix D)**

If on-site storage will occur at this site, complete and attach Appendix D.

**LABORATORY ACCREDITATION**

All laboratory tests performed must meet the requirements of 30 TAC Chapter 25, *Environmental Testing Laboratory Accreditation and Certification*, unless the laboratory meets 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;
  + located in another state and is accredited or inspected by that state;
  + 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.

**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: Click here to enter text.

Title: Click here to enter text. Sign and date in the box below.

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

# SITE OPERATOR SIGNATURE PAGE

**If co-applicants are necessary, each co-applicant must submit an original, separate signature page.**

Permit Number: Click here to enter text.

Applicant: Click here to enter text.

I understand that I am responsible for operating the site described in this permit application in accordance with the requirements in 30 TAC Chapter 312, the conditions set forth in this application, and any additional conditions as required by the Texas Commission on Environmental Quality.

I certify, under penalty of law, that all information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine, imprisonment for violations, and revocation of this permit.

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory Name: Click here to enter text.

Title: Click here to enter text. Below is a text box that contains a space for a wet ink signature, date and notary public certification.

Signature (use blue ink): Date:

SUBSCRIBED AND SWORN to before me by the said on

this day of , 20

My commission expires on the day of , 20

(Seal) Notary Public

County, Texas

# LANDOWNER SIGNATURE PAGE

**Required if the landowner is not the applicant or co-applicant. Each landowner must submit an original, separate signature page.**

Permit Number: Click here to enter text.

Applicant: Click here to enter text.

I certify, as the owner of the land described in this permit application, that I have all rights and covenants to authorize the applicant to use this site for the land application of (*identify the type(s) of sludge*). I understand that 30 TAC Chapter 312 requires me to make a reasonable effort to see that the applicant complies with the requirements in 30 TAC Chapter 312, the conditions set forth in this application, and any additional conditions as required by the TCEQ. I also certify, under penalty of law, that all information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine, imprisonment for violations, and revocation of the permit.

Signatory Name: Click here to enter text.

Title: Click here to enter text.

Below is a text box that contains a space for a wet ink signature, date and notary public certification.

Signature (use blue ink): Date:

SUBSCRIBED AND SWORN to before me by the said on

this day of , 20

My commission expires on the day of , 20

(Seal) Notary Public

County, Texas

Attachment 1

Individual Information

Complete this attachment if the applicant or co-applicant is an individual. Make additional copies of this attachment if both are individuals.

Prefix (Mr., Ms., Miss): Click here to enter text.

Full Legal Name, including middle name: Click here to enter text.

Driver's License or State Identification Number: Click here to enter text.

State that Issued the License or Identification Number: Click here to enter text.

Date of Birth: Click here to enter text.

Mailing Address: Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail Address: Click here to enter text.

For TCEQ Use Only

Customer Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Regulated Entity Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Permit Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TECHNICAL REPORT

FOR BENEFICIAL LAND USE OF SEWAGE SLUDGE

# SECTION 1. SITE HISTORY

Has sewage sludge or septage been previously land applied at this site?

   Yes    No

If Yes, provide a short narrative on the agricultural practices previously used at the site. The narrative must discuss the following elements:

* crops grown;
* tillage practices;
* previous sludge application amount (dry tons) and rates (dry tons per acre); and
* previous septage application amount (gallons) and rates (gallons per acre).

|  |
| --- |
| Click here to enter text. |

# SECTION 2. PROPOSED LAND APPLICATION ACTIVITIES

Provide a short narrative on the proposed land application activities at the site. The narrative must discuss the following elements:

* crops grown;
* planting dates;
* times per year applied;
* frequency of application; and
* tillage practices.

|  |
| --- |
| Click here to enter text. |

# SECTION 3. SOIL INFORMATION

1. **Soil Properties**

Complete the table below using the Physical and Chemical Properties and the Engineering Tables found in the USDA Natural Resources Conservation Service (NRCS) soils descriptions.

| **Map Symbol** | **Soil Type** | **Slope** | **pH** | **Depth to Bedrock\***  **(inches)** | **Depth to Groundwater**  **(feet)** | **Permeability**  **(inches/hour)** | **Soil Depth\*\***  **(inches)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
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\* If depth to bedrock is not specified in the soil survey, use the maximum depth shown.

\*\* If soil depth is less than two feet, provide rationale for using these shallow soils. The rationale should include site specific investigation results.

1. **Restrictive Soil Characteristics**

In the table below, identify all soils that have the following restrictive characteristics and the management practices to be used.

* Soils with at least an “occasional flooding” classification may flood between 5 to 50 times in 100 years;
* Soil permeability of >6 inches per hour; and
* Seasonal groundwater or groundwater table below the treatment zone at least:
  + 3 feet for soil with permeability of <2 inches per hour
  + 4 feet for soil with permeability of 2-6 inches per hour.

| **Soil Type** | **Restrictive Characteristic** | **Best Management Practices** |
| --- | --- | --- |
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# SECTION 4. WELL INFORMATION

In the table below, provide information about each well located on-site and within 500 feet of the application area. Water well information is available from the Texas Water Development Board, 512-936-0837. Oil and gas well information is available from the Texas Railroad Commission, 512-463-6851.

| **Well Type**  **(Water Well, Oil Well, Injection Well)** | **Producing**  **or**  **Non-Producing** | **Open, Cased, or Capped\*** | **Protective Measures\*\*** |
| --- | --- | --- | --- |
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\* Casing, capping, and plugging rules are located in 16 TAC Chapter 76.

\*\* The following protective measures are required prior to initial sludge/septage application:

* If the well is producing and cased, no action is needed.
* If the well is producing and not cased, the well must be cased or describe other protective measures.
* If the well is non-producing and cased, the well must be plugged or capped.
* If the well is non-producing and not cased, the well must be plugged.

# SECTION 5. HYDROLOGIC CHARACTERISTICS

Submit information listed below, or equivalent documentation, regarding the hydrologic characteristics of the surface and groundwater at the application site and within one-quarter mile of the site.

* Aquifer identification per Texas Water Development Board Report 345
* Location of the area according to the Geologic Atlas of Texas, published by the University of Texas, Bureau of Economic Geology.
* Any feature that exhibits a direct hydrologic connection between surface and subsurface water.
* List periods of seasonal perched and/or high water table, if any.

Attachment Number: Click here to enter text.

**Table 1**

Pollutant and Nutrient Concentrations in

Sewage Sludge

Complete this table **for each source** of sludge.

Facility Name: Click here to enter text.

TCEQ Authorization Number: Click here to enter text.

**POLLUTANT/METAL ANALYSIS**

| **Pollutant** | **Maximum Concentration, mg/kg**  **dry weight** | **Test Results, mg/kg**  **dry weight** | **Sample Date** | **Detection Level for Analysis** | **Sample Method** |
| --- | --- | --- | --- | --- | --- |
| Arsenic (As) | 75 |  |  |  |  |
| Cadmium (Cd) | 85 |  |  |  |  |
| Chromium (Cr) | 3000 |  |  |  |  |
| Copper (Cu) | 4300 |  |  |  |  |
| Lead (Pb) | 840 |  |  |  |  |
| Mercury (Hg) | 57 |  |  |  |  |
| Molybdenum (Mo) | 75 |  |  |  |  |
| Nickel (Ni) | 420 |  |  |  |  |
| Selenium (Se) | 100 |  |  |  |  |
| Zinc (Zn) | 7500 |  |  |  |  |
| PCB (ppm) | 50.0 ppm |  |  |  |  |

**NUTRIENT ANALYSIS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nutrient** | **Concentration (%)** | **Sample Date** | **Detection Level for Analysis** | **Sample Method** |
| Total Kjeldahl Nitrogen (TKN) |  |  |  |  |
| Ammonium Nitrogen (NH4-N) |  |  |  |  |
| Nitrate Nitrogen (NO3-N) |  |  |  |  |
| Total Phosphorus (P) |  |  |  |  |
| Total Potassium (K) |  |  |  |  |

TABLE 2

Volume Weighted Average (Mean) of Nutrient and Pollutant Concentration

Complete this table if more than one source is land applied at the site.

**Directions:**

1. For each pollutant, multiply the Pollutant Concentrations from Table 1 by the estimated number of dry tons you expect to apply from each facility.
2. Sum the individual columns. Enter results in last row of the table.
3. Divide the sum of each column by the dry tons sum (bottom of second column). Enter number in the appropriate Volume Weighted Average Box (row below table).
4. Use these final results to complete Appendix A, Step 1.

| TCEQ Auth. Number | Est. Dry Tons\* | As | Cd | Cr | Cu | Pb | Hg | Mo | Ni | Se | Zn | TKN | NH4-N | NO3-N | P | K |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| Sum |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Volume Weighted Average |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\*Total estimated dry tons to be land applied from the source facility.

APPENDIX A

AGRONOMIC RATE CALCULATIONS

**Note: The maximum allowable agronomic rate for land application of wastewater treatment plant sludge is 12 tons/acre/year.**

APPENDIX A, PART 1. SEWAGE SLUDGE APPLICATION RATE

# STEP 1. CALCULATE QUANTITY OF NUTRIENTS AND METALS IN SLUDGE IN LBS/TON

| **Nutrient** | **Concentration (%)\*\*** | **Conversion Factor** | **Pounds per Ton** |
| --- | --- | --- | --- |
| Total Kjeldahl Nitrogen (TKN) |  | x 20 |  |
| Ammonium Nitrogen (NH4-N) |  | x 20 |  |
| Nitrate Nitrogen (NO3-N) |  | x 20 |  |
| Total Phosphorus (P) |  | x 20 |  |
| Total Potassium (K) |  | x 20 |  |

| **Pollutant** | **Test Results, mg/kg**  **dry weight** | **Conversion Factor** | **Pounds per Ton** |
| --- | --- | --- | --- |
| Total Arsenic (As) |  | x 0.002 |  |
| Total Cadmium (Cd) |  | x 0.002 |  |
| Total Chromium (Cr) |  | x 0.002 |  |
| Total Copper (Cu) |  | x 0.002 |  |
| Total Lead (Pb) |  | x 0.002 |  |
| Total Mercury (Hg) |  | x 0.002 |  |
| Total Molybdenum (Mo) |  | x 0.002 |  |
| Total Nickel (Ni) |  | x 0.002 |  |
| Total Selenium (Se) |  | x 0.002 |  |
| Total Zinc (Zn) |  | x 0.002 |  |

\*\*Values from sludge laboratory analysis (dry weight only).

Conversions:

mg/kg ÷ 10,000 = %

ppm = mg/kg

# STEP 2. CROPPING PLAN AND NUTRIENT NEEDS

Warm Season Intended Crop(s): Click here to enter text.

Yield Goal: Click here to enter text. Nitrogen Requirement, in lb/yr: Click here to enter text.

Cool Season Intended Crop(s): Click here to enter text.

Yield Goal: Click here to enter text. Nitrogen Requirement, in lb/yr: Click here to enter text.

Provide the data source for the nitrogen requirements above.

Click here to enter text.

Nitrogen needed by crop:

**2A.** Total Nitrogen Requirement\* Click here to enter text.

**2B.** Nitrogen available in soil\*\* Click here to enter text.

**2C.** Nitrogen amount still needed

Line 2A – Line 2B Click here to enter text.

\*Line 2A = Sum of the nitrogen requirement for the specified yield goals for the warm season crop and cool season crop

\*\*Line 2B = 2\*NO3-N (ppm)(in the 0-6" soil depth) + 6\*NO3- N(ppm)(in the 6-24" soil depth)

# STEP 3. CALCULATE THE PLANT AVAILABLE NITROGEN (PAN) PROVIDED BY THE SLUDGE

Use the TKN, NH4-N, and NO3-N from Step 1.

Organic Nitrogen = TKN – (NH4-N) – (NO3-N) Click here to enter text.

Mineralization Rate (%) \* Click here to enter text.

**3A.** Organic Nitrogen x Mineralization Rate Click here to enter text.

**3B.** Ammonium Nitrogen = (NH4-N) x V Click here to enter text.

V = 0.5 if sludge is left on soil surface

V = 1.0 if sludge is worked into the soil

**3C.** Nitrate Nitrogen (NO3-N) Click here to enter text.

**3D.** Total PAN = (Line 3A + Line3B + Line 3C)= Click here to enter text.

\*Mineralization Rates:

| **Treatment Method** | **Mineralization Rates** |
| --- | --- |
| Unstabilized Primary and Waste Activated Sludge | 40 % |
| Aerobically Digested Sludge | 30 % |
| Anaerobically Digested Sludge | 20 % |
| Composted Sludge | 10 % |

# STEP 4. CALCULATE MAXIMUM SLUDGE APPLICATION RATES BASED ON CROP NITROGEN NEEDS (SARN)

**4A.** Nitrogen amount still needed (lbs/acre/year)

Enter amount from Step 2C. Click here to enter text.

**4B.** Total PAN (lbs/ton)

Enter amount from Step 3D. Click here to enter text.

**4C.** Sludge Application Rate (SARN) (tons/acre/year)

Line 4A ÷ Line 4B Click here to enter text.

# STEP 5. CALCULATE MAXIMUM SLUDGE APPLICATION RATE BASED ON METALS (SARM)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| METAL | A  Cumulative Metal Limits  (lbs/ac) | B  Max Loading Rate (lbs/ac/yr) | C  Metals In Sludge (lbs/ton)  (Step 1) | D  Metals Applied Yearly at SARN (lbs/acre/yr)  (C x SARN) | E  Sludge Applied Yearly at SARM (tons/acre/yr)  (B ÷ C) | F  Max Sludge Loading Rate (tons/acre)  (A ÷ C) |
| Arsenic | 36 | 1.8 |  |  |  |  |
| Cadmium | 35 | 1.7 |  |  |  |  |
| Chromium | 2677 | 134 |  |  |  |  |
| Copper | 1339 | 67 |  |  |  |  |
| Lead | 268 | 13 |  |  |  |  |
| Mercury | 15 | 0.76 |  |  |  |  |
| Molybdenum | Monitor | Monitor |  |  |  |  |
| Nickel | 375 | 18.7 |  |  |  |  |
| Selenium | 89 | 4.5 |  |  |  |  |
| Zinc | 2500 | 125 |  |  |  |  |
| Other |  |  |  |  |  |  |

**Note:** For each metal, if the value in column B is greater than the value in column D (B>D), the SARN dictates the maximum sludge application rate. Enter N/A in column E. If the value in column B is less than the value in column D (B<D), then the SARM dictates the maximum sludge application rate and the value of E = B ÷ C.

# STEP 6. CALCULATE THE CUMULATIVE LOADING RATE

**6A.** Maximum allowable cumulative sludge loading rate

Lowest value in Step 5, Column F (tons/acre) Click here to enter text.

**6B.** Previous applications of sludge (tons/acre) Click here to enter text.

**6C.** Remaining sludge application rate to reach metal limits

Line 6A – Line 6B (tons/acre) Click here to enter text.

**6D.** Maximum allowable sludge application rate

Lowest value of Step 4C and Step 5, Column E (tons/acre/year)

Click here to enter text.

**6E.** Years remaining to reach the maximum cumulative loading

Line 6C ÷ Line 6D (years) Click here to enter text.

APPENDIX A, PART 2: SEPTAGE APPLICATION RATE

Complete Part 2 and 3 if sewage and septage are both applied at the site.

# STEP 1. CROPPING PLAN AND NUTRIENT NEEDS

Warm Season Intended Crop(s): Click here to enter text.

Yield Goal: Click here to enter text. Nitrogen Requirement, in lb/yr: Click here to enter text.

Cool Season Intended Crop(s): Click here to enter text.

Yield Goal: Click here to enter text. Nitrogen Requirement, in lb/yr: Click here to enter text.

Provide the data source for the nitrogen requirements.

Click here to enter text.

Nitrogen needed by crop:

**1A.** Total Nitrogen Requirement\* Click here to enter text.

**1B.** Nitrogen available in soil\*\* Click here to enter text.

**1C.** Nitrogen amount still needed

Line A - Line B Click here to enter text.

\*Line 1A = Sum of the nitrogen requirement for the specified yield goals for the warm season crop and cool season crop

\*\*Line 1B = 2\*NO3-N (ppm)(in the 0-6" soil depth) + 6\*NO3- N(ppm)(in the 6-24" soil depth)

# STEP 2. CALCULATE ANNUAL APPLICATION RATE

The annual application rate is based on the nitrogen needs of the crop. It is calculated using the following equation:

AAR = N ÷ 0.0026

AAR = Annual application rate, in gallons per acre per 365 day period.

N = Nitrogen amount still needed for the crop, in pounds per acre per 365 day period.

**2A.** Enter amount from Step 1C Click here to enter text.

**2B.** Conversion Factor 0.0026

**2C.** Annual Application Rate (gal/acre/yr)

Line 2A ÷ Line 2B Click here to enter text.

APPENDIX A, PART 3: PROPORTIONATE AGRONOMIC RATE

Complete if both sewage and septage are applied in the same year.

**Sewage Sludge:**

**A.** Sewage Sludge Application Rate (tons/acre/year) Click here to enter text.

**B.** Percentage of plant nutrient supplied by sludge

= Click here to enter text. ÷ 100 Click here to enter text.

**C.** Multiple Line A by Line B (tons/acre/year) Click here to enter text.

**Domestic Septage:**

**A.** Sewage Sludge Application Rate (tons/acre/year) Click here to enter text.

**B.** Percentage of plant nutrient supplied by sludge

= Click here to enter text. ÷ 100 Click here to enter text.

**C.** Multiple Line A by Line B (tons/acre/year) Click here to enter text.

APPENDIX B

PATHOGEN REDUCTION REQUIREMENTS

**For each source**, select the pathogen reduction alternative that will be used prior to land application of sewage sludge/septage. Requirements for each alternative can be found in 30 TAC §312.82.

| **TCEQ Permit Number** | **Pathogen Reduction Alternative Used** | **Fecal Coliform Geometric Mean (cfu/gram total solids)\*** | **Fecal Test Date\*** | **Is PSRP Certification Attached?\*\***  **(Yes/No/NA)** |
| --- | --- | --- | --- | --- |
| Example  WQ11280-001 | Option 1: Density of Fecal Coliform | 300,000 cfu/g | 12/2/98 | NA |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |
|  | Choose an item. |  |  |  |

\*Applicable to Option 1 only.

\*\*Applicable to Option 2a – f.

If Other is selected as the Alternative Used, please explain: Click here to enter text.

APPENDIX C

VECTOR ATTRACTION REDUCTION REQUIREMENTS

**For each source**, provide the vector attraction reduction option that will be used prior to or after land application of sewage sludge/septage. Requirements for each alternative can be found in 30 TAC §312.83.

| **TCEQ Permit Number** | **Vector Attraction Reduction Alternative Used\*** | **Monitoring Criteria and results needed for alternative** |
| --- | --- | --- |
| Example  WQ11280-001 | Option 10: Incorporate within 6 hrs | Visual inspection of area after tilling |
| Example  WQ13450-003 | Option 4: SOUR <=1.5 mg 02/hr/g total solids at 20C (<2% solids) | Aerobically digested, 2.0% solids, SOUR=1.3 mg/g |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |
|  | Choose an item. |  |

\*Options 1-8 are sludge treatment alternatives. Options 9-10 are onsite alternatives. Option 12 is for domestic septage only.

APPENDIX D

ON-SITE STORAGE

If on-site storage will occur at the site, this Appendix must be completed in its entirety. On-site storage does not include staging of sludge or septage for up to seven (7) days prior to applying it. On-site storage cannot exceed the 90-day maximum per 30 TAC §312.50 unless properly authorized for each instance. Construction of the storage area cannot begin until written authorization for this action is received from the TCEQ. Materials cannot be treated without proper authorization from the TCEQ.

1. Provide a complete description of operational plans for the temporary storage, including all steps to be taken to control odors, vectors and other nuisance conditions.

Click here to enter text.

1. The location of the temporary storage area(s) must be accurately shown on the USGS topographic map submitted with the application, including all main features of the storage area(s) (e.g. berms, tanks, pads, liners, storm water retention, etc.).
2. Provide a copy of the liner and storage tank certification as per 30 TAC §312.50(a)(4) or 312.50(a)(8).

Attachment Number: Click here to enter text.

1. Describe the proposed spill prevention and cleanup methods.

Click here to enter text.

1. Provide a certification that the berm(s) will hold the required volume(s) without discharging as per 30 TAC §312.50 (a)(7).

Attachment Number: Click here to enter text.

1. Describe the method for stormwater runoff collection and disposal.

Click here to enter text.

1. Describe methods to be used to ensure no loads of sludge remain at the temporary storage site for longer than 90 days, including how exceptions to this restriction will be requested (as provided by 30 TAC §312.50), when needed.

Click here to enter text.

INSTRUCTIONS FOR PERMIT FOR

BENEFICIAL LAND USE OF SEWAGE SLUDGE

# GENERAL INFORMATION

# Purpose of the Application

This form is to be used to:

* Permit a new site for beneficial land use of sewage sludge;
* Submit a Major Amendment to change acreage or to make any other substantive change to a permitted site for beneficial land use of sewage sludge; or
* Renew an existing permitted site for beneficial land use of sewage sludge.

**NOTE:** If the land application site is within or adjacent to a publicly-owned wastewater treatment plant (WWTP) and the site is owned or operated by the WWTP, the WWTP’s existing wastewater discharge permit may be amended to authorize land application of sewage sludge. To amend the wastewater discharge permit, complete and submit this application form and the Domestic Wastewater Permit Application (TCEQ Form 10054).

# Who Should Apply?

This application must be submitted by the site operator. If there is more than one operator, then a co-applicant is required.

# When Is The Application Submitted?

For new and amendment applications, the completed application must be submitted at least 180 days before the proposed date of land application. For renewal applications, the completed application must be submitted at least 180 days before the expiration date of the current registration.

# Where to Send the Application Form

**One original and three copies** of the application, including attachments, must be provided to the address below:

Regular U.S. Mail:

TCEQ

ARP Team, MC 148

PO Box 13087

Austin TX 78711-3087

Express Mail or Hand Delivery:

TCEQ

ARP Team, MC 148

Building F Room 2101

12100 Park 35 Circle

Austin TX 78753

# TCEQ Contact List

Permit Information and Application Forms: 512-239-4671

Technical Information, Sludge Permits Team: 512-239-4671

Environmental Law Division: 512-239-0600

Copies of records on file with the TCEQ may be obtained for a minimal fee from the Records Management Office at 512-239-2900.

# INSTRUCTIONS FOR FILLING OUT THE APPLICATION FORM

# Section 1. Type of Application

Select the appropriate type of application.

For amendment applications, describe the proposed changes.

For existing permits, provide the TCEQ permit number.

# Section 2. Application Fee

The permit application fee varies from $1,000 to $5,000, based on the quantity of sewage sludge to be applied annually under the permit.

| **Quantity of Sludge Applied Annually** | **Application Fee** |
| --- | --- |
| 2,000 dry tons or less | $1,000 |
| 2,001 to 5,000 dry tons | $2,000 |
| 5,001 to 10,000 dry tons | $3,000 |
| 10,001 to 20,000 dry tons | $4,000 |
| 20,001 dry tons or more | $5,000 |

Application fees must be paid by check or money order made payable to the Texas Commission on Environmental Quality. Fees are to be sent under separate cover making reference to the type of application, name of applicant, and permit number of existing permit, and mailed to:

TCEQ

Revenues Section (MC 214)

P.O. Box 13088

Austin, Texas 78711-3088

To verify receipt of payment or any other questions you may have regarding payment of fees to the TCEQ, you may call the Revenues Section, Cashiers Office at (512) 239-0357.

# Section 3. Applicant Information

Provide the full legal name of the site operator.

If the site operator is an existing TCEQ customer, provide the customer number (CN) for the site operator. The Customer Number is available at the following website: <http://www15.tceq.texas.gov/crpub/>. If the site operator is not an existing TCEQ customer, leave blank.

Provide the following contact information for the site operator: mailing address, phone number, fax number, and email address.

# Section 4. Co-Applicant Information

If there is more than one operator, then a co-applicant is required. Provide the full legal name of the co-applicant.

If the co-applicant is an existing TCEQ customer, provide the customer number (CN) for the co-applicant. The Customer Number is available at the following website: <http://www15.tceq.texas.gov/crpub/>. If the co-applicant is not an existing TCEQ customer, leave blank.

Provide the following contact information for the co-applicant: mailing address, phone number, fax number, and email address.

Explain the need for a co-applicant.

# Section 5. Application Contact Information

Provide the name and contact information for the person that TCEQ will contact if additional information is needed about this application. Provide one contact for the operator and one contact for the landowner.

# Section 6. Permit Contact Information

Provide the name and contact information for two individuals that TCEQ can contact if additional information is needed during the term of the permit.

# Section 7. Billing Contact Information

Provide the name and contact information for the person that TCEQ can contact regarding the annual fee invoices.

# Section 8. Reporting Contact Information

Provide the name and contact information for the person that TCEQ can contact regarding the annual sludge reports.

# Section 9. Notice Information

1. **Individual publishing the notices**

Provide the name, company name, mailing address, telephone number and fax number of the person that will publish the public notices required during the processing of the application. Only one name can be provided. This individual will be contacted to publish the required public notices in a newspaper of the largest general circulation in the county where the facility is/will be located. This person must be available during the application processing since the first public notice. The “Notice of Receipt of Application and Intent to Obtain a Water Quality Permit” must be published within 30 days of the application being declared Administratively Complete.

1. **Method of Receiving Notice Package**

Provide the method of receiving the required public notice information. When the application is declared Administratively Complete, the notice package will be sent via the method selected. The notice package includes the TCEQ declaration of completeness, a notice ready for publication, instructions for publishing the notice, a publication affidavit, and a public notice verification form.

1. **Contact Person in the Notice**

Provide the person’s name, company name, mailing address, telephone number and fax number of the one individual that will be identified as the notice contact in the two public notices that are published as part of the permitting process. This individual may be contacted by the public to answer questions about all aspects of the permit application.

1. **Public Viewing Location**

Provide the name and physical address for the public place where the complete application, draft permit, and Technical Summary/Fact Sheet will be made available for viewing and copying by the general public. Please verify with the proper authority they will make the application available for public viewing and copying. The address must be a physical address. Post office box addresses are not acceptable. The public place must be located within the county in which the facility is/will be located. If the facility is located in more than one county, a public viewing place for each county must be provided.

1. **Bilingual Notice Requirement**

Bilingual notice may be required for new, major amendment, and renewal applications if an elementary school or middle school nearest to the facility is required to make a bilingual education program available to qualifying students.

The applicant is required to call the bilingual/ESL coordinator at the nearest elementary and middle schools to obtain answers to questions 1. – 4. These questions will determine if an alternative language notice is required.

If it is determined that a bilingual notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language.

# Section 10. Regulated Entity (Site) Information

1. Provide the name of the site as known by the public in the area where the site is located.
2. If the site is currently regulated by TCEQ, provide the regulated entity reference number (RN) for the site. The RN is available at the following website: <http://www15.tceq.texas.gov/crpub/>. If the site is not currently regulated by TCEQ, leave blank.
3. If the location in the existing permit is not correct or if this is a new site, provide the physical address of the site. If a physical address is not available, provide a location description.
4. Provide the county in which the site is located.
5. Provide the latitude and longitude for the site.
6. Provide the name and contact information for the landowner of the application site.
7. Provide the name and contact information for the county judge in each county where the site is located. Attach an additional sheet if the site is located in more than one county.

# Section 11. Land Application Information

If the land application site is within or adjacent to a publicly-owned wastewater treatment plant (WWTP) and the site is owned or operated by the WWTP, the WWTP’s existing wastewater discharge permit may be amended to authorize land application of sewage sludge. To amend the wastewater discharge permit, complete and submit this application form and the Domestic Wastewater Permit Application (TCEQ Form 10054).

1. Provide the anticipated date that you plan to start sludge applications on this site. This date must be at least 330 days from the date TCEQ receives this application form.
2. Indicate by a checkmark if the beneficial land use area is within the city limits, within the extraterritorial jurisdiction, or outside the extraterritorial jurisdiction of a city. Provide the city or municipality name in the space provided.
3. Identify the types of sludge that will be land applied at this site.
4. For each source, provide the facility name, TCEQ authorization number, and the location. Add additional rows to the table, if necessary.
5. Provide the total acreage of the property where the application site is located. Include the application area and the buffer zones.
6. Provide the total acreage where sludge may be applied. Do not include buffer zones.

NOTE: A minimum buffer of 500 feet is required for water wells and surface water when land application of Class B Sewage Sludge occurs in a county that borders the Gulf of Mexico (Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kenedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy Counties).

# Section 12. Miscellaneous Information

1. Provide the name of each person that was previously employed by TCEQ and who was paid for services regarding this application.
2. Identify if the application site is located on Indian lands. If the answer is yes, TCEQ does not have jurisdiction to process this application. Do not send this application to TCEQ. Contact the Sludge Permits Team at 512-239-4671.
3. Identify if any permanent school fund land is affected by this application. If yes, provide the location and potential impacts on the school fund land.
4. Indicate if the site operator or co-applicant(s) owe fees or penalties to TCEQ. If yes, provide the amount owed, the type of fee or penalty, and the account number for fees or the TCEQ Docket number for penalties.

The following TCEQ website will help you determine if you owe any fees or penalties to the TCEQ and how to make a payment: <https://www.tceq.texas.gov/agency/fees/delin/index.html>. For questions about delinquent fees and penalties, contact the Financial Administration Division, Revenue Section, at 512-239-0354.

**NOTE: TCEQ will not declare any application administratively complete or issue a permit if the applicant or co-applicant is delinquent on a fee or penalty.**

# Section 13. Affected Landowner Information

1. Attach a landowner map or drawing that includes a scale, the applicant’s property boundaries, the application area boundaries, the approximate property boundaries of all landowners located within 1/4 mile of the property boundaries. Assign a letter or number to each landowner.
2. Attach a list of landowners that live on land within 1/4 mile of the property boundaries. The list must include the landowner’s name and address, and include a cross-reference to the letter or number identified on the landowner map. The applicant may choose to attach a list of all landowners within 1/4 mile of the property boundary, regardless of whether the landowner lives on the land.
3. Identify the format of the landowners list.
4. Provide the source of the landowner’s names and mailing addresses. Sources may include City or County Tax Records.

# Section 14. Insurance Information

**This information is not required for an applicant that is a political subdivision (e.g., city, county, state agency, water district, etc.).**

Note: The insurance policies required by this section must be maintained for the duration of the permit which is normally issued for a term of five years.

1. **Commercial Liability Insurance**

Attach a copy of the certificate of insurance in regard to commercial liability, reflecting total coverage of not less than $3 million per occurrence with an annual aggregate of not less than $3 million, exclusive of legal defense costs. The certificate must be worded identically to the wording specified in 30 TAC §37.9145 (relating to Certificate of Insurance for Commercial Liability) or an endorsement worded identically to the wording specified in 30 TAC §37.9150 (relating to Endorsement for Commercial Liability). The certificate of insurance must be issued by an insurance company authorized to transact business in the State of Texas and that has a rating of A- or better by A.M. Best Company.

1. **Environmental Impairment Insurance**

Attach a copy of the certificate of insurance in regard to environmental impairment, reflecting total coverage of not less than $3 million per occurrence with a policy limit of not less than $3 million, exclusive of legal defense costs. The certificate must be worded identically to the wording specified in 30 TAC §37.9155 (relating to Certificate of Insurance for Environmental Impairment). The certificate of insurance must be issued by an insurance company authorized to transact business in the State of Texas and that has a rating of A- or better by A.M. Best Company.

# Section 15. Maps and Attachments

1. Complete and submit the TCEQ Core Data Form (TCEQ-10400).
2. Submit an original General Highway (County) Map showing all boundaries of the site area and all areas within 1000 feet of the area boundaries. These can be ordered from the Texas Department of Transportation Map Sales from the following web site: <http://www.txdot.gov/travel/county_grid_search.htm>
3. Submit a full-sized USGS topographic map (1:24,000 scale). These are available by contacting the Texas Natural Resource Information System at 512-463-8337. The map must show:

* the boundaries of the property(s) being permitted;
* the boundaries of the application area within the property boundaries;
* all areas within ¼ mile of the site (if the site is on the border of the USGS map, the adjoining map is also required); and
* the location of all wells, springs, public water supply intakes, water treatment plants, potable water storage facilities, and wastewater treatment plants on-site and within ¼ mile of the application area (including off-site).

1. Submit a legible copy of a USDA Natural Resources Conservation Service (NRCS) Soil Map that shows the approximate application area boundaries, the soil legend, necessary interpretative information, and the location of each grab sample of the composite soil sample(s) taken for analyses. If the specific county is not mapped, have a soil scientist identify the soils.
2. Submit a copy of the Federal Emergency Management Agency (FEMA) Map that shows the approximate application area boundaries, the surrounding area within ¼ mile of the property boundaries, and the appropriate legend.
3. Submit a copy of the nutrient management plan that has been prepared by a certified nutrient management specialist, in accordance with the practice standards of the USDA-NRCS.
4. Submit a copy of the TCEQ transporters registration approval documents.
5. Attach the soil laboratory analysis for the application area. Additional information about collecting and analyzing the soil samples is available at the end of these instructions.
6. Attach a sludge laboratory analysis for each source. Additional information about sludge testing is available at the end of these instructions.
7. Metal and Nutrient Concentrations (Table 1). Use the sludge laboratory analyses to complete Table 1 for each source.
8. Volume Weighted Averages of Metal and Nutrient Concentrations (Table 2). If more than one source of sludge is land applied, complete Table 2.
9. Agronomic Rate Calculations (Appendix A). Determine the agronomic application rate by completing and attaching Appendix A.
10. Pathogen Reduction Requirements (Appendix B). Identify the pathogen reduction alternative for each source by completing and attaching Appendix B.
11. Vector Attraction Reduction Requirements (Appendix C). Identify the vector attraction reduction alternative for each source by completing and attaching Appendix C.
12. On-Site Storage (Appendix D). If on-site storage will occur at the site, complete and attach Appendix D.

# Signature Page

A separate signature page must be provided for the site operator, each co-applicant, and the landowner of the application site (if the landowner is different from the site operator and co-applicant). The signature page must bear an original signature and the seal of a notary public. The date signed by the applicant must be the same as the date notarized. The signature page will not be acceptable if the dates are different.

In accordance with 30 Texas Administrative Code §305.44 relating to 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 sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

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 federal agency includes 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 (e.g., regional administrator of the EPA).

# SOIL TESTING INFORMATION

Soil samples shall be taken prior to any application of commercial fertilizer. Do not use a galvanized container as this could give a false reading on zinc. Samples will need to be taken within the same 45 day time-frame each year, or by an approved sampling plan and analyzed within 30 days of sample collection. The initial soil sample for application approval may be taken whenever necessary.

Obtain one composite sample for each soil depth per 80 acres and per uniform soil type (soils with the same characteristics and texture) within the 80 acres, or per approved soil sampling plan. Composite samples shall be comprised of 10 - 15 random sample cores taken from each of the following soil depth zones: 0-6 inches and 6-24 inches.

Soil samples shall be submitted to a soil testing laboratory along with a previous crop history of the site, intended crop growth and yield goal. Soil reports shall include fertilizer recommendations for the crop yield goal. Samples shall be analyzed for the parameters below:

| **Parameter (7)** | **0- 6 "** | **6 -24"** |
| --- | --- | --- |
| Nitrate Nitrogen (NO3-N, mg/kg) (1) | x | x |
| Ammonium Nitrogen (NH4-N, mg/kg) (1) | x | x |
| Total Kjeldahl Nitrogen (TKN, mg/kg) (2) | x | x |
| Phosphorus (plant available, mg/kg) (3) | x | x |
| Potassium (plant available, mg/kg) (3) | x | x |
| Sodium (plant available, mg/kg) (3) | x | x |
| Magnesium (plant available, mg/kg) (3) | x | x |
| Calcium (plant available, mg/kg) (3) | x | x |
| Electrical Conductivity (4) | x | x |
| Soil Water pH (S.U.) (5) | x | x |
| Total Arsenic (mg/kg) (6) | x | N/A |
| Total Cadmium (mg/kg) (6) | x | N/A |
| Total Chromium (mg/kg) (6) | x | N/A |
| Total Copper (mg/kg) (6) | x | N/A |
| Total Lead (mg/kg) (6) | x | N/A |
| Total Mercury (mg/kg) (6) | x | N/A |
| Total Molybdenum (mg/kg) (6) | x | N/A |
| Total Nickel (mg/kg) (6) | x | N/A |
| Total Selenium (mg/kg) (6) | x | N/A |
| Total Zinc (mg/kg) (6) | x | N/A |

* 1. Determined in a 1 N KCl soil extract (<http://soiltesting.tamu.edu/webpages/swftlmethods1209.html>).
  2. Determined by Kjeldahl digestion or an equivalent accepted procedure. Methods that rely on Mercury as a catalyst are not acceptable.
  3. Mehlich III extraction (yields plant-available concentrations) with inductively coupled plasma.
  4. Electrical Conductivity (EC) - determine from extract of 2:1 (volume/volume) water/soil mixture and expressed in dS/m (same as mmho/cm).
  5. Soil pH must be analyzed by the electrometric method in Test Methods for Evaluating Solid Waste, EPA SW-846, 40 CFR 260.11; method 9045C - determine from extract of 2:1 (volume/volume) water/soil mixture.
  6. Analysis for metals in soil must be performed according to methods outlined in Test Methods for Evaluating Solid Waste, EPA SW-846; method 3050.
  7. All parameters must be analyzed on a dry weight basis, except Soil Water pH and Electrical Conductivity.

Please be advised that the maximum acceptable soil concentrations of metals are listed below. These rates are based on the maximum cumulative loading rates found in 30 TAC §312.43 Table 2- Cumulative Metal Loading Rate.

|  |  |
| --- | --- |
| **Metal** | **Soil Concentration Limit (mg/kg)** |
|
| Total Arsenic | 20.5 |
| Total Cadmium | 19.5 |
| Total Chromium | 1500 |
| Total Copper | 750 |
| Total Lead | 150 |
| Total Mercury | 8.5 |
| Total Molybdenum | Monitor |
| Total Nickel | 210 |
| Total Selenium | 50 |
| Total Zinc | 1,400 |

# SLUDGE TESTING INFORMATION

Testing Parameters (dry weight basis) for

Municipal Wastewater Sludge and Water Treatment Plant Sludge

| **Nutrients (%)** | **Metals (mg/kg)** | **Other** |
| --- | --- | --- |
| Total Kjeldahl Nitrogen  Ammonium-Nitrogen  Nitrate-Nitrogen  Total Phosphorus  Total Potassium | Total Arsenic  Total Cadmium  Total Chromium  Total Copper  Total Lead  Total Mercury  Total Molybdenum  Total Nickel  Total Selenium  Total Zinc | Total PCBs |

* 1. If accepting sludge from multiple sources,
     + 1. perform a new sludge analysis on the mixed sludge if blended before land application, or
       2. use Table 2 of the application form to determine the volume weighted average (mass balance) which will accurately reflect the amount of metals contributed by each facility.

1. The metal and nutrient tests shall be used to calculate the Maximum Sludge Application Rate and Site Life in Appendix A of the application form. These tests and calculations will also be required in an annual report for the permitted site.
2. Copies of all laboratory test data with Quality Control (QA/QC) and Chain of Custody sheets must be kept on file at the site operator’s place of business for at least five (5) years and can be requested by TCEQ at any time.
3. Include the most recent full Toxicity Characteristic Leaching Procedure (TCLP) analysis for each wastewater treatment plant source.

**Maximum Metal Loadings & Concentrations**

If background soil concentrations exceed the values listed below, then land application is only possible if sludge concentrations are below the concentrations found in Table 3 of 30 TAC §312.43(b)(3).

If the concentration of any metal in the sewage sludge exceeds the metal ceiling concentration, then the land application of that sludge is prohibited.

| **Pollutant** | **Sludge Cumulative Loading**  **(lbs/acre)** | **Table 3**  **§312.43(b)(3)**  **(mg/kg)** | **Sludge Metal Ceiling Concentration**  **(mg/kg)** |
| --- | --- | --- | --- |
| Arsenic | 36 | 41 | 75 |
| Cadmium | 35 | 39 | 85 |
| Chromium | 2,677 | 1,200 | 3,000 |
| Copper | 1,339 | 1,500 | 4,300 |
| Lead | 268 | 300 | 840 |
| Mercury | 15 | 17 | 57 |
| Molybdenum | Monitor | Monitor | 75 |
| Nickel | 375 | 420 | 420 |
| Selenium | 89 | 36 | 100 |
| Zinc | 2,500 | 2,800 | 7,500 |