

Section 8

Evaluating Funding Mechanisms for a Storm Sewer Enterprise

8.1 Introduction

The City of Concord is evaluating alternative methods of funding its storm water management program. Storm water management programs enable municipalities to comply with complex surface water quality regulations imposed by the Federal government. At this time, the full impact to comply with these regulations is unknown. However, the goal of this task is to evaluate the advantages and disadvantages of alternative funding mechanisms. We evaluate alternatives in terms of the five criteria:

- Ease and cost of implementation;
- Equity, including applicability to all customers;
- Revenue stability;
- Customer acceptability; and
- Legal authority.

There are also a number of policy decisions the City will need to consider regarding their pursuit of equity and encouraging private sector entities to invest in solutions affecting their business properties. Equity issues will include determining whether non-taxable properties should be paying for storm water management. In addition, the City will need to evaluate whether it can or should provide incentives to private entities to invest in storm water management facilities, such as detention ponds, to reduce the public investment.

A comprehensive approach to storm water management planning is a multi-year process. The implementation of such a program takes extensive strategic planning up-front and a major commitment to fund operations and maintenance for the life of the program. As we understand it, the General Services Department is presently responsible for most storm water management functions. The primary funding source for these activities is general tax revenue, although certain functions, such as catch-basin cleaning, may be paid through other fees.

The purpose of this section is to address the various rate and financial issues associated with a storm water management program.

8.2 Funding Alternatives

The scope of services performed by a storm water management program is diverse. The services generally include:

- **Program Administration** – oversight, management, billing, customer service, etc.
- **Engineering** – storm water master planning, protecting water quality of surface waters, design, permitting, construction management, inspections, etc.
- **Operations and Maintenance** – flushing, jet vactoring, erosion control maintenance, minor repair work, etc.
- **Capital Improvements** – scheduling, prioritizing, and construction of major primary and secondary systems.

Four principal funding options are available to the City. They include:

- General Fund revenues with the storm water management program paid for primarily with property taxes.
- Village Districts with the primary source of revenues being property taxes on residents of the District.
- Sewer use fees with the costs of the storm system included in the wastewater user fee.
- Storm Sewer Enterprise/Storm Water Utility with the program paid with a storm water use fee.

Municipalities frequently supplement these principal sources with miscellaneous fees and other mechanisms. These may include permit review fees, fines for non-compliance, and developer contributions for constructing required infrastructure. These supplemental sources are not discussed in this section.

Each of the principal funding options is discussed below.

8.3 General Fund

The General Fund receives revenue from many sources, primarily local property tax receipts, license and permits, Federal and State shared taxes, payments-in-lieu of taxes (PILOTs), fines and penalties. Most municipal services are funded from the General Fund with the balance funded through fees, such as the water or sewer use fee. When considering the capacity of a General Fund to effectively support a City's storm water management program, the analysis must look to evaluate three issues: fairness, equity, and competition for scarce dollars.

There are several advantages to administering a storm water management program through a General Fund:

- Existing source of revenue;

- Billing system is in place and cost effective;
- Payments made by residents are fully tax-deductible on federal income taxes;
- Collection rates are high and stable; and
- Requires minimal incremental implementation and administrative costs.

The obvious benefit of using the General Fund is that it serves as an account for depositing receipts from which multiple municipal services are funded and relies on relatively stable revenue sources. Funding storm water management requirements through municipal taxes places little or no additional burden on the existing property tax billing system. Property owners do benefit since the total tax payment is deductible for federal tax purposes. Finally, property tax collections are generally high, relatively stable and fully enforceable as a lien on a property.

There are disadvantages to using the general fund. First, the storm water management programs must compete for funding with other municipal needs that have more political appeal. Frequently infrastructure related programs are not seen as priority programs against other municipal needs, such as schools, police and fire. Second, the use of general fund taxes does not assess costs to residents based on their impacts on the storm water system. There is no relationship between the value of a particular parcel and the amount of run-off from that parcel that the storm water system must accommodate. The actual amount of run-off from a parcel is more highly correlated with the amount of impervious surface on the parcel and not its value.

8.4 Village Districts

New Hampshire has created enabling legislation, Revised Statutes Annotated (RSA) 52, et. al., to allow the formation of village districts to provide special “needs” services. These districts include flood control, fire, drainage, irrigation systems, shade tree maintenance, sanitary collection and wastewater treatment, roads, impoundment of water, potable water, and others. Funding for these special needs districts comes from *ad valorem* taxes or a special use tax assessment based on a property’s total assessed value.

The role of the village district is to provide a particular service function for a specified area. In this case, the service would be drainage to control flooding, minimize water quality degradation and to eliminate sanitary sewer overflow conditions if they exist. Under the statute, each property owner within the district is eligible to vote when a special election is called for to establish a village district, adopt a budget, issue debt, establish a tax rate, and/or make an amendment to the district’s size, rules of incorporation, or services provided through the district. A majority of the eligible voters within the district is required to pass any proposal. The voters determine a ruling body of representative members and the appointment of a village district manager. A

village district may issue tax anticipation notes to meet expenditure obligations based on anticipated revenues from the current tax assessment.

If the intent of a Storm Sewer Enterprise is to focus solely on issuing Village District Assessment Bonds for capital construction purposes, then a village district or, as it is sometimes called, a special assessment district may be considered. These districts are established according to the area benefiting from a particular improvement or service and assessments are made against property owners that fall within those district boundaries. These districts may include one or more or a portion of multiple communities or towns. All properties that fall within the district must receive a direct benefit.

The disadvantages of this funding option are:

- Districts may include only a portion of the City. The size of the District is limited only by those property owners wanting to join. However, given the geographical lay-out of Concord's storm water management system, this limitation may be an advantage. Concord's storm water system serves a relatively small portion of the City and thus the Village District would target the appropriate geographical area.
- Revenues generated within the district must be spent for the benefit of those within the district which may not be where the money is most needed.
- Assessments are based on property value and not impact or demand on the storm water management system.
- Decision-making would be complicated given the need to "poll" all residents of the village.

The ease and cost of implementing a village district would not be difficult; however, there would be a cost to organize. The formulation of a village district requires meeting all the requirements of the act (RSA 52) which may require the use of an attorney to formulate the form, language, mission and scope into a service agreement. An engineering consultant may be necessary to establish the district boundaries based on basin-wide drainage studies and the specific legal language of a district agreement.

A Village District raises some of the same equity issues discussed under the General Fund. The primary point is that fees are assessed based on property value rather than on a determination of runoff contribution to the drainage system. Residents will not be paying in proportion to their impact on the system. The benefit of this approach is that revenues would be very stable since they are tied to the regular tax bill for the community at large that has a high collection rate. In addition, customers affected by the formation of a special district would know that the funds generated through the district tax levy are for projects specifically targeted to benefit them.

8.5 Storm Water Funding Through Sewer Use Fees

Most municipalities including Concord manage and operate storm sewer operations through general fund departments of the city. In Concord, the General Services Department is responsible for administering storm sewer activities with funding from general taxes.

An alternative approach used by a number of communities is to include the expenses of the storm water system within the sewer user fee revenue requirement. Under this alternative, Concord's sewer department, which is an enterprise fund and generates revenues, would include in its expenses the costs of storm water management. This would then result in the sewer rates to be increased to meet the additional expenses.

This approach frequently fits within the operations of the utility as well because the sewer department's staff is responsible for the maintenance of the storm water system infrastructure. Many communities also do not like to take on the added burden of tracking storm sewer related activities separate and apart from sanitary collection and treatment because it is easier to capture those expenditures under the umbrella of sewer services. As a result, storm water service costs are captured in the enterprise fund's annual expenditure budget. These expenditures are then incorporated into the annual review of sewer rates used to support the utilities annual expenditure needs.

There are many similarities between the requirements of a sanitary sewer management program and that of a storm water sewer management program, including, but not limited to:

- Master planning, engineering, capital improvement design and construction;
- Flushing and televising of pipes;
- Staff that are assigned to collector system maintenance;
- Administrative, budgetary and financial services; and
- Billing and collections services.

The requirements for storm water systems in Concord that differ from sanitary sewer operations include:

- Maintenance of drainage swales since not all collection elements are below ground; and
- Maintenance of catch basins that are designed to capture solids suspended in storm water.

The obvious advantages of funding storm water activities under the umbrella of a sewer utility or department is the assignment of maintenance crews to perform semi-

annual maintenance functions on a seasonal basis associated with spring rains and fall cleanup of leaves from storm drains and catch-basins. A second advantage is that simplicity of organization with similar operational and system requirements “housed” within a single funding and managerial structure.

There are several disadvantages. First, sewer use fees can be instable related to variations in the sale of water. In wet years, when storm water operating and maintenance requirements may be there highest, revenues will likely decline because Concord’s sewer use fees are based on metered water consumption.

In addition, there is an equity problem associated with funding storm water activities through water use fees or consumption based billing. Storm water runoff during rain events has no relationship to water sales based on consumption. High water users will carry the bulk of the expense for storm sewer charges as opposed to those properties that have a high percentage of impervious surfaces.

The costs to fund a storm water program within a sanitary sewer fund would be relatively simple because the system of funding and staffing a sewer enterprise is already in place. It essentially requires including within the sewer budget or enterprise fund the expenses associated with storm water management and then making appropriate adjustments in the rate calculation.

8.6 Storm Sewer Enterprise Fund/Storm Water Utility

An enterprise fund is generally the choice of a local government to create a separate revenue fund to capture the assets, administrative, operations and capital construction activity associated with a specific service or department. The department, enterprise program or storm water utility remains a department of the City but no longer relies on general tax revenues to support its operations. The difference with this approach from that described in Section 8.5 is that the revenue source is directly related to storm water management. Nationally, approximately 300 communities have established storm water utilities with specialized fee structures.

The storm water utility provides funding for local storm water management programs and includes funding to cover operations and maintenance, basin planning, facility construction, and program administration. Storm water utilities allocate costs among “customers” based on estimates of the relative amount of run-off that comes from each parcel. In addition, a principal advantage of a storm water utility compared to a general fund revenue source is that tax-exempt properties (federal, state, local and other tax-exempt buildings) are assessed a user fee or cost of service fee that reflects their relative storm water contribution. This is comparable to how other public utilities bill tax-exempt properties based on usage (e.g., electricity, water consumption).

Storm water utilities generally all use a methodology that estimates the amount of impervious area on a particular parcel as a percentage of the total impervious area

and allocates fees on that basis. A number of alternative methods have been developed that seek to simplify this process and reduce the initial administrative burden associated with determining each customer's bill. Nearly 70 percent of existing storm water utilities base the bills on some type of equivalent residential unit basis. In these systems, all residential properties or some subset of residential properties become the base billing unit. All other customers are then billed based on the amount of impervious area relative to the average impervious area per equivalent residential unit (ERU). Depending on the system, the ERU may reflect the average amount of impervious area per dwelling unit for all housing, for all single family housing or for all multi-family housing. This approach reduces the administrative burden of determining the actual impervious areas for every residential property. There are many permutations of this approach including multiple residential class systems, credit policies, and lifeline rate policies. For simplicity of discussion, we use the term ERU to include all of these various approaches.

The advantages of the storm water utility approach include:

- The utility can be structured so that it relies on an evaluation of a representative sample of residential properties in the community to determine a standard impervious area for all residential properties as a class (single family, apartment, condominium) which significantly reduces the up-front implementation burden and costs.
- Costs are allocated to properties based on their relative contribution to the storm water problem.
- Revenues are relatively stable, since impervious area (the basis of the charge) does not change rapidly over time.

The disadvantages of a storm water utility approach include:

- The City may incur a significant up-front effort to define a billing unit, determine the amount of impervious area on each parcel in the City, and to establish a new billing system.
- The City will also need to educate its residents regarding the benefits of the storm water program and the basis of the new charge that they are paying. It is frequently challenging to get public support for this fee, since opponents characterize it as a "tax on rain".
- Under an impervious charge system, there are administrative complications necessary for maintaining accurate records of impervious areas for all citywide parcels, including both residential and commercial.

As an incentive to the private sector to participate aggressively in a storm water management program, the City can consider providing credits or differential rates to

businesses that operate and maintain detention and other water quality facilities that provide a higher level of protection than that required by ordinance.

Transitioning to a new full service fee can be difficult. Therefore, many communities have considered a combination of revenue sources that allows for the gradual transition from the General Fund to a full enterprise fee structure to fund a storm water management program. The transition period may range between one and five years. Initiating a program that is partially offset by General Fund revenues allows an immediate effort to address problems while at the same time gradually adjusting the public to a full cost program. Taxes rarely fall even with the transfer of an expenditure obligation to a new funding strategy. Therefore, a gradual effort that relieves the municipalities tax burden for new general purpose demands offers two benefits: (1) relief on the politically charged issue of higher taxes; and (2) creating a business model for administering a program that has an established market and growing services needs.

8.7 Summary

The City of Concord may choose to fund its storm water program from the four primary alternatives outlined in this section. Selecting the best alternative requires balancing a number of frequently conflicting goals and objectives. For example, an administratively simple fee structure is preferable because it reduces the burden of maintaining the system. However, the most simple fee structure (general taxes) is the most inequitable rate structure.

Each system has advantages and disadvantages:

- A general tax system is the easiest to administer and provides very stable revenues, at least in the short-term. However, this system presents equity issues and over time may represent instable revenues, as storm water management must compete with high priority and visibility municipal issues, such as police and fire protection and schools.
- The use of sewer use fees is also a relatively easy to administer funding source since the use fee is well established and collection rates are high. Again, this alternative source presents equity issues.
- The Village District is very similar to general tax supports. The key distinctions are that (i) a Village District targets the tax payment as the strategy for improving overall equity and (ii) the Village District will complicate tax payments since not all Concord residents will be subject to the District tax.
- Storm water user fees provide an independent revenue source that is allocated to residents/customers based on their estimated contribution to the storm water management problem. However, this autonomy and equity must be balanced against the up-front implementation costs, ongoing maintenance of the billing

system and effort required to educate customers and policy-makers on the basis of the charge.

The City’s selection of the appropriate funding mechanism will result in the cost burden being shifted among various customer classes. We have not developed a detailed budget for the City’s storm water management program, nor is it the scope of this assignment to undertake a detailed feasibility evaluation of the alternative systems. However, it is important to understand how the alternatives shift the burden among customers.

The following table is based on work that was undertaken for Manchester, New Hampshire that was evaluating implementing a wet weather charge based on impervious area. As part of that evaluation, we compared what various typical customers would be required to pay for wet weather management under three funding alternatives:

- General Taxes based on property values;
- Sewer Use Charges based on metered water consumption; and
- Storm Water Charges based on impervious area.

Table 8-1 shows what the estimated annual bills would be under each funding source for a variety of customer types. This information reflects actual data in Manchester (for value of properties, amount of impervious area, and annual water consumption) at the time of that analysis. We believe it is illustrative of the impact in Concord and is useful in understanding the real implications of adopting any of the principal funding approaches.

Customer Type	General Taxes	Sewer User Charges	Storm Water Charges
Single Family	\$120	\$94	\$48
Apartment Building	\$3,046	\$2,033	\$1,440
Strip Mall	\$4,858	\$3,250	\$6,626
Regional Mall	\$22,030	\$15,506	\$38,282
Manufacturing Facility	\$2,878	\$8,717	\$4,368
Parking Lot	\$216	\$0	\$528
Laundromat	\$386	\$2,364	\$360

Table 8-1
Estimated Annual Bills
Alternative Storm Water Funding Approaches

As can be seen from the table, an impervious area charge shifts the burden away from residential properties and towards commercial developments. General tax systems place much of the burden on residential properties. While the table does not include it, under the general tax system, tax-exempt properties would pay nothing, while under the other two systems tax-exempt properties would be required to pay something. The sewer use charge alternative is most favorable to commercial properties because their relative water use is less than the value of the property or the amount of impervious area.