

Developing a New Sewer System

Dear Reader:

The following document was created from the MTAS website ([mtas.tennessee.edu](https://www.mtas.tennessee.edu)). This website is maintained daily by MTAS staff and seeks to represent the most current information regarding issues relative to Tennessee municipal government.

We hope this information will be useful to you; reference to it will assist you with many of the questions that will arise in your tenure with municipal government. However, the *Tennessee Code Annotated* and other relevant laws or regulations should always be consulted before any action is taken based upon the contents of this document.

Please feel free to contact us if you have questions or comments regarding this information or any other MTAS website material.

Sincerely,

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Developing a New Sewer System

Reference Number:
MTAS-572

Why Build a New Sewer System?

The usual reasons are:

- To solve health, environmental and ground water concerns caused by failing septic tanks/drain fields;
- To attract new or expanded commercial/business/industrial growth;
- To serve new residential growth; and
- To preserve and increase property values.

What to Consider

- Are citizens in favor of centralized sewer service? City leaders may have to do an extensive job of public education to get the residents on-board with the idea.
- Sewer systems provide a valuable service. The primary reasons for having a sewer system are public health environmental protection and growth. Having well designed and well operated centralized sewer likely will increase property values and business tax revenues.
- If your city decides to develop a sewer system, mandatory hookup is a must. For financial viability, cities with standalone sewer systems (those where the town does not own the water system) should require mandatory hookup where sewer is available. Many lenders require mandatory hookup. If a city is able to avoid mandatory hookup requirements, at a minimum all properties where sewer is available, but who choose not to hookup, should be charged a minimum bill. Where old structures are demolished and new ones built, the new structures should have mandatory hookup requirements.
- The financial capability of the sewer system is subject to state law and enforcement. The Water and Wastewater Financing Board, under the state comptroller, regulates financial capability of municipal water and sewer systems. Those systems must be operated as enterprise funds (be financially self sufficient, i.e., revenues from user fees must cover expenses). Because the fixed costs, mostly construction costs are so very high, there is a trend in utility billing to set minimum bills to cover these fixed costs. This results in very high minimum bills and low usage rates. This type rate structure generally includes no usage volumes in the minimum bill.
- Building a new sewer system may be the biggest project any community ever undertakes. It will be administrative-ly and financially challenging, especially in the first few years.
- Sewer systems will change your community. For growth to occur, centralized sewer service must be available. Growth will occur where centralized sewer service is available.
- When city A's wastewater is treated and discharged by city B and city B owns the national pollution discharge elimination system (NPDES) permit, there are advantages and disadvantages for city A.
 - The advantage is that the contributing city (city A) does not have the liability of the NPDES permit and does not have to operate and maintain a sewage treatment plant.
 - The disadvantages are that city A is dependent on city B for short-term and long-term capacity to handle wastewater from city A in its lines and its plant. City A has no control over rates passed on by city B.

- If city B treats wastewater from city A, a contract satisfactory to both sides must be developed. City A will still have the administrative, financial, and operating and maintenance responsibilities that go along with operating a sewer collection system. Considerations include:
 - A contract between two municipalities that includes the following and is prepared and or reviewed by an attorney and:
 - Identifies parties and purposes;
 - Specifies each party's responsibilities;
 - Clearly specifies any capacity guarantees;
 - Addresses sewer use ordinance differences and industrial pretreatment permitting if applicable;
 - Has a dispute resolution and/or termination clause;
 - Is specific about what rates are to be charged and how, how often and on what basis they can be changed;
 - Describes the services to be performed;
 - Stipulates how and when payments are to be made;
 - Includes an indemnity or hold harmless clause; and
 - Includes a severability clause.
 - Administrative responsibilities:
 - Developing and managing the contract between the two cities;
 - Planning, engineering, and construction responsibilities and managing those functions, for instance, procuring engineering services and obtaining easements;
 - Procuring financing for the project, including setting tap fees; connection fees, capacity fees, and clearly defining what each of terms means. There is often significant confusion on the meaning of these terms and what is or is not included in the fees.
 - Keeping residents and businesses informed;
 - Developing policies and procedures such as a sewer use ordinance and customer forms such as applications;
 - Determining how billing and revenue collection will be done;
 - Setting sewer rates; and
 - Receiving and handling complaints.
 - Operation and Maintenance
Determining who will be responsible for operation and maintenance and managing the work, i.e., will you hire certified operator(s) or contract for these services?
- If your city will be constructing the sewage collection system, treatment facility, and effluent disposal system all the responsibility falls upon your leaders and managers and the costs must be borne by the new customers.
- Funding the project
 - Several options for grants and loans are available. The city will have to decide how to proceed on funding questions. Often consulting engineers assist with funding packages.
 - Be aware that the cost of all sewer related construction is staggeringly expensive.

How to Proceed and Costs Involved

Reference Number:
MTAS-804

How to Proceed

- Retain an engineering firm to propose viable alternatives and cost estimates.
- Be in charge. Don't turn the project over entirely to your engineer. Appoint a champion — a person or committee who will coordinate the project, devote time to it and promote it.
- Get buy-in from as many local groups and citizens as possible. Develop a consistent message about why you are doing this.
- Ask for free help from state agencies. Check out cities that have been through this process, and talk to them and learn from their mistakes.

- Have realistic expectations. Keep your eyes wide open. Don't get tunnel vision by listening to one way of doing things and thus not considering other options. Check out everything.
- Organize. Have a written list of action steps and concrete plans. Work your plan, but stay loose and flexible.
- Keep excellent detailed records of all contacts, costs, etc.

How Much Will it Cost?

Probably far more than anyone initially thought. Be cautious comparing your expectations. The sewer bills for new systems are often far higher than those of an old established system. The single most important factor in the costs will be the infrastructure installation followed by the quality of system management. There usually are many different methods that a city can choose from to provide sewer service, for instance, the city could:

- Build collection lines and a discharging plant;
- Build collection lines and a non-discharging treatment system such as a drip field discharge (originally applied only to small systems or subdivisions but increasingly is used for larger systems including some small cities);
- Build collection lines and a trunk line to another city and discharge into a neighboring city's system;
- Allow a neighboring city to build collection mains within your city limits. The neighboring city would "own" all the system and serve customers directly. Your city would have no vested interest in the sewer system, but could benefit from the growth that will occur; or
- Allow a private company to build and operate a sewer system within your city limits.

When?

- Set goals and deadlines for when certain actions must occur. This will require close communication with other parties involved in the project. Don't get into a situation where you have to make crisis decisions. Allow enough time to think things through and get the information you need to make good decisions. Make sure you understand the financial consequences of your decisions.
- If seeking grants, become aware of application deadlines.
- A note about grant funded projects. The infrastructure constructed with grant funds must be depreciated like any other asset and rates must cover that depreciation.

Where?

- Phasing in sewer systems may make sense for your city especially if houses are widely dispersed. Again, know WHY you are installing sewers.
- Start with areas of greatest need. Plan and budget to add other areas later.

Who?

Again, appoint a spokesman or committee who will commit the time and effort it will take to make this project successful. Consider the skills needed — good communication skills, organizational capabilities, etc.

See Steps to a Successful Utility Construction Project [1] for more information on this topic.

Links:

[1] <https://www.mtas.tennessee.edu/reference/steps-successful-construction-project>

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