**2024 SEWER PROJECT TECHNICAL APPLICATION**

Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Applicant: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contact Person: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Engineer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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E-mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Type: 🞏Treatment Plant Capacity 🞏 Infiltration/Inflow 🞏Lift Station Capacity

🞏 Failing Septic Tanks 🞏 Aging Equipment 🞏 Line Extension

🞏 Quality and Operations

Complete the following information for existing and under-construction facilities which relate to the proposed project for MAY 2022 - APRIL 2023.

This technical application should be sealed by a professional engineer, licensed in Tennessee.

1. **Provide a brief project description, including scope, purpose & need, and condition of existing facilities. This is required even if PER is included:**
2. **Description of project location:**
   1. Attachment A: Project Map
3. **If this is a wastewater treatment project? Has a preliminary project discussion been held with TDEC?** (Please refer to Chapter 1 of the Design Criteria for Review of Construction Plans and Documents for more information.)
4. **Detailed project cost including proposed funding sources. For rehab projects, laterals up to the property line must be included.:**
5. **Project Schedule:**
6. **Measurement\*:**
   1. ADDWF=Average of lowest 7 contiguous days average daily flow: MGD
   2. ADF= Average Daily influent Flow: MGD
   3. ATF= Annual Total influent Flow: MGY
   4. Annual I/I = ((ADF-ADDWF)\*365/ATF)\*100: %
   5. NPDES or SOP Permitted Volumetric Load: MGD
   6. Number of Sanitary Sewer Overflows + Releases\*\*:Dry \_\_\_\_\_\_\_\_\_Wet\_\_\_\_\_\_\_\_\_\_
7. **Mapping**:
   1. Is current sewer system map up to date? 🞏Yes 🞏No
   2. Date of last revision:
   3. Does the map include a strategic numbering system for lines and/or manholes? 🞏Yes 🞏No If yes, ensure numbering system is shown on the PDF of the map.
8. **Planning/Repair**: Provide a brief description of selected items.
   1. Does the utility:
      1. Locate I/I and Repair lines using a systemized method: 🞏Yes 🞏No

Explain method:

* + 1. Have permanent metering devices throughout the system: 🞏Yes 🞏No

AND/OR

Track pump run times to determine effect of storm flow: 🞏Yes 🞏No

* + 1. Install/Utilize software management to collect and analyze usage in the system: 🞏Yes 🞏No

Name of software:

Explanation of how software is used:

* 1. Will the proposed project:
     1. Locate I/I and Repair lines using a systemized method: 🞏Yes 🞏No

Explain method:

* + 1. Install permanent metering devices throughout the system: 🞏Yes 🞏No

Provide a map of the proposed locations and meter types.

AND/OR

Track pump run times to determine effect of storm flow: 🞏Yes 🞏No

* + 1. Install/Utilize software management to collect and analyze usage in the system: 🞏Yes 🞏No

Name of software:

Explanation of how software will be used:

c. Attachment B: Map of existing or proposed meters and/or pump run time data (if applicable)

\* For applicants without a treatment plant, report I/I values for receiving plant

\*\* Dry = May-Oct 2022, Wet = Nov 2021-Apr 2022

**Problem being addressed (complete only sections a-g that apply to the proposed project):**

1. **Treatment Plant Capacity**

Existing Proposed

Permitted Design Capacity (MGD): \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hydraulic Capacity (MGD): \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Organic Loading (lbs/day): \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Average Daily Loading (MGD): \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Peak Daily Loading (MGD): \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Existing Average Daily Loading/ Existing Hydraulic Capacity (%):

1. **Infiltration/Inflow (I/I)**

Annual I/I = ((ADF-ADDWF)\*365/ATF)\*100 (%):

Annual I/I calculated in project location, if measured (%):

1. **Lift Station Capacity**

Average daily pump station run time (min):

1. **Failing Septic Tanks**

Number of Septic Tanks in Project Area:

Number of Failing Septic Tanks in Project Area:

Number of Failing Septic Tanks/ Number of Septic Tanks:

1. **Aging Equipment**

Age of equipment as of November 1, 2023:

Life expectancy of original equipment, must be longer than 10 years:

(Age of equipment/ Life expectancy)\*100:

Provide information, if available, for the following:

* Maintenance history for existing equipment being proposed for replacement
* Specific current condition of the existing equipment being proposed for replacement
* Estimated useful life remaining in existing equipment (provide any documentation related to when equipment was originally installed, if available)
* Information on any “environmental” conditions that might have caused acceleration of the deterioration of the equipment being replaced
* Documentation available to ensure that the life expectancy of proposed replacement equipment will be longer than 10 years (such as documentation from manufacturer or projected depreciation schedule)

1. **Line Extension**

Line location, size and material:

Customers served:

1. **Quality and Operations**

Check the categories that best describe your project. List the priority level and clearly describe how the proposed project will improve the conditions of the selected items:

Urgent Priority: Problems that are posing health risks now

High Priority: Problems resulting in possible health risk if not corrected

Medium Priority: Problems not posing a health risk but are improvements to the system

Low Priority: Regular maintenance items or issues not affecting water quality

* Discharge of a pollutant of concern for which the receiving stream is impaired
* Immediate Threat - Existing facilities are experiencing operational problems due to deterioration of facilities – such problems have resulted degradation of water quality such that the health and wellbeing of customers are affected (Requires detailed and/or appropriate documentation demonstrating an immediate threat.)
* Addition of nutrient removal
* Existing facilities are experiencing operational problems due to deterioration of facilities – such problems have the potential to result in degradation of water quality such that the health and wellbeing of water customers may be affected. (Requires detailed documentation of problem.)
* Addition of redundancy
* Addition of standby power
* Upgrading of older facilities not posing a current risk
* Addition of facilities not affecting stream quality – meets anti-degradation requirements
* Regular maintenance items – replacement of equipment
* Other

Technical Application Checklist:

* Technical application using format above, sealed by a professional engineer licensed in Tennessee
* Attachment A: Project Map
* Attachment B: Map of existing or proposed meters and/or pump run time data (if applicable)