



**Fiscal Sustainability Plan (FSP)**  
**Best Management Practices**

## Overview

On June 10, 2014, President Obama signed into law the Water Resources Reform and Development Act of 2014 (WRRDA). Among its provisions are amendments to Titles I, II, V, and VI of the Federal Water Pollution Control Act (FWPCA). On January 6, 2015, the Environmental Protection Agency (EPA) issued an interpretive guidance for those provisions affecting the Clean Water State Revolving Fund (CWSRF) program.

This guidance pertains to the requirement of the preparation and/or certification of a Fiscal Sustainability Plan (FSP) as required of Clean Water State Revolving Fund financial assistance recipients when that assistance is in the form of a loan. FSPs are NOT required of assistance recipients that utilize municipal bonds.

Fiscal Sustainability Plans are essentially asset management plans and may cover a single project or the whole wastewater system. Single project approaches should be applied in such a way that a comprehensive and cohesive plan that covers the entire system eventually results as the utility continues to repair, replace, and expand the system.

Asset Management can be defined as, “maintaining a desired level of service for what you want your assets to provide at the lowest life cycle cost.” Lowest life cycle cost refers to the best appropriate cost for rehabilitation, repairing, or replacing an asset.<sup>1</sup>

This guidance is intended to outline Best Management Practices, or BMPs, for asset management planning and is based on two separate resources:

*Managing Small Domestic Wastewater Systems (RG-530)* – Texas Commission on Environmental Quality (TCEQ), <https://www.tceq.texas.gov/assistance/water/wastewater/managing-small-domestic-wastewater-systems-rg-530>

*Asset Management: A Best Practices Guide (EPA 816-F-08-014)* – United States Environmental Protection Agency (EPA), <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P1000LP0.txt>

<sup>1</sup> *Asset Management: A Best Practices Guide*, EPA 816-F-08-014, United States Environmental Protection Agency

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## Framework

Asset management can help you get the most out of the assets that make up your system by prioritizing repairs and budgeting for equipment replacement. It can also help you maintain the financial capacity to make scheduled repairs and planned replacement of assets before there is a crisis.<sup>2</sup> The following four steps will lead you to develop a plan of system sustainability. These steps, and more, can be found in the document mentioned above, TCEQ RG-530. Each step is described in more detail in the following pages. For assistance with creating a plan, please contact the Texas Commission on Environmental Quality (TCEQ) Small Business and Governmental Assistance Section at (800) 447-2827 or <https://www.tceq.texas.gov/assistance>.

### **Step 1. Take an inventory of your system and prioritize your assets.**

Document what assets you have and prioritize each asset based on how critical it is to your system operations. This will help you make informed decisions to ensure that you have funds available for the maintenance, repair, or replacement of the vital parts of the system.

### **Step 2. Develop a comprehensive plan for managing your assets.**

Based on your prioritization in Step 1, identify the maintenance, repairs, and replacements you expect to make in the next five years. Estimate how much money your system needs to set aside or reserve for these expenses.

### **Step 3. Develop a budget for managing your assets.**

Based on your comprehensive plan from Step 2, identify your expected revenues for the next five years—and compare them to your expected expenses. This may involve a rate study.

### **Step 4. Develop your asset-management plan.**

Once you complete the initial three steps of your asset-management plan, you need to implement it. Work with your management team—including council and board members, if appropriate—to complete your identified repairs and maintenance and to make sure that you have the technical and financial means to ensure reliable service.

<sup>2</sup> *Managing Small Domestic Wastewater Systems*, TCEQ RG-530

## ***Take an inventory of your system and prioritize your assets.***

Developing an accurate inventory of your system's assets is important to their overall management, as all other steps will refer to the data gathered during this step. It will also help you to establish the relative importance or criticality of the equipment and components of your system. The TCEQ guide RG-530 includes worksheets for system inventory and prioritization that will assist in the creation of a comprehensive inventory of your system and to prioritize the assets.

### **1. Identify your assets**

List each of your utility's assets, including emergency generators, electrical systems, sewer pumps, blowers, aerators, meters, buildings, vehicles, structures, and all other physical assets and their year of installation. Be as specific as possible by including the location, manufacturer, material composition, horsepower (hp), gallon-per-minute (GPM) capacity, or other identifying characteristics for each asset, or refer to your operations and maintenance manual.

### **2. Describe the redundancy**

Briefly describe the redundancy of each of the system's assets. Are there backups? Are there different assets that can do the same job? Keep in mind: some redundancy may be required by TCEQ rule.

### **3. Document the expected useful life**

Use the manufacturer's recommendations, if available, or the information in Table 1 of TCEQ guide RG-530, Estimated Useful Life Span for Standard Equipment, to enter the expected useful life for each asset. Table 1 in the guide provides the estimated useful life span for many standard pieces of equipment, assuming proper maintenance has been conducted. For new equipment, use the higher end of the expected useful life.

Keep in mind the current condition of each asset as well as historical routine maintenance, repairs, and rehabilitation. Focus on conditions that may affect the asset's useful life (e.g., rust or broken parts). If your asset is in poor condition, has not been maintained according to the manufacturer's recommendations, or operates under challenging circumstances (varying wastewater concentrations, extreme climate changes, proximity to coastal areas, etc.), then the expected useful life is likely to be on the lower end of the range. If the asset is in good condition and has been properly maintained according to the manufacturer's recommendations, use the higher end of the expected useful life. Choosing the lower end of the useful-life range will produce a more conservative estimate, which will help to ensure that you are prepared to replace the asset in a worst-case scenario.

### **4. Record the age**

For each asset, document how long it has been in use. If an asset has been previously used by another system, you should list the total age, not just the length of time your system has used it.

**5. Calculate the remaining useful life**

For each asset, calculate the remaining useful life by subtracting its age from its useful life.

**6. Calculate the expected replacement year**

For each asset, calculate the expected replacement year by adding the remaining useful life to the current year.

**7. Calculate the cost to replace**

You can estimate the cost of buying and installing a new piece of equipment, based on your knowledge from completing similar projects, on information from a neighboring system that has done similar work, or on bids from vendors.

When estimating the cost of replacing each asset, take into account the expected replacement year, because inflation can affect replacement costs. It is a challenge to place a specific value on future costs because we cannot predict changes in the economy. For assets that have a remaining useful life of more than 10 years, the utility should consider the average inflation rate over a 10-year period, or set aside some reserve funding to account for inflation.

Generally, the best way to obtain an estimate of the inflation cost per year is to use a federal, state, or locally established inflation rate, if available. Local economic-development corporations, along with local universities, are a good source for local inflation rates. The Texas comptroller's website at [www.window.texas.gov](http://www.window.texas.gov) has information on inflation rates, as does the U.S. Bureau of Labor Statistics, on its Consumer Price Index Web page at [www.bls.gov/cpi](http://www.bls.gov/cpi).

If you are unable to obtain this information from your local economic-development corporation or those government sources, we suggest you use an average inflation rate of 5 percent per year.

Costs for larger asset improvement projects are hard to verify due to the complexity of the project and you will most likely need assistance from a consultant.

**8. Set the priority level**

For each asset, consider how critical it is to the operation of your system, its remaining useful life, the availability of other assets to replace it or be used as a backup for it, its maintenance history, and any other factors important in evaluating its priority for receiving funding. Rank each asset from "1" to "5," where "1" is the highest priority and "5" is the lowest. Use the information in Table 2, RG-530, Prioritization Rating, to determine how each asset should be rated. Because there are only five priority levels, some assets will have the same priority.

When ranking assets, keep in mind that assets in the following three categories should be assigned a higher priority:

- Assets with a shorter remaining useful life, because you will need to rehabilitate or replace them relatively soon. How likely is it that the asset will fail? Base this evaluation on the asset's age, condition, and failure history.
- Assets that are critical to your operation, because of the system's responsibility for protecting public health and the environment.
- Assets for which your system has less redundancy, because the system would have trouble operating without them.

## ***Develop a Comprehensive Plan***

Use the Comprehensive Planning Worksheet (Worksheet 2) from RG-530 to generate a cost-management plan for your system's assets. This tool will assist identifying the funding and other resources required for long-term, continued operation. You should update this worksheet at least once a year. You can either make minor adjustments to the worksheet as the condition of your assets change, or start a new worksheet each year.

### **1. List your prioritized assets**

List the assets, with the highest-priority (lowest-numbered) assets first.

### **2. List maintenance, repair, and replacement activities**

For each asset, list the maintenance, repair, and replacement activities that you expect to perform over the next five years. If you plan to add a new clarifier, state, "add new clarifier." Include enough detail for each activity so that you can determine its cost. Be sure to include anticipated employee costs.

### **3. Estimate years until action is needed**

For each activity, fill in the number of years before you will need to perform that task. For annual activities, enter "1." For replacement activities, enter the remaining useful life.

### **4. Estimate Cost**

Fill in the estimated cost for each activity. Make sure it is the complete cost, including preparation, cleanup, removal, and disposal of any waste.

If you expect to sell an asset at the end of its useful life, subtract the estimated sale price from the cost of a new item, and enter the difference.

### **5. Calculate the financial reserve required per year**

For each asset, calculate the reserve required by dividing the cost by the years until the action will be needed. This is the estimated amount of money that your utility needs to set aside each year ("Reserve Required per Year") for that asset.

**6. Calculate the total financial reserve required in the current year**  
Add the reserves required per year for each item to calculate the total reserve required in the current year. This is the estimated amount of money that your system needs to set aside, starting this year, in order to pay for all of the maintenance, repair, and replacement.

**7. Repeat the process for the next four years**  
To create a five-year plan, you should complete a separate comprehensive planning worksheet for each of the next four years. This will allow you to compare how much reserve money will be required if the cost is spread out over a longer period of time.

You can then use this information to determine whether a potential rate increase, customer surcharge, state or federal grant or loan, or other source of funding will be required.

### ***Calculate your budget***

The next step is to create a budget. Assign the current date, indicate the fiscal year that the budget covers, and indicate whether this budget is the first or if you are updating an earlier budget.

**1. List your revenues**

List all your utility's revenue sources and the dollar amount each source is expected to provide in the coming fiscal year. Enter the revenue you expect to collect for sanitary-sewer services. For "Fees and Service Charges," list all late fees, fees for establishing and transferring service, impact fees, and other fees. In the "Interest" space, enter any interest you expect to accrue on the system's investments. If your utility has other sources of income, enter them as "Other." Calculate your total annual revenue by adding all the revenues you listed.

**2. List your expenses**

List the sources of your utility's expenses and the dollar amount each source is expected to draw in the coming fiscal year. If your utility has other general expenses not listed on the worksheet, enter them as "Other." Calculate your total annual expenses by adding all the expenses you listed.

**3. Calculate your net income**

Calculate your net income by subtracting your expenses from your revenue.

**4. Enter your total required reserves**

**5. Calculate additional reserves needed and into the future.**

Subtract your total required reserves from your net income.

If the result is a positive number, you have no shortfall to make up for and can set aside the required funds in a reserve account. If the result is a negative number, you should start planning ways to make up for the shortfall.



To make up for the needed resources, you might increase rates, charge customers a surcharge, or seek state or federal funding through grants or loans.

## **6. Plan for the future**

To get a picture of future financial needs, complete the budget worksheet for the next four years—or longer, depending on the system’s needs. This will allow you to forecast expenditures for expensive repairs or replacement items. Therefore, you can avoid drastic increases in rates, surcharges, or loans that the system may have to pay back for many years to come.

## ***Implement Your Asset Management Plan***

You have completed the initial three steps of your asset-management plan: inventory development and asset prioritization, comprehensive planning, and budget building. Now you must work with your management team, including council and board members, if appropriate, to implement the plan. This process should help ensure you have the technical and financial means necessary to offer reliable service. Ideally, you should create a plan for at least the next five years.

### **1. Hold a Meeting**

Arrange a meeting with your management team. Give the following items to each member.

- a map of the system
- a list of current assets, identifying for each the value, or cost to replace, and the remaining useful life
- a list of priority asset maintenance, repairs, and replacements
- a list of costs associated with the expected repairs or replacements
- the current budget allotment as well as the projected budgetary requirements

### **2. Communicate Regularly**

Keep your management team updated with quarterly progress reports. This will reinforce your dedication to the plan and help make certain that your system is functioning optimally. It will also ensure that you maintain management support throughout the implementation process.

### **3. Update Changes**

Keep up with the changes that occur as your plan is implemented, including changes in the system’s equipment, finances, and personnel. This will help ensure that you successfully manage your utility’s assets.

### **4. Conduct a Rate Study**

If you determine that your utility is not bringing in enough money to be sustainable or to complete necessary improvements, you may need to raise your rates. You should conduct a rate study before raising your rates.

Rate studies are very complicated and may require professional help. You may decide to hire a consultant; apply for financial, managerial, or technical assistance through the TCEQ; or request the assistance of an EnviroMentor through the TCEQ's Small Business and Local Government Assistance section.

Regardless of how you conduct your rate study, you will need to contact the [Public Utilities Commission](#) (PUC) of Texas for information and assistance with rate increase applications. You can contact the PUC at 888-782-8477 or 512-936-7120 or by e-mail at [customer@puc.texas.gov](mailto:customer@puc.texas.gov).

## Need More Help?

The TCEQ's Financial, Managerial and Technical Assistance Program offers free contractor on-site assistance to help you analyze your planning options, conduct rate studies, and help you with all aspects of running and funding your wastewater system. For more information about the program, visit the web page <https://www.tceq.texas.gov/drinkingwater/fmt>, call the Water Supply Division at 512-239-4691 or by email at <mailto:FMT@tceq.texas.gov>. You may also contact the TCEQ Small Business and Local Government Assistance representative in your region by calling the toll-free number 800-447-2827.

The Texas Water Development Board (TWDB) has a number of financial assistance programs that can help you finance your project and the development of your asset management plan. You can contact the TWDB at (512) 463-0991 or by email at [Financial\\_Assistance@twdb.texas.gov](mailto:Financial_Assistance@twdb.texas.gov).