ALTERNATIVE FUNDING MECHANISMS

A BEST PRACTICE BY THE NATIONAL GUIDE TO SUSTAINABLE MUNICIPAL INFRASTRUCTURE

National Guide to Sustainable Municipal Infrastructure

Guide national pour des infrastructures municipales durables

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Alternative Funding Mechanisms
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FOREWORD

In spite of recent increases in public infrastructure investments, municipal infrastructure is decaying faster than it is being renewed. Factors such as low funding, population growth, tighter health and environmental requirements, poor quality control leading to inferior installation, inadequate inspection and maintenance, and lack of consistency and uniformity in design, construction and operation practices have impacted on municipal infrastructure. At the same time, an increased burden on infrastructure due to significant growth in some sectors tends to quicken the ageing process while increasing the social and monetary cost of service disruptions due to maintenance, repairs or replacement.

With the intention of facing these challenges and opportunities, the Federation of Canadian Municipalities (FCM) and the National Research Council (NRC) have joined forces to deliver the *National Guide to Sustainable Municipal Infrastructure: Innovations and Best Practices*. The Guide project, funded by the Infrastructure Canada program, NRC, and through in-kind contributions from public and private municipal infrastructure stakeholders, aims to provide a decision-making and investment planning tool as well as a compendium of technical best practices. It provides a road map to the best available knowledge and solutions for addressing infrastructure issues. It is also a focal point for the Canadian network of practitioners, researchers and municipal governments focused on infrastructure operations and maintenance.

The *National Guide to Sustainable Municipal Infrastructure* offers the opportunity to consolidate the vast body of existing knowledge and shape it into best practices that can be used by decision makers and technical personnel in the public and private sectors. It provides instruments to help municipalities identify needs, evaluate solutions, and plan long-term, sustainable strategies for improved infrastructure performance at the best available cost with the least environmental impact. The five initial target areas of the Guide are: potable water systems (production and distribution), storm and wastewater systems (collection, treatment, disposal), municipal roads and sidewalks, environmental protocols and decision making and investment planning.

Part A of the *National Guide to Sustainable Municipal Infrastructure* focuses on Decision Making and Investment Planning issues related to municipal infrastructure and therefore is qualitatively distinct from Part B. Among the most significant of its distinctions is the group of practitioners for which it is intended. Part A, or the DMIP component of the Guide, is intended to support the practices and efforts of elected officials and senior administrative and management staff in municipalities throughout Canada.

As previously discussed, current funding levels are insufficient to meet infrastructure needs. Municipal infrastructure tends to be taken for granted, so

much so that the fundamental role it plays relative to both our standard and quality of life is marginalized. Infrastructure competes with corporate priorities such as police, fire, social services, parks, recreation and libraries which often tend to receive higher priority for funding. The net effect of this situation is a chronic deficiency in capital budgets for infrastructure to the point that infrastructure, both current and new is rapidly deteriorating. In an attempt to mitigate this situation, Part A of the Guide has identified specific best practices.

These best practices are intended to articulate the relevance and fundamental importance of municipal infrastructure by simplifying complex and technical material into "non-technical" decision-making concepts and principles. By doing so, it is anticipated that the need for adequate sustainable funding can be understood and ultimately realized. However, Part A best practices should not be construed as definitive 'best' practices, rather they should be interpreted as guidelines and concepts. Furthermore, Part A best practices are not normative and as such are not intended to usurp the discretion of those most knowledgeable about the local municipality. Quite the contrary, it is hoped that the best practices will inspire decision makers to optimize their municipal infrastructure management practices by providing high level, simple, easy to understand approaches and concepts for representing municipal infrastructure issues. In this way, the gulf between the non-technical community and the technical community of engineers and public works officials may be bridged.

It is expected that the Guide will expand and evolve over time. To focus on the most urgent knowledge needs of infrastructure planners and practitioners, the committees solicited and received recommendations, comments and suggestions from various stakeholder groups, which shaped the enclosed document. Although the best practices are adapted, wherever possible, to reflect varying municipal needs, they remain guidelines based on the collective judgements of peer experts. Discretion must be exercised in applying these guidelines to account for specific local conditions (e.g. geographic location, municipality size, climatic condition).

For additional information or to provide comments and feedback, please visit the Guide Web site at www.infraguide.gc.ca or contact the Guide team at infraguide@nrc-cnrc.gc.ca.

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This best practice was developed by stakeholders from Canadian municipalities and specialists from across Canada, based on information from a scan of municipal practices and an extensive literature review. The following members of the National Guide's Decision Making and Investment Planning Technical Committee provided guidance and direction in the development of this best practice. They were assisted by the Guide Directorate staff and by Marbek Resource Consultants Ltd.

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This and other best practices could not have been developed without the leadership and guidance of the Project Steering Committee and the Technical Steering Committee of *the National Guide to Sustainable Municipal Infrastructure*, whose memberships are as follows:

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EXECUTIVE SUMMARY

The *National Guide to Sustainable Municipal Infrastructure: Innovations and Best Practices* is intended to be a decision-making and investment planning tool as well as a compendium of technical best practices and innovations. The Guide will provide a road map to the best available solutions for addressing infrastructure issues.

This best practice description focuses on alternative funding. Eight methods of potential interest to municipalities provide options for developing innovative funding sources to meet infrastructure needs, or to align costs with benefits to users. The municipalities profiled have undertaken these methods in a variety of ways that have evolved in response to their infrastructure and community needs.

This best practice profiles three specific methods in detail, while another five methods are included but without the same level of detail.

Alternative Funding Mechanisms, Detailed Profiles

1. Special Levies
2. Development Fees
3. Utility Models

Other Alternative Funding Mechanisms Identified

4. Sponsorships
5. Innovative Transportation Revenues and Incentives
6. Government Service Partnerships
7. Funding Partnerships
8. Strategic Budget Allocations

1. GENERAL

The *National Guide to Sustainable Municipal Infrastructure: Innovations and Best Practices* is intended to be a decision-making and investment planning tool as well as a compendium of technical best practices and innovations. The Guide will provide a road map to the best available solutions for addressing infrastructure issues. It consists of two parts: a decision-making and investment planning tool, and a compendium of technical best practices. The first part is intended for use by municipalities to assess their needs and to help both senior management and technical staff, as well as elected officials, manage their infrastructure assets more effectively by using best practices in the selection, development and implementation of infrastructure projects. The second part will comprise various sets of technical modules to provide municipal practitioners with best practices for the choice of technologies and methodologies.

1.1 INTRODUCTION

This best practice focuses on alternative funding. There are several methods within this practice of potential interest to municipalities that provide options for developing innovative funding sources to meet infrastructure needs, or to align costs with benefits to users. The municipalities profiled undertake these methods in a variety of ways that have evolved in response to their infrastructure and community needs.

This best practice profiles three specific methods in detail, while another five identified methods are also included but without the same level of detail.

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1. Special Levies
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Municipal best practices profiled in this document showed evidence of one or more of the following features:

- innovative funding sources or successful user-pay approaches to fund infrastructure;

- recent approval for significant infrastructure investments or expenditures, especially significant transportation works;

- infrastructure investments to support quality of life in the community and/or to achieve corporate objectives;

- evidence of a structured decision-making matrix for funding allocation decisions that formally compares or rates municipal infrastructure functions with other municipal services; and

- evidence of a formal process to gain public and special interest group input or support for infrastructure funding requests.

It is important to note that municipalities not profiled in this best practice description likely practice variations of the methods documented, or undertake additional innovative methods of potential interest. As such, the methodologies and practices herein contained should not be construed as exhaustive of existing practice.

1.2 SCOPE

Canadian municipalities are reporting varying levels of unmet needs for infrastructure funding for capital projects, operation and maintenance (O&M) functions and, in some cases, for both.[1] These trends clearly indicate that historic and traditional methods of funding municipal infrastructure are inadequate to meet most needs.

Innovative funding techniques can provide part of the answer to infrastructure needs. Other solutions or options are identified through practices in areas such as long-term planning, establishing levels of service, benchmarking for performance optimisation, life cycle asset management, service demand management, public education and participation in decision making and solution implementation, some of which are topics of other current *National Guide to Sustainable Municipal Infrastructure* best practices.

When considering the large capital investment by the public in municipal roads, potable water, storm and wastewater facilities, even small shortfalls in funding can represent large dollar amounts. Infrastructure shortfalls can have serious implications for communities in terms of the protection and continued utility of

[1] A couple of municipalities estimated as little as 10 percent of their current infrastructure funding needs are being met, although most estimated needs were being met in the order of two thirds to three quarters. These estimates were based on quick qualitative assessments by staff in senior administration positions, but they clearly indicate that historic and traditional methods of funding municipal infrastructure are inadequate. (See Decision Making and Investment Planning (DMIP)-1 Scan Report to the Federation of Canadian Municipalities and the National Research Council, 2002, for more information.)

capital assets. The potential implications are broader than economic issues, however, when consideration is given to the role infrastructure plays in providing essential services, supporting economic development, protecting health and safety, and contributing to quality of life in the community. Some infrastructure, such as wastewater treatment plants and storm water management practices, also protect the environment from the full effects of human activities. Municipal infrastructure decision makers must consider economic, social and environmental factors for priority setting and funding allocation.

1.3 EMERGING ISSUES

In addition to existing funding issues, many municipalities in Canada are facing new pressures or the increased complexity of infrastructure decision making as a result of several trends over the last decade. Some of these trends have resulted directly in financial pressures; others have had indirect effects as a result of increased public concern or senior government regulatory requirements. Some of these emerging issues are:

- delegation of responsibility for several services formerly managed by provincial authorities to municipalities, while funding support has not increased in proportion to infrastructure needs;

- heightened awareness of public health and safety issues, especially with respect to potable water and emergency services;

- concern for road traffic congestion and speeding;

- concern for ageing populations and ease of access to services;

- concern for ageing infrastructure supporting municipality;

- concern for air and water quality, watershed integrity, biodiversity decline, species at risk and maintaining green spaces, natural areas and terrestrial wildlife habitat; and

- regulatory requirements such as senior government requirements for toxics management. Specific issues of interest to municipalities include reporting toxics to the National Pollutant Release Inventory (NPRI), the management of smog (particulate matter and ozone and other smog precursors) and the management of wastewater effluents, such as ammonia, chlorinated compounds and other substances declared toxic under the *Canadian Environmental Protection Act* (CEPA).

Public concern and senior-level government requirements for action to abate climate change have not resulted in significant municipal infrastructure pressures to date, but increased expectations and commitments are likely over the next decade, both for mitigation measures and adaptation needs.

1.4 GLOSSARY

Alternative Funding (or Innovative Funding) — Revenue or funds received or generated from sources and methods other than the traditional property tax fund.

Basic Impervious Area (BIA/IA) — Represents the responsible customer's volume of storm water run-off to the city's storm water drainage system.

Benchmarking — Measuring performance against a standard of quality (industry sector or technical standard).

Best Practices — State-of-the-art methodologies and technologies for municipal infrastructure planning, design, construction, management, assessment, maintenance and rehabilitation that consider local economic, environmental and social factors.

Biochemical Oxygen Demand (BOD) — A measure of the strength of sanitary sewage discharge. It represents the oxygen required by micro-organisms as they break down the organic content of sanitary sewage.

By-law — Municipal regulation.

Capital — Up-front costs associated with building new infrastructure and investment that extends the life of current infrastructure.

Combined Sewer Overflow (CSO) — Underground mains carrying sanitary sewage flow are connected to storm sewer mains carrying property run-off during heavy rainstorms.

Development Cost Charge (DCC) — Development fees/lot levies paid by private developers to municipalities for municipal infrastructure.

Green Spaces — Natural land, park land or recreational space designated as such with a municipal jurisdiction.

Infrastructure — Refers to those physical infrastructure assets that relate to municipal road, water, wastewater and sewer systems.

Levels of Service — Levels of service reflect social and economic goals of the community and may include any of the following parameters: safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost and availability. The defined levels of service comprise any combination of the above parameters deemed important by the municipality

Life Cycle Asset Management/Total Asset Management — A tool consisting of an inventory of assets, and the ability to track the performance and projected

needs of those assets based on the associated costs during the expected life of an asset, typically computerised.

Long-Term Planning — Ten-to-50-year planning horizon.

Mill Rate — The general tax rate.

Municipality — Jurisdiction that includes both urban and rural areas, and can be large or small in population size.

National Pollutant Release Inventory (NPRI) — An authority granted under *the Canadian Environmental Protection Act* to Environment Canada that requires reporting of pollutants released in Canadian communities by industry and other sectors.

Nodal Development — Clusters of development around city cores or centres.

Operations and Maintenance (O&M) — The active process of utilising an infrastructure asset, which will consume resources such as manpower, energy, chemicals and materials; and all actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal.

Performance Optimisation — Technical performance of equipment or processes in the most efficient and effective manner possible.

Potable water — Drinking water.

Riparian Properties — Property located along a waterway that drains directly into the waterway.

Self-Financing/Cost Recovery — Ability to charge fees to cover costs associated with providing the service.

Senior Government — Provincial, territorial or federal levels of government.

Solid Waste — Municipal garbage.

Species-at-Risk — Biological species in Canada that are at risk of becoming extinct or extirpated.

Storm Water — Rain water run-off.
Suspended Solids (SS) — A measure of sanitary sewer and stormwater flow strength, representing the weight of suspended particulate matter per unit of sanitary and wastewater flow.

User Pay — Fees charged specifically to the users of a service, based on the user's consumption of, or reliance on, the service.

Utility — A service that is brought to, or from, individual properties, which operates on a cost-recovery basis to manage capital assets and O&M.

2. RATIONALE

Alternative funding mechanisms are a best practice because they can assist in fulfilling unmet needs. The following list outlines the additional benefits of specific practices. Some alternative funding techniques can better allocate costs to those benefiting from the service thus increasing equity in provision of services. Some can increase accountability by clear allocation of funds, while others can increase flexibility or service levels through contractual arrangements or partnerships.

There are several potential benefits:

- revenue to support continued provision of safe and efficient infrastructure;
- supplementing the property tax base;
- incorporating life cycle costs of infrastructure (i.e., depreciation of infrastructure; operation and maintenance costs resulting from new capital investments);
- reliable, predictable, dedicated funding to support multi-year infrastructure investment strategies;
- providing additional options to generate infrastructure funds; and
- demand management techniques being developed.

3. GENERAL DESCRIPTION

Three alternative funding methods are profiled in detail in this best practice:

- special levies;
- development fees; and
- utility models.

The descriptions of these three alternative funding methods include the following elements:

- the approach, context of use, the objectives of the practice, mechanics (i.e., an overview of how it works, with examples of method application) and cost implications;
- application potential; and
- the limitations of the method.

Following the detailed profile of the three selected best practice methods, other alternative funding mechanisms are presented:

- sponsorships;
- innovative transportation revenues and incentives;
- government service partnerships;
- funding partnerships;
- strategic budget allocations; and
- cost allocation to users/demand management.

These methods are profiled in less detail, and generally include a brief overview of the approach, the context of use, objectives of the practice, an overview of how the method works including examples, and a basic assessment of the application potential.

4. SPECIAL LEVIES

4.1 DESCRIPTION

4.1.1 APPROACH

This method refers to economic instruments that ensure a funding source exists to cover needs that are difficult to fund through user pay, and for which there is a benefit in explicitly identifying them separately from the general tax levy. Typically, this method is accompanied by a special fund established by the municipality to manage the special levy revenues.

4.1.2 OBJECTIVES

This approach can be used as a strategy to generate more funding for a municipality to cover a new service not traditionally covered by the general tax base, or a specific service offered to only a portion of the community, such as environmental protection. Alternatively, special levies may subsidise certain existing services, such as public transit and storm water management. A municipality can use a special levy to increase a level of service, establish a strategic allocation fund for future investment or extend service to previously uncovered areas. Ideally, the method would be used to achieve a strategic goal for the community. The ability to demonstrate the link to community priorities is a fundamental component of success in adopting this method.

4.1.3 CONTEXT

A key feature of this method is that it collects revenues that are distinct from the general tax levy in support of an identifiable goal. There should be a clear benefit from the goal and, to be successful, the supporting rationale needs to be well communicated to the public. Through communication and consultation, it is necessary to get public and political “buy in” for the new funding strategy. The public generally appreciates transparency in how resources are spent for all taxes collected, and clarity of rationale is even more important for a special levy. In addition, there is a higher standard of accountability with this method since it will be a higher-profile funding source. A municipality must ensure it communicates how the levy revenues are spent, and report back regularly on it. Municipalities that have identified a need or goal that is important to the public, and that have successfully communicated the benefits of a special levy in meeting that need, have experienced high levels of public support for the levy.

4.1.4 MECHANICS

The mechanics of this method include a variety of potential levy collection venues, such as:

- a particular residential or commercial tax;
- a general levy on the property tax bill; or

- a rate base/utility levy for residential and/or commercial properties.

Variables to consider include time and scope. Time horizons are an important part of the method development and application. A special levy could be set up for an indefinite period, or for a specific time horizon. The time horizon chosen will depend on what the levy is designed to support and how much flexibility is needed in decision making to allocate the revenues. For example, a special levy to support a long-term goal may have no identified termination date. Alternatively, a levy collected to fund a specific project will be expected to end once the project is completed. These examples also indicate the variants of scope that could apply to this method, from a single targeted project (e.g., building a new facility), to a variety of projects and programs with a common goal (e.g., water quality protection). The time and scope, in combination, establish the flexibility and nature of the particular application of the special levy method by a municipality.

4.1.5 SAMPLE APPLICATIONS

The following examples demonstrate some of these variants in type and scope of levy. This first case is a U.S. system in which public transit is administered by a senior level of government. Portland, Oregon has an autonomous body called Tri-Met that runs the mass transit system. The state government imposes a transit tax directly on all employers (including self-employed individuals), and this funds the mass transit system. The program began in 1969. The levy is imposed only for the amount of gross payroll paid for services performed within the Tri-Met or Lane Transit District (LTD). Funds are collected through the Oregon Department of Revenue. All salaries, commissions, bonuses, fees or other items of value paid to a person for services performed within the transit district are subject to transit district taxes, including:

- contributions to a simplified employee pension;
- payments for the purchase of annuities under salary reduction agreements;
- contributions to retirement plans made at the election of the employee, including employer-matched contributions;
- payments to governmental retirement plans under salary-reduction agreements;
- amounts deferred under government-deferred compensation plans; and
- any amount deferred under a non-qualified deferred compensation plan.

The following are exempt from Tri-Met and LTD excise taxes:

- federal government units;

- federal credit unions;
- public school districts;
- non-profit and tax-exempt institutions, except hospitals;
- foreign insurers;
- all insurance adjusters, agents and agencies, as well as their office staff, whether representing foreign or domestic companies;
- domestic service in a private home;
- casual labour;
- services performed outside the district;
- seamen who are exempt from garnishment;
- employee trusts that are exempt from taxation;
- tips paid by the customer to the employee; and
- wages paid to employees whose labour is connected solely to planting, cultivating or harvesting seasonal agricultural crops.

The employer transit tax is reported quarterly. As of January 1, 2002, the tax rate is 0.6218 percent ($6.218 per $1,000) of the wages paid by an employer and the net earning from self-employment.[2] This tax is applicable to all mass transit, including buses, vans and light rail, and is an indefinite program.

Other municipalities use a levy on the property tax bill, with varying degrees of flexibility. Brisbane, Australia, for example, uses an environmental levy on the property tax bill to raise specific funds to protect local watersheds from pollution. The levy is identified separately on the bill. This objective is directly linked to a strategic environmental goal for the city. The levy has been used for a variety of projects with outcomes that are linked through the strategic goal. For example, the environmental levy has been used to construct storm water infrastructure improvements, as well as to rehabilitate old landfill sites that threaten to contaminate ground or surface water. In this instance, it can be used for different projects from year to year, depending on the need, as long as the project is linked to the overall goal of watershed improvement.
Brisbane also has a separate levy for natural habitat protection called a bushland levy. This is also on the property tax bill, and it is used to fund natural habitat

[2] Tri-Met Web site <http://www.tri-met.org/taxinfo.htm>

projects and protect the nature of the surrounding hillsides through the purchase of property and linked corridors. Properties selected for acquisition with the bushland levy must meet certain criteria, including ecological significance, size, connectivity, level of threat, opportunity to complement other outcomes and value for money.

These levies were established following general concern about regional environmental issues in Brisbane (e.g., vegetation clearing). This led city council to establish a task force to address environmental issues. The task force recommended a range of proprietary, regulatory and voluntary measures. The city advertised proposals in local newspapers and held community forums about its overall Brisbane Plan, which included the above levies to fund its environmental objectives. Overall, there was a high level of support for the levies. In addition, the city also developed partnerships with private landowners and volunteer bush care groups, and established local by-laws to protect vegetation. The bushland levy provided the revenue to purchase natural area properties, to pay for capital requirements for property management and for one additional staff member to manage the property assets. Both levies are collected on the general tax bill and administered in separate funds. Fund spending is reported to the Finance Committee quarterly. Accounting resources are provided by staff in the Finance Division and the Environment and Parks Branch. Brisbane prepares regular reports to the public on the use of these levy funds, and summary information on the levy fund is included in Council's budget reports. Brisbane recommends the identification of values, threats and priorities for identifying environmental protection goals using existing planning tools as a first stage in the process, followed by identifying the long-term strategic outcomes that are desired. This information will enable a municipality to identify appropriate measures to achieve desired goals.

Another example of a general tax levy appears in Okotoks, Alberta. Okotoks has instituted a recapitalization fee on the general property tax bill, which will be used to fund existing infrastructure replacements. The recapitalization reserve assists in funding a variety of capital projects. The levy is presented as a separate line item on the general tax bill, and is invested as part of the town's capital reserves. Interest is reinvested in the reserve fund. The levy was established as part of the annual budget and is part of the tax rate by-law. Council reviews the rate annually. The intention is for the levy to be collected for an indefinite period. Currently, the levy is not sufficient to fund the estimated depreciation of the town's asset base. Council's current three-year business plan includes the development of a comprehensive multi-year (12-year) asset management plan. This plan includes a major asset inventory, a comprehensive maintenance and replacement schedule and cost projections plus reserve strategies for future funding requirements. This information will facilitate a review of the current recapitalization levy. City administration estimates the levy may be underfunded by up to five times the amount ultimately required. However, this will be quantified in the new asset management plan. Public consultations are part of the

rate development. The public is invited to the Finance and Budget Committee's budget meetings and Council's annual budget meetings, plus there are special consultations when Council establishes the tax rate by-law. The only reporting mechanisms in this case are the annual capital budget and the annual capital project report, which are made public. Okotoks recommends conducting public consultations before a council considers a special levy, as stakeholders will identify both advantages and disadvantages of the levy.

Examples of levies for project-specific purposes are found in Winnipeg, Manitoba, which has recently approved charging specific levies by lot frontage for street and sidewalk repair. Winnipeg also has specific sewer and water renewal levies. The city recently completed a comprehensive review of financing infrastructure preservation for long-term infrastructure management. This review examined tools to finance infrastructure without raising the general mill tax rate. The report reviewed the benefits of pay-as you-go financing, and how implementing a total asset management system will demonstrate the best possible use of funds allotted to the infrastructure (Winnipeg, 2001). The recommendations of this report are still under consideration.

Halifax, Nova Scotia, among others, has specific levies for local improvements such as new asphalt, curbs, water lines, sanitary sewer, storm sewer or combined sewer upgrades. Property owners are charged by lot frontage.

Depending on the levy design and purpose, there are trade-offs between the benefits of increased flexibility from a broad goal or scope, as in the Brisbane and Okotoks examples, and public support through easily identifiable results. The public tends to be more supportive of specific projects or programs where products are obvious. For example, public support may not be as high for a levy that pays for a variety of programs (e.g., storm water infrastructure improvements) as for a levy that results in a specific facility installation or upgrade. The broader the goal supported by the levy, the more the link to community vision and priorities needs to be reinforced. In cases where the levy is applied to goals rather than projects, accountability is a larger issue, and communication of results would be proportionately more important. For example, Brisbane produces a quarterly newsletter to inform the public on what projects the levies funded.

Specific design and implementation considerations of the special levy method include:

- justification for need (an asset management plan, community goal, project identification);

- development of the levy rate (amount and frequency of collection);

- administration (whether or not to use a separate account for maintaining the fund, collection aspects and whether the levy should be a separate item on a general bill or a special bill); and

- mechanics of the levy (flexibility of use with regards to scope and decision-making authority, time limitations, e.g., sunset clauses, and a communications plan, e.g., consultations before consideration of a special levy and reporting of results).

4.1.6 COSTS

Municipalities would have to consider the costs involved in establishing a special levy. They can be considerable, especially for the initial public consultation to gain support for the proposal, unless it is co-ordinated with strategic planning or another consultation process. In addition, there would be administrative costs and costs associated with communicating results to the community to demonstrate responsibility and accountability for the special levy.

4.2 APPLICATIONS

This method is potentially applicable to any infrastructure or environmental funding need of a municipality. As demonstrated in the above examples, it has been applied to achieve general infrastructure development goals, transportation goals and watershed protection goals. It could be applied to a new need that a municipality has for which funding is not covered by the general tax base, or for an existing need that has been identified as a priority by the community. Although the range of applications appears unlimited, it is reasonable to assume that the ideal application would be a new or priority program linked to enhanced quality of life goals.

A key feature of a special levy is to delineate clearly what the levy is to be used for (i.e., what strategic goal it is going to achieve), and why it should be distinct from the general tax fund. This is necessary to justify the levy to the public.

4.3 LIMITATIONS AND CHALLENGES

There are communication challenges associated with a special levy. An important aspect in planning for the design of a levy includes establishing “buy in” for the new funding strategy from the public. Potential approaches to address this issue are numerous, but include surveys, workshops, focus groups and other similar consultation strategies. (Grand Falls–Windsor, Newfoundland found success in using a unique approach with external facilitators to gain public support for new rate changes and strategic planning proposals. Municipal employees were not present during the facilitated public sessions.)

There is a higher standard of accountability with a special levy, and a municipality must ensure it communicates exactly what the levy is to be used for to the public. Although it aims to achieve a strategic goal for the community,

parameters for flexibility of use need to be established as part of the package before setting up the funding mechanism. Restrictions on using the levy for other purposes should be clearly articulated.

Revenue-generating methods, such as special levies, are not very prevalent among the municipalities interviewed. Although taxes are standard practice, the transparent process for establishing special levies (involving public consultation) is relatively new. The idea is applicable to both large and small municipalities, and might be more applicable to high-growth municipalities that need to fund O&M to meet a higher service demand. If the goal or project identified is not of sufficient priority to the public, there will be difficulty in implementing this method due to public opposition to an additional tax. There needs to be a considerable amount of planning, and a strong justification of the need for the new levy. Municipalities would also have to ensure the costs associated with this approach (including consultation, administration and reporting) are justified relative to the benefits and goals.

Communities using special levies indicate it can be a very successful revenue-generating practice, and they have public support for the approach. There is greater potential for large municipalities to generate significant revenues, due to the higher number of persons and businesses that would be charged the new levy. For example, Brisbane was able to fund a $2 million sediment-removal, storm water improvement project with its levy.

The most significant limitation of a special levy is that only a small number are practical in each municipality. It would not be feasible for municipalities to have a high number of special levies, as they would no longer be “special.” However, the application potential and limitations will depend largely on the type of special levy designed. Okotoks noted that its recapitalization levy may be more difficult for high-growth communities with large property ownership changes, since people question why they should pay for replacing something they may not use.

5. DEVELOPMENT FEES

5.1 DESCRIPTION

5.1.1 APPROACH

In its basic form, this method is an economic instrument that ensures municipalities have a revenue source to fund the municipal infrastructure (e.g., roads and buried systems) required as a result of new private developments. Development fees can also be used to ensure a future reserve fund exists for operations and maintenance of infrastructure. In their basic form, development charges are not particularly new or unique; however, they can be used innovatively by municipalities to influence development in accordance with the community's strategic planning and economic goals. Ultimately, a well-designed development fee structure is a tool linked to planning processes for the delivery of infrastructure that suits the community's vision and for which new needs are proportionately funded by new users of the infrastructure.

5.1.2 OBJECTIVES

Development fees or development cost charges (DCCs) can strategically influence development in a community by affecting the urban form of the city. As a minimum, they can be set as a straightforward cost-recovery mechanism. Development fee structures can influence:

- whether or not development actually occurs;
- the amount of funding revenue collected to cover the current costs of the new infrastructure;
- where development occurs to suit the desired land-use planning goals of the community's official plan;
- whether existing infrastructure is used optimally (i.e., encouraging infill or developing greenfield areas); and
- infrastructure design or innovation.

5.1.3 CONTEXT

Generally, the ability of a municipality to set development fees is outlined in its local government act, which is established through provincial or territorial authority. The municipality then establishes a by-law for the development fee structure. Such systems are becoming more popular across Canada due to the changing role of municipalities. Downloading from senior levels of government has made municipalities responsible for more services without a concomitant increase in revenue sources. Currently, only Ontario, British Columbia, Alberta and Saskatchewan have DCC systems through provincial legislation, although it

is reported that Nova Scotia and Quebec are in the process of developing DCC systems.

Terminology for DCCs varies. In Alberta, DCCs are called "lot levies"; in Saskatchewan they are "development fees." In British Columbia and Ontario, they are called development charges or DCCs.[3] There are variations from province to province with respect to what infrastructure can be funded from DCCs.

Typically, new private developers are required to pay development fees to municipal governments to cover the capital costs of installing certain municipal services. The need for the services is affected by the development of lands, or the alteration or extension of buildings, by private developers. Typically, local government acts permit DCCs to be established to provide, construct, alter or expand facilities related to the following local government services (B.C., MMA, 2000).

- roads/highways (depending on system);
- sewage treatment;
- water services;
- drainage; and
- parkland acquisition and improvement.

DCCs are typically payable by parties obtaining an approval of subdivision or a building permit. They do not normally include soft services, such as childcare, housing, fire protection and police. However, some B.C. municipalities have enacted legislation (e.g., the *Vancouver Charter* and the *Resort Municipality of Whistler Act*) to enable them to establish similar charges for certain soft services (B.C., MMA, 2000).

In developing DCC by-laws, local governments must consider the specific responsibilities outlined in their local government act, along with any exemptions that may restrict the use of DCCs. Non-profit buildings, such as churches, are often exempted, for example. It is important to consider policy issues as well as technical issues, such as whether DCCs could be used for purposes other than the exact works for which they were collected. Additional policy issues to consider include (B.C., MMA, 2000):

- level of service;

[3] Phone interview with Ray Tomalty, May 7, 2002.

- housing affordability;
- equity between existing taxpayers and developers or newcomers attracted by development;
- the projected amount of new development; and
- the utility services required to support the projected development.

5.1.4 MECHANICS

To establish DCCs, consideration should be given to:

- the DCC approach to rate setting (i.e., flat or variable rate, rate based on housing type, house size or lot size or occupancy);
- land zones, areas and classes (i.e., location of desired development);
- timing of charge payable;
- land value;
- land use goals (i.e., amount of desired development, density, location, restrictions); and
- other infrastructure goals (i.e., capacity plan for certain services).

There are two common approaches to the development of a DCC rate structure. The structure can either be "municipal-wide" or "area-specific" (sometimes called "marginal cost approach"). Each has different influences on the calculation of charges and, therefore, can influence broader development goals.

Under the municipal-wide charge structure, the same DCC rate is applied for a particular type of land use throughout the municipality, regardless of the location of the development. For example, the DCC for an apartment unit is the same across the municipality, as is the charge for a single family home and for a townhouse. This approach is based on the assumption that similar land uses generate a similar, or the same, capital cost burden and, therefore, should be treated equally. A development charge for sewers, for example, would be the same on a single family home 20 kilometres from the treatment plant as a single family home right beside the plant (Tomalty, 2000). This approach also has certain political appeal in that all geographic areas are treated the same in terms of development potential.

The area-specific charge refers to different rates being assigned to the same class of land development, depending on factors, such as geography, zoning or certain infrastructure needs. For example, an area requiring specialized storm water

treatment could have different DCCs than other areas without that level of infrastructure need. A second example would be a residential development along a transit line that has significantly lower DCCs than another development farther from the public transit system. This type of DCC structure can encourage compact nodal development or infill, in keeping with the official land development planning and transportation demand management goals of many municipalities.

With both of these approaches, DCC rate setting can be determined by dividing the net capital infrastructure costs attributable to new development for a given period by the corresponding number of projected development units (or areas) in that same period. This can be done for both residential and non-residential land uses (B.C., MMA, 2000). This calculation requires a population growth forecast and an estimation of servicing costs. The calculations may be done on a municipal-wide basis, or for a specific area. There is general agreement that the municipal-wide approach does subsidize suburban development, since the DCC is the same in areas where new infrastructure must be built as in existing serviced areas[4] where infrastructure construction needs are less.

5.1.5 SAMPLE APPLICATIONS

Some municipalities adopt a blended approach to use both municipal-wide and area-specific DCC combinations. For example, Richmond Hill, Ontario, calculates 20 percent of the DCC as an area-specific charge for linear infrastructure (which varies by district), while 80 percent of the rate is on a per unit basis that is the same across the municipality.[5]

Variable rate charges according to land zones or classes must be clearly delineated in the DCC by-law and, ideally, there should be a link between a municipality's land use plan and its capital infrastructure plan, with charges set accordingly (i.e., lower charges in areas of desired development). In British Columbia, DCCs can be imposed according to different zones or specified areas, different land uses and different classes of development. The Ottawa, Ontario DCC by-law waives fees in the downtown core to encourage infill. Anecdotal reports from developers indicate this absence of charge does influence them when considering development potential in the downtown core.[6]

Land zoning is a primary driver of development patterns, and this must be given careful consideration when variable DCC rates are set. Land value at market rates is also an important factor. When raw land prices are low, high DCCs force housing prices upward and make lower density housing less affordable for buyers (Skaburskis and Tomalty, 2001). This may suit the development objectives of a municipality, or it may require DCC adjustment.

[4] Ibid.
[5] Ibid.
[6] Ibid.

Calgary, Alberta uses DCCs for new capital infrastructure in zoned areas. The city is not using variable rates, but infrastructure-specific rates, which are negotiated annually with the Urban Development Institute in accordance with average costs of servicing. Calgary does have growth area management plans (GAMs) that are non-statutory plans stemming from the Municipal Development Plan (MDP). The GAMs identify the required infrastructure services in new development areas and are used to co-ordinate budget approvals for specific projects. For new infrastructure development, Council approval is mainly a political decision that involves three choices: open new areas and build new infrastructure to accommodate growth, open up new areas with the knowledge that some service levels will be lower or do not open up new service areas. This line of thinking is primarily influenced by lessons from the 1970s when the city did not accommodate population growth in the housing development sector, and housing prices soared as a result. The option to consider lower service levels recognizes that public perception of the adequacy of levels of service can vary depending on expectations developed by such things as existing infrastructure and housing locations.

Housing characteristics, such as single homes or apartments, should be factored into DCC rates. Flat charges, on a per-dwelling-unit basis, penalize higher density projects. The rate schedule could distinguish between small and large houses. It could also be based on lot or building area size instead of being on a per lot basis, to encourage certain urban forms, increase density or meet other municipal goals. DCCs are rarely charged on a square metre basis; however, this is starting to emerge in Canadian municipalities as one way to cover increased service costs for large commercial or industrial facilities.

Municipalities, such as Ottawa, have adopted by-laws that differentiate between dwelling types. Ottawa charges higher rates on single-family dwellings, lower rates on townhouses and the lowest rates on apartments (Skaburskis and Tomalty, 2000). Windsor, Ontario is also using DCCs in this manner. It charges $3,000 for a single residential unit, $2,400 for a townhouse/row/duplex unit and $1,500 on apartment buildings. Windsor charges $0.90 per square foot for other non-residential development, for equitable distribution of service costs. Victoria, British Columbia charges $0.26 per square foot for building permits (Winnipeg, 2001). The City of North Vancouver also charges DCCs based on the area of the building.[7]

Rate timing is significant in setting DCC systems. DCCs levied at the time of redevelopment increase construction costs and induce developers to delay until housing prices rise high enough to cover these costs. The delay could raise development densities because property values increase with time, making it important for developers to recover higher costs through more units.

[7] Ibid.

It is possible for rates to be set in accordance with a municipality's land use planning goals. DCCs can be used to direct development toward desirable regions (Skaburskis and Tomalty, 2001). Land use planning techniques, such as encouraging nodal development through a variable rate DCC paid by the private developer, could be used to encourage development according to the official plan. An official plan might have goals of infill development in serviced areas or nodal subdivision development. DCCs could encourage this type of development by making infill incrementally less expensive than developing off-grid or outside of priority subdivision areas. Annapolis County, Nova Scotia encourages infill in all the municipalities and villages it administers to reduce pressure to construct new infrastructure. The county charges DCCs for development off grid only. Provincial ministries of municipal affairs in British Columbia, Ontario and Quebec have adopted positions, policies or legislation in favour of more compact urban forms, and it is reported that planning officials in many municipalities support intensification as a policy goal.[8]

Surrey, British Columbia encourages nodal development in its five town centres. The municipality uses the fund to generate 95 percent of the city's capital infrastructure growth needs. The goal is to use these funds for future infrastructure needs. DCCs are averaged on a municipal-wide basis, but the rates vary as to the type of development (e.g., residential, industrial) and the category of infrastructure needs (e.g., roads, drainage, sewer, water). In the past, Surrey promoted development in a particular area with area-specific DCCs. The municipality is now looking at the feasibility of doing so again; however, to do so, it needs to negotiate with the Province of British Columbia to fine-tune the by-law details. This separate DCC would be collected and spent only in that one particular area, and would have a rate separate from the rest of Surrey. The first step in establishing this system is to prepare a 10-year plan that is adopted by Council. This proposed plan includes:

- growth projections for the next 10 years;
- the impact of this growth on current infrastructure;
- an outline of specific infrastructure that needs to be developed (e.g., roads, drainage, parks acquisition) to the required 10-year level; and
- the specific costs to take current infrastructure to the 10-year levels.

Surrey would then set the rates based on this information and prepare a by-law to be adopted by Council. The by-law then has to be approved by the Inspector of Municipalities (Province of British Columbia) before it becomes law.

[8] Tomalty, 1997 as cited in Tomalty (2000).

Austin, Texas uses DCCs (called impact fees) to encourage growth according to its municipal land use planning goals. The city uses a smart growth matrix as a tool to assist Council in analyzing development proposals within the desired development zone. A points system measures how closely a development project matches the city's smart growth goals. Factors considered include:

- the location of development;
- proximity to mass transit;
- urban design characteristics;
- compliance with nearby neighbourhood plans; and
- increases in tax base, and other policy priorities.

If a development project, as measured by the matrix, significantly advances the city's goals, financial incentives are available to help offset the high cost of developing in urban areas. These incentives may include a waiver of development fees or public investment in new or improved infrastructure, such as water and sewer lines, streets or streetscape improvements, or similar facilities. Incentives available under the smart growth matrix require Council review and approval. A full account of the points system applied to developments in Austin is available on its Web site.[9]

Brisbane, Australia is establishing a plan to lower or waive development charges for developments not connected to the storm sewer or sanitary sewer system, that use alternative water management systems to recycle rainwater for domestic household use. The city's goal is to avoid having to build a new sewage/storm sewer treatment plant. The program has been formalized into the Integrated Water Cycle Management Program. (Further details on this program can be found in the description of utility models.)

Okotoks, Alberta requires developers to submit comprehensive land use plans with minimum targets for housing and commercial development on blocks of land. Developers must meet or exceed the targets for Council to consider the plan. Council has refused requests to revise zoning, thereby ensuring the desired mixed residential and commercial densities.

Halifax, Nova Scotia plans to implement DCCs (called capital cost contributions) soon. Last year, the city conducted public consultations regarding changing current requirements. Currently, developers pay only for construction of local streets and sewer systems within their subdivisions. The new system would see developers pay for a share of expenditures required to expand water systems,

[9] City of Austin Web site <http://www.ci.austin.tx.us/smartgrowth/matrix.htm>.

wastewater facilities, storm water systems and additional streets or roads, as well as upgrade intersections, traffic signals and bus bays.[10]

5.1.6 COSTS

There may be administrative or political costs involved in establishing development fees. Discouraging development in undesirable areas can be an important practical and political problem. The pressures and incentives for development in most high-growth municipalities are high enough to offset most additional costs.

A variable rate approach is more conducive to equitable development of infrastructure services (capital and O&M). Variable rates can use elements such as the number of square metres of the development, housing type or lot size, among others. These factor into housing prices, so it may be more affordable to purchase townhouses or condominiums, and the municipality achieves its planning goals of increased density. However, there may be costs involved in establishing such a system, as the administrative complexities might be time intensive. Some municipalities might feel the internal costs of calculating variable rates outweigh the benefits. In addition, the costs may be higher for municipalities to defend the variable rate to developers or to third parties, such as the Ontario Municipal Board. Municipalities using DCCs indicate they are successful revenue sources to cover costs and can assist in achieving land use planning goals or other corporate goals.

5.2 APPLICATIONS

In general, development charges are a well-established practice. However, their strategic use as incentives for infrastructure-friendly development is less common. The approach is not new, but the ability to use it in different ways to achieve different land use goals is potentially innovative. There may be opportunities to use variable DCCs or to increase DCCs to fund a larger proportion of associated infrastructure costs (capital and O&M). The practice is applicable across all municipalities. In some instances, DCCs could have social implications in demand-driven markets with rapidly rising land prices, because the burden of the DCC translates into higher housing costs, and new housing prices can impact existing housing prices.

DCCs can change the extent to which developers substitute land for buildings and, thereby, the density of the built form, the spread of cities and the mix of land uses. The schedules of rates and fees can promote or discourage city sprawl directly by favouring compact or less dense projects (Skaburskis and Tomalty, 2000). Ideally, DCCs can be set to achieve a strategic land use planning or infrastructure objective.

[10] City of Halifax Web site <http://www.region.halifax.ns.ca/mediaroom/pressrelease/pr2001/011214capcostsurvey.html>.

An important consideration in designing a DCC system is the equitable allocation of costs for developers versus benefits for existing users of new infrastructure. Equity is difficult to achieve through a municipal-wide fee structure; however, variable rates may require case-by-case assessment, which is time consuming. With the traditional municipal-wide approach to setting DCCs, there are no links between fiscal planning and land use planning. In addition, a variable rate approach, using elements, such as the number of square metres of development, housing type or lot size rather than housing type, may have a more equitable development result. An important issue to consider with any DCC system is the link with municipal goals of growth, development or employment.

5.3 LIMITATIONS AND CHALLENGES

The area-specific approach to DCC rate setting is more difficult to defend if challenged by developers since some of the reasons for the variable rates may not be directly related to the infrastructure costs for new growth. Politicians may be reluctant to charge different rates in different areas for fear of being seen as favouring certain areas or constituents over others. It is also possible that developers would object to restrictions or "red tape" associated with a more complex DCC structure. In addition, area-specific charges have not typically been linked to planning goals to influence spatial development patterns[11] and, therefore, this new approach may take some trial and error with respect to rate structure to influence development in the desired way. Fiscal instruments have not typically been seen as part of strategic growth management plans.[12]

To be successful from a municipality's perspective, the DCC by-law must clearly delineate the charge to be applied to land classes, zones and types of development. Developers in Ontario, for example, often challenge a municipality that attempts to recoup costs not directly associated with development, such as off-site infrastructure upgrades required to increase capacity at a community-wide level.

Municipal planning goals are only one element of price systems that influence developers in their plans. Other factors include location, timing, land values, building taxes and property taxes.[13] Property taxes, in particular, are another fiscal instrument determined, in large part, by municipal policy, which can work to counter effects of DCC structures. The DCC structure and effects should be reviewed periodically to assess whether the DCCs are working in concert with, or in opposition to, property tax assessments.

[11] Phone interview with Ray Tomalty, May 7, 2002.
[12] Ibid.
[13] Ibid.

For DCCs to influence desired characteristics, the differences in DCC rates have to be large enough to matter materially to developers (Skaburskis and Tomalty, 2001). In some municipalities, strong political will would be required to maintain large differential DCC charges.

6. UTILITY MODELS

6.1 DESCRIPTION

6.1.1 APPROACH

Municipalities have begun exploring innovative practices for charging user fees for some traditional municipal services. A utility model exists where user fees collected are dedicated to the service, and the service is managed autonomously relative to other municipal services. Such practices are well established in many municipalities for potable water services and sewage treatment. However, two other services are also emerging with high potential for utility model approaches: storm water management and solid waste management. Some transportation infrastructures, such as toll bridges, are also being managed on a cost-recovery basis. However, these are not typically considered "utilities"; the term "utility" applies more typically to services brought to, or coming from, individual properties.

The utility model entails management of capital assets, operations and maintenance on a cost-recovery basis through fees for service. The fee for service must be sufficient to fund the needs of the infrastructure and overhead operations, such as administration, bill collection and management. Only users of the service support the service through the fee for service. The amount paid by users is normally proportional to their use of the service.

As capital grant programs from senior levels of government decline, the attractiveness of user fees increases, since it is seen as an equitable way to recover the costs of services. Asset management programs and demand management techniques may be easier to implement with the utility model than for services managed as part of the broader municipal organization. In addition, demand management and fees for service can encourage other social and environmental benefits, such as a raised awareness of service benefits and resource conservation. A utility model approach also allows for life cycle asset management approaches to be more easily implemented due to long term, predictable and reliable funding. This mechanism could be implemented at a municipal level in association with local utilities (public or private utility operators).

6.1.2 OBJECTIVES

Utility models are an approach that balances supply and demand, and can be self-financing. They entail allocating the costs of certain services to users for the use and benefit they derive from the service. Such charges could be based on volume of water used, area of property serviced, or volume of waste created, for example. Ideally, this would be done in the context of aligning a level of service with broader municipal goals for affordable services that meet community needs for development and economic planning, environmental protection and social and health needs. For shifts to a utility model to be fairly reflected in taxation levels,

it is important that the existing general tax mill rate be reduced by an equivalent amount for the pre-user-fee level of mill rate support (Winnipeg, 1998), once utility user fees are adopted.

The user fee is a specific charge for a certain service that is clearly separate from general taxes. User fees can be tailored to encourage certain user behaviours (e.g., resource conservation) which, in effect, can reduce the overall costs of services (depending on the ratio of fixed to variable costs). Advantages include:

- allocating costs for a service more accurately to the users;
- presenting the costs of services in a transparent fashion;
- securing a revenue stream for the service; and
- allowing for demand management approaches that are difficult to develop otherwise.

This method can result in a more equitable and fair alternative to other financing mechanisms,[14] such as broad property tax-based charges.

6.1.3 CONTEXT

This is a cost-recovery mechanism for a service separated from other municipal services. It is more easily applied to utility-type services that supply individual homes and buildings, as utility services are more easily separated from the general tax mill rate than services, such as fire protection and parks, for example. Utility services have separate administration, planning, O&M, and capital budgets. Utility models can be incorporated into bundled services. They can be delivered through public, private or public–public partnerships, and they can be directly owned by municipalities or leased utilities.

A method for measuring the use of the service by each user is key. For example, water meters reflect the actual use of the service (Moraru-de Loe, 1997). A utility model can easily be applied to potable water services for residential, commercial and institutional sectors through water meter volume. This is a standard practice for water service billing. Potable water services are the most common application of the utility method in municipalities; however, the full use of water meters is fairly underused in Canadian municipalities since, traditionally, access to fresh water has not been a major public concern. Direct volume meters might also be applied to sewage treatment, but due to technical difficulties, wastewater utility charges are more typically calculated proportionate to volume of potable water consumed.

[14] Apogee Research, 1997, as quoted in Cameron et al. (1999).

There is an emerging approach to apply a utility model to storm water management services, in recognition of the substantial costs for storm water-related capital works and the operating costs of the capital infrastructure. Storm water user-pay financing represents a significant change from current financing mechanisms.

In most Canadian municipalities, including Ottawa, storm water revenues are typically generated through a combination of property taxes, DCCs and surcharges on water bills.[15] Direct volume meter readings are not feasible for storm water, so fees for service to date are calculated based on lot size. In some sophisticated storm water fee models, additional lot features, such as imperviousness, slope and soil type, may be taken into consideration.

The utility model method is being applied in theory to solid waste programs. These are not typically run as separate utilities, although they could be. The idea would be to charge for waste collection per bag generated, but to provide full recycling collection services through the general tax fund. The system could include a variant of user pay, whereby there is a bag limit collected under the general tax system, and generators must buy special tags for additional bags. Use of this system is aimed more at demand management than revenue generation to cover costs. Demand management is important to prolong the life of existing landfills, which defers significant waste management costs.

6.1.4 MECHANICS

As stated above, utility models can be applied to several utility types. Charges may take a number of forms, and may depend on the stage in utility model development of the municipality:

- direct user charge on the basis of volume used or service provided;
- levy by property size; or
- charge per unit in excess of a baseline, initially to encourage behaviour change.

The factors to consider in designing and implementing a utility model program include (Minnesota, 2000):

- estimation of the revenue requirements;
- administrative structure (public, private, partnerships such as public–public or public–private, own–lease);
- what the fund will cover (O&M, capital costs, both);

[15] Ibid.

- the fee/levy/rate base or structure;
- the organizational form of the fee/levy/rate base;
- the development of goals and a comprehensive plan for the utility program;
- demand management aspects;
- best management practices;
- billing options (monthly, annually, separate or on other utility bill);
- assessment of political climate and selling of idea;
- development and adoption of utility legal ordinances such as statutory authority, definitions, exemptions, adjustments, credits, administrative procedures (payment and collection, delinquent accounts) and use of revenues;
- implementation of a staff education program (to address customer questions);
- environmental protection (e.g. source protection);
- public information program (during both the planning and implementation stages); and
- subsidies.

6.1.5 POTABLE WATER APPLICATION

The utility model is often applied to potable water services through water meters and full-cost, volume-based user-pay systems. Water meters with associated full-cost, volume-based user-pay systems allocate the cost for O&M of a service more accurately to the user of the service, so those who consume more of the resource will pay more for it. The key feature in this application is ensuring the rate covers the cost of the service, which includes the full costs of the annual O&M as well as rehabilitation and replacement costs.

This mechanism could be implemented at a municipal level in association with local utilities. It does not necessarily increase revenue but can provide excellent demand-management opportunities. With less water being consumed, existing plant capacity will suffice longer. Thus, water meters and water demand management may be a means of capital investment deferral. A number of municipalities have 100 percent residential and commercial water use meters in place. These include Yellowknife, Northwest Territories; Okotoks, Alberta; Halifax, Nova Scotia; and New Glasgow, Nova Scotia.

6.1.6 STORM WATER APPLICATION

The utility model for storm water management services is more popular in the United States than in Canada. Over 100 municipalities in the United States have implemented user-pay approaches to storm water management, with 66 percent of them based on utilities; 34 percent operate through municipal public works departments. Monthly residential bills are in the range of US$1 to US$4 for most programs. Nearly 60 percent of these programs are based on estimates of impervious property area, with remaining programs based on location and size of residences, or on water consumption rates (Cameron et al., 1999).

Portland, Oregon has been operating a sewer and drainage utility since 1977, and charges specific storm water utility fees to cover the costs of planning, O&M, and capital improvements specifically for services related to flood control, drainage, watershed health, environmental restoration and protection. The storm water management fee appears on one utility bill along with a fee for the sanitary sewer service, and a potable water utility fee. The city's approach is to set the storm water utility rates in a way that achieves the greatest degree of equity for its customers while keeping administrative costs within the customer billing system reasonable. The rates factor in the estimated amount of impervious surface area for residential, commercial and institutional properties, as a measure of units of drainage service. The basic impervious area (BIA) is used to represent the responsible customer's volume of storm water run-off to the city's storm water drainage system. It is measured in thousands of square feet. This measure keeps the costs of administering drainage service billings reasonable, although other parameters affect the precise level of drainage service. These include the slope of the property, the amount of semi-impervious area, soil type and access to, and use of, the public right of way (Portland, 2001a).

As a full sewer and drainage utility, services provided are divided among the following four primary service parameters (the last two relate directly to storm water service) (Portland, 2001a):

- sanitary sewage flow (managing volume);
- sanitary sewage strength (purification, measured by biochemical oxygen demand and suspended solids);
- drainage service (drainage utility costs, managing volume and quality of urban run-off); and
- account service (administration and special monitoring services for industrial customers).

Allocations of service to combined sewer overflow (CSO) areas are difficult to make, and are usually split between sanitary sewage flow and drainage service parameters.

The utility makes transfers to a rate stabilization fund and a sewer construction fund from its operating revenue. This money is invested and interest is earned as income. Revenues, in addition to service charges and fees, are needed to finance the services delivered by the utility, and these are derived from systems development charge revenues, wholesale service revenues and transfers from the rate stabilization fund. Riparian properties had been exempted from monthly storm water charges but a storm water management fee is now being charged for such properties. The city is expecting to generate revenues of up to US$700,000 from this change. The system development charge (SDC) revenues are designed to recover an equitable share of service costs associated with new development, so new customers actually pay a portion of the costs of major sanitary and drainage system facilities that serve the entire community (through SDCs and connection fees). These are, in fact, two separate revenues: one for sanitary system development and one for storm water system development. Both are calculated in similar ways, and involve a present value replacement cost for facilities. The storm water SDC also factors in the provision for the capacity to drain the public right of way, and for draining excess run-off from properties adjacent to the right of way. These factors include (Portland, 2001a):

- collection, conveyance and treatment of storm water flows from properties;
- collection, conveyance and treatment of storm water flows from public rights of way; and
- access to individual properties on local streets and use of arterial streets, unimpeded by flooding. It also includes protection of individual properties from hazardous materials spills in the right of way and protection from flows originating elsewhere.

Total storm water charges are divided between on-site and off-site costs. On-site charges represent the portion of total costs for facilities handling storm water flows from individual properties. Off-site costs represent the portion of total costs for facilities handling storm water flows from public rights of way. Off-site costs are further split to reflect the various benefits received from facilities draining the right of way: drainage of arterial streets and access to individual properties. Access to individual properties is calculated based on the amount of impervious area for each type of street, and adjusted for the portion of arterial streets used for access to properties (which is measured by the number of daily vehicle trips) (Portland, 2001a). Interesting to note is that state legislation does not allow for SDCs to cover the costs of future facility construction.

In addition to the storm water utility approach, Portland offers several financial incentive programs intended to encourage property owners to reduce storm water volumes. The first program was the Downspout Disconnection Program. It began as a pilot in 1993, and has grown into a cornerstone program to reduce volume in CSOs, thereby avoiding the need for new treatment facilities. The program

provides a cash subsidy to property owners in the amount of US$53 per downspout disconnected (privately) to avoid sewer overflow problems. Property owners have the option to disconnect themselves and apply for a rebate, or have it done by a city-approved community partner, at no cost to the property owner. The city's Bureau of Environmental Services had estimated that the sewer utility could avoid millions of dollars of future costs for designing and building the large containment and treatment facilities that would otherwise be required. More than 10,400 homes have taken advantage of the rebate program, and another 15,000 homes disconnected their downspouts without participating in the rebate program (Portland, 2001b, Exhibit C).

Portland is also developing a new program called the Clean River Incentive and Discount Program, which will offer a rebate program to encourage private on-site storm water management on all ratepayer properties. This program will offer a rebate according to run-off volumes from roofs and paved areas, and encourage private storm water management techniques, such as dry wells, soakage trenches, eco-roofs, trees and hedges, and other city-approved devices (Portland, 2001b).

The only major Canadian city to implement a storm water user-charge program fully is Regina, Saskatchewan. Since 1992, the city has charged user fees based on estimated total property area. Typical residential properties pay about $3.50 per month, and large properties pay proportionately more (Cameron et al., 1999).

Calgary, Alberta will most likely be the next Canadian city to implement a similar program. Calgary introduced a storm sewer upgrade program in 1994 to help finance storm sewer projects to reduce flooding. A monthly fee of $1.15 was levied on all customers connected to the sanitary sewer system. This was increased to $1.48 in 2001 as a supplement to the Infrastructure Canada Alberta Program (ICAP) funding, and will remain in effect until 2006 when ICAP funding ends. Council had to amend the sewer service by-law to enable the city to charge sanitary sewer customers for these improvements. Customer billing was a flat fee, and was easy to implement by the utility billing provider.

City of Calgary administration is also investigating the possibility of establishing a storm sewer utility for user fees, which would charge customers according to lot imperviousness (i.e., how much water is able to run off their property during rainstorms). There is a possibility that Calgary will estimate the amount of impervious surface area by lot size using algorithmic equations. They see this as a method of collecting levies to cover the costs of controlling flooding by charging on the basis of the causes of flooding. The fee structure for this program would need further study to quantify the cost of data collection, database development and maintenance, as well as billing and implementation issues. Historically, Calgary's drainage budget was financed from general tax revenues. The storm water utility would include administration, planning, design and engineering, O&M, regulation and enforcement, construction and water quality management services. The main reason for preferring a utility approach for storm

water is that utilities are a stable and secure source of funds. Public works officials also believe the utility approach is more equitable. The city has hired a consultant to review future financing and governance options related to storm water management; the results are expected later in 2002. This will feed into the city's development of a long-term strategy for storm water management. Before implementing any changes, the city plans to undertake a public consultation program.

Brisbane, Australia is trying to avoid having to build a new sewage/storm sewer treatment plant, and decided on an incentive program to encourage residential use of rainwater barrels for domestic uses, such as lawn watering and dishwashing. The program was formalized as the Integrated Water Cycle Management Program, and Brisbane is now conducting pilot projects in new residential greenfield developments, where alternative systems of water service and water cycle management are being explored for wastewater, storm water and recycled water flows. For example, the rainwater from rain barrels could be filtered and connected into the house system. (Grey water would be piped into the house to be reused, in flushing toilets or washing dishes for example. Conversely, used dishwater or bath water could be piped outside for lawns or gardens.) In fact, the intent is to lower developer charges to a level that reflects the impact the new development has on the system. If there are no connections to the storm water system, there are no developer infrastructure charges. This calculation will be dealt with on a case-by-case basis. It is the intention of the program to roll the initiative into the developed areas of the city as well. Knowledge gained from these pilot projects will allow Council to create new policy initiatives. Council members are aware that aspects of local regulations may be affected with these policy changes, and they will deal with these as needed.

6.1.7 BUNDLED SERVICES APPLICATION

In New Glasgow, Nova Scotia, a package of services was developed, including several utility operations that provide regionalized utility services including potable water, sewer and solid waste, and transit, roads and police for a neighbouring town. A feasibility study showed it made fiscal and administrative sense to provide certain services as a package in partnership rather than amalgamate or independently contract services. Essentially, one town provides a contracted package of services to the other, at a higher level of service and less cost.

6.1.8 COSTS

Developing a utility model from scratch could carry some significant up-front administrative costs and require financial resources. Time and expertise for research into appropriate methods along with revenue estimates, planning, consultations and the development of legal ordinances would be required. However, a municipality would be able to assess the long-term economic benefits of having such a system in place through the research involved.

In the Portland example, the use of aerial photography is conducted in association with other facility-planning activities and, as such, it is not solely conducted for the purpose of storm water management estimates of impervious areas. Portland considers the costs of the program relatively small compared to the benefits of identifying properties subject to higher costs (and thereby, higher revenues).

From a public communications perspective, a utility approach to providing services is relatively easy to explain, and the issues of equitable payments assist in selling the idea. This should aid in public communications efforts, although it may not reduce the costs of consultations.

Some utility methods mentioned above are not fully operated as separate utilities and, therefore, would be less costly to establish. The work involved in some of these programs could be a first step toward running services as separate utilities. This appears to be the approach of some municipalities when they begin to institute charges for storm water management. Similarly, the installation of water meters requires a certain level of up-front investment, but the pay back of not having to build a new plant to cover the growing demand can be significant.

6.2 APPLICATIONS

Although water meters have been used for some time, the practice has still not been adopted in most municipalities. In some places, commercial meters are in place, but residential meters are not. The practice is applicable to all types of municipalities, to help maintain the same level of service and reduce the requirement to expand capacity in the long term. References from Environment Canada indicate that households with water meters and full-cost, volume-based user-pay systems use, on average, between 34 and 39 percent less water than households without meters (EC, 2001).

Although there are a few Canadian examples of storm water utility models, the most innovative approaches are not very prevalent among Canadian municipalities. All types of municipalities could potentially benefit, depending on revenues needed, community expectations for demand management, and other community social and environmental priorities. Benefits of the storm water utility model include (Minnesota, 2000):

- equitable method of collecting funds for surface water management (properties that contribute more to run-off and pollutant load pay for the service);

- a predictable and dependable amount of annual revenue dedicated to the implementation of surface water management, and no competition with other governmental services for general revenues; and

- dedicated revenue that allows for the orderly implementation of surface water management projects and activities, and long-term planning.

6.3 LIMITATIONS AND CHALLENGES

The major difficulty in applying the utility model approach is public acceptance in areas where services are being delivered at rates subsidized by the general tax base, or by overall deterioration of capital asset value. The issues regarding the administrative logistics to establish a utility system can also be time consuming and require long-term planning. Implementation of meters and administrative systems can require significant time and resources, along with public co-operation and access to homes.

Other than addressing these logistical and start-up issues, the use of utility models is only limited by the number of municipal services that can be equitably managed on a user-fee basis. Other than water, sewer, storm water and garbage, municipal services to homes are limited. Future innovations in the use of utility models are likely to arise in the way fees are applied to these services, rather than through the application of this method to new utilities.

7. OTHER ALTERNATIVE FUNDING MECHANISMS

This section presents other methods of alternative funding, but does not develop these methods fully.

7.1 SPONSORSHIPS

7.1.1 PROFILE

Corporate sponsorships allow private companies to get some form of public recognition through advertising, signage or monuments, for example, in exchange for significant donations or strategic funding arrangements to cities to pay for the O&M of facilities or recreational areas. The approach could also include the involvement of local groups and organizations in the actual labour for O&M of recreational areas. Sponsorships typically increase the profile of the private contributor or group among members of the public. The technique can be used in any type of municipality, for a variety of aspects of O&M needs. It could also involve expertise or, in some cases, a form of capital investment, such as energy retrofits (see the example below). Generally, a municipality fosters such arrangements to reduce its O&M demands.

7.1.2 EXAMPLES

Okotoks, Alberta is encouraging private or corporate sponsorship or donation of land for environmental reserves, open spaces or recreational areas. The Okotoks Rotary Club helped raise funds and install pathways along the Sheep River. Neighbourhood groups donated their time to revitalize parks (e.g., tree planting and playground equipment installation). As well, land was purchased or donated along the Sheep River Valley and escarpment for conservation. To aid in forest preservation, the town created an urban forest life cycle management plan that includes a planting demonstration of drought-tolerant native species. In 1998-2000 the town completed an energy audit with the assistance of the Pembina Institute of Appropriate Development and has implemented an aggressive retrofit program funded, in part, through the Alberta Municipal Partnership program. New, higher-efficiency mechanical and lighting equipment was installed to reduce energy consumption and decrease carbon dioxide emissions. The cost savings achieved through decreased energy consumption were placed in a revolving fund for other energy efficiency projects. The town continues to pursue innovative technologies to reduce energy consumption including solar heated make-up air in major facilities.

In 2002, after two years of testing and pre-design work, Okotoks, Alberta initiated the detailed design and construction of an integrated wastewater treatment facility. A unique combination of proven technologies will eliminate digesters and sludge handling, create class A/B compost, reduce plant size by approximately 30 percent and typical operating costs by up to 50 percent,

increase life cycle and operating performance of the existing treatment stream and improve the work environment for employees.

St. John's, Newfoundland has a successful program to manage an extensive walking trail system throughout the city. The program involved development of the trail system, shelters, signage and lighting, along with O&M by members of the community and special interest groups. The trail system has become a popular method of commuting to work in the city.

Winnipeg, Manitoba is pursuing corporate sponsorships for municipal parks to help cover O&M costs.

7.1.3 ASSESSMENT

Sponsorship does not appear to be very prevalent among Canadian municipalities; however, given that management of parks was not examined in detail, it may be more common than it appears. Although the quest for "donations" is not particularly new, the idea of granting recognition for support and associating a public or private organization with a specific infrastructure is relatively new and has great potential for many municipalities across the country. Sponsorship is applicable to both large or small and slow- or fast-growing municipalities, but it is more applicable to urban centres that have commercial cores as sources of sponsors, or large non-profit organizations that could provide assistance. Sponsorships are not a high-cost endeavour. The only difficulties would be in "selling" the idea to public interest groups or corporate sponsors. This means the municipality would have to engage in a strategic marketing initiative with potentially interested parties.

7.2 INNOVATIVE TRANSPORTATION REVENUES AND INCENTIVES

7.2.1 PROFILE

This approach involves a specific revenue structure, or funding mechanism, for road funding. This could involve an agreement in which a portion of the provincial fuel taxes collected at gas pumps is redistributed to municipalities for road O&M or capital road infrastructure. This specific approach involves negotiation with provincial levels of government and, as such, is somewhat limited in regard to being within a municipality's control.

Other options for innovative road revenue are road tolls, pavement cut fees/graduated pavement fees, advertising fees (along major routes/bus shelters/bike racks) and local road improvement with community funding partnerships.

7.2.2 EXAMPLES

Calgary and Edmonton, Alberta negotiated with the provincial government a number of years ago and were successful in securing a redistribution of provincial fuel taxes. However, the provinces are now planning on reducing the amount redistributed. Grande Prairie also receives a redistributed amount of taxes collected from the province from this program.

Portland, Oregon receives a redistribution of state taxes collected from fuel sales called the Gas Tax Rebate (GTR). However, the city indicated that the redistribution amounts are at 1991 rates, which has led to a $50 million backlog in street repair. The rebate can only be used for O&M, a limitation the city felt was unfortunate, since it would like to use the funds to develop alternative transportation networks.

Brisbane, Australia also receives redistributed fuel taxes from a senior level of government.

Cardiff, United Kingdom noted that partnerships exist with certain levels of government to operate road networks, and they often use road tolls as funding mechanisms for O&M.

Rockland, Ontario entered into a 75/25 partnership with local community residents who petitioned for local road upgrades. Surrey, British Columbia conducted sidewalk/street improvements in a 50/50 agreement with local residents (this agreement required a threshold number of residents to agree with the cost share, then all would be required to contribute).

7.2.3 ASSESSMENT

This method of redistributed fuel tax revenue is new in Canada, and Alberta and British Columbia appear to be the only provinces involved in such an arrangement. Interestingly, almost every other municipality interviewed noted that the lack of redistributed fuel tax funding to lower orders of government is a severe funding constraint in managing O&M of municipal roads. This method is applicable to every municipality, as witnessed by its extensive application in the United States. Municipalities experiencing rapid growth or large volumes of commuter traffic benefit most from such redistribution. The approach is somewhat limited in the sense that it is not totally within a municipality's control, and legally binding negotiated agreements are required. Road tolls have been predominant in the United States and in European countries for many years, but are slowly being implemented in Canada, primarily by provincial authorities. For example, the province of Nova Scotia oversees the toll structure for the two Halifax-Dartmouth bridges (via the Halifax-Dartmouth Bridge Commission), and has recently installed road tollbooths for a new provincial highway.

7.3 GOVERNMENT SERVICE PARTNERSHIPS

7.3.1 PROFILE

Governmental partnerships can take place in the form of inter-municipal partnerships, provincial–municipal partnerships or federal–municipal partnerships. Inter-municipal partnerships, termed "regionalization" of services, are viewed as an alternative form of service delivery. This method is used to manage ongoing O&M costs for infrastructure services. Full amalgamation may not be economically achievable or politically desirable for many small towns, therefore partnerships can be a solution for more efficient infrastructure service delivery. The approach would be a strategic negotiation of service delivery arrangements, on a contracted basis, between two or more municipalities, with the goal of providing (and receiving) a higher level of service at a lesser cost. This approach could take the form of a regional authority to run a service (e.g., public transit) or it could take the form of contracting out a package of services.

7.3.2 EXAMPLES

Annapolis County, Nova Scotia has a regionalized service agreement with other towns to manage solid waste and transit. Kings Transit authority was formed to provide regional transit services. Six county towns formed a regional solid waste management authority to manage a solid waste management program. It was seen as a more economical way to provide the level of service.

New Glasgow, Nova Scotia now provides all roads, water, sewer, transit and police services for a neighbouring town of 4,000. This decision was an alternative to tax increases and full amalgamation, which carried great economic disadvantages, not to mention public opposition. Building on a historic precedent of shared services for solid waste and sewer system infrastructure, the towns decided it made fiscal and administrative sense to provide other services as a package. Following a feasibility study, the two towns agreed to a contracted package of services, at a higher level of service and less cost than their individual services.

7.3.3 ASSESSMENT

This method is not very prevalent (both examples cited are in small Nova Scotia municipalities). The arrangements can be fairly creative, and could be ideal for small, rural, neighbouring municipalities. Municipalities would need to conduct research with neighbouring municipalities and determine if there are any strategic advantages in areas of infrastructure service delivery that could be attained by establishing a regional authority or a contracted partnership. There may be some start-up costs, but a long-term feasibility plan would identify the cost savings that would result in O&M. The two municipalities cited above indicated significant advantages to the partnership, including administrative cost savings and a higher level of service.

7.4 FUNDING PARTNERSHIPS

7.4.1 PROFILE

With this approach, a private company or non-governmental organization forms a partnership with a municipality often, but not necessarily, following an open competitive bid process. This arrangement could be established for road or bridge infrastructure, utilities such as water and sewer, solid waste services or recreational facilities. The partnership could be a specific infrastructure project or for a package of services, or even an exchange of services. The method typically involves private sector capital financing, often including private operation and maintenance services for a set period. The arrangement could have the municipality providing a monthly lease rate to the private contractor, a private contractor funding the service with a user rate charge or a regular municipal grant to a non-governmental organization to provide a service. A municipality usually involves a partner if the partner is able to provide the service at a lower cost, for the same or higher level of service. Often, a private partner is willing to finance the capital for a project in exchange for a set rate or lease agreement, which allows a municipality to meet a need without having to raise the capital to finance a project. This arrangement usually alleviates a certain amount of risk from the municipality, in project design and start up. Key features can include:

- capital provided up front, which the municipality would not otherwise have access to;
- the private sector assuming more risk than traditional contracts; and
- ultimately, the municipality paying for the project in the long term by giving a partner some exclusive rights in project operation.

Essentially, a partnership will allow a municipality to avoid an increased debt load, accelerate project completion, capitalize on private sector expertise and identify innovative solutions.

7.4.2 EXAMPLES

Winnipeg, Manitoba has used a public–private partnership (PPP) to finance a new bridge, and to provide O&M services for a 30-year lease. The municipality did not have the capital funds for the project, since it has a policy of not borrowing any funds for capital projects. Winnipeg saw the opportunity of involving a private partner as a solution. It also preferred that all liabilities be under the responsibility of the private operator. There was public support for the facility because it significantly reduced traffic congestion, and did not involve a tax increase.

Grande Prairie, Alberta, a high-growth area, has established a PPP with local school boards and a private developer to build a multi-use public recreational complex (including an arena) along with a school. This project included a soccer

field that was built to manage storm water more efficiently. The city contracted out the utility and parking lot capital and O&M responsibilities, but the city still financed the capital costs of the facility. They saw the opportunity for future O&M costs to be managed by partners. The city is also negotiating a regional partnership with neighbouring municipalities to form a water/wastewater utility corporation, which could provide more cost-efficient services. In addition, it is investigating the applicability of PPPs for pumping stations. Also, the city is in the process of a PPP for a co-generating electricity plant that will use waste wood from a sawmill as fuel, and produce heat for district heating. The project is a partnership with a private contractor, a private sawmill and a natural gas company. It is due to be completed in 2004. (Funding from the Federation of Canadian Municipalites was used for the feasibility study.)

Halifax, Nova Scotia is using PPPs for its organics waste collection program. The private operator is an expert in this technical area. There was an extensive bidding process involved in the selection of a firm to operate this service. Halifax is in the process of awarding a contract to four private partner firms to build and operate three sewage treatment plants. This plan will see water rate increases to cover financial increases with O&M. There is an 80 percent public approval rate for this plan.

Iqaluit, Nunavut is in the process of awarding a PPP for a package of infrastructure services involving the design, construction and operation of water/sewer treatment plants, as well as solid waste management facilities. The details of the arrangement are still under investigation by the municipality.

Hamilton, Ontario has a PPP contract for O&M for its wastewater and water treatment facilities. Hamilton considers this partnership to be an innovative arrangement.

The municipality of Grand Falls–Windsor, Newfoundland has a partnership with a local YMCA to operate a multi-use recreational facility. The town felt the YMCA could operate the facility more efficiently and economically than the municipality. The arrangement includes an annual grant of $30,000, with the YMCA paying its own utilities and labour costs from user fees. Surrey, British Columbia has a similar partnership with a local YMCA.

Cardiff, United Kingdom uses partnership arrangements to convert single-use facilities to multi-use facilities to decrease overhead O&M costs. The aim is to combine building uses in underutilized buildings, and to create more efficiently run recreational centres. A partnership merged recreational services into a school and a public recreational facility. A private partner is operating the facility.

Ottawa, Ontario is examining the feasibility of a new arrangement involving leasing access for running conduits through storm and sanitary sewers to private organizations. The private organization, in turn, would lease the conduits to other

private organizations that wish to install cables or small lines along the route. The city would benefit from the partnership agreement for the conduit, through either a cash payment for the access or through an arrangement whereby the private organization performs maintenance and cleans the sewer lines for a given period.

7.4.3 ASSESSMENT

Funding partnerships appear to be prevalent in many of the municipalities interviewed, but are not yet common practice in all municipalities. The range of services funding partnerships can be applied to are diverse, and the idea is catching on among Canadian municipalities in creative ways. It is an arrangement that can be widely applied in all types of municipalities, whether they are slow or fast growing, large or small, urban or rural. Partnerships are not costly to apply and usually provide a higher level of service at a lesser cost than the municipality was previously providing. The significance of the benefits of partnerships varies, depending on the project application. However, most municipalities found such arrangements to be very successful, and they all cited interest in applying the concept to more infrastructure services.

7.5 STRATEGIC BUDGET ALLOCATIONS

Strategic budget allocations appear to be fairly prevalent across many of the municipalities interviewed, but are not yet common practice in all municipalities. These allocations can be applied to a diverse range of services and the idea is catching on among Canadian municipalities in creative ways. It is an arrangement that can be widely applied in all types of municipalities, whether they are slow or fast growing, large or small, urban or rural. Partnerships are not costly to apply and usually provide a higher level of service at a lesser cost than the municipality was previously providing. The benefits of partnerships vary, depending on the project application. However, most municipalities found such arrangements to be very successful, and they all cited interest in applying the concept to more infrastructure services.

7.5.1 PROFILE

The method entails strategically setting aside certain moneys collected from a portion of the tax bill or a portion of a rate bill into a special fund. The special fund is invested, and interest earned is reinvested, with the goal of having a special fund for certain types of capital for future needs. Strategic budget allocations ensure a secure source of revenue in the face of declining funding, so there is improved security for certain categories of infrastructure. In contrast with the project-based ranking approaches, strategic allocations allow municipalities to recognize the cumulative needs associated with many infrastructure projects that might not be high priorities on their own. In some applications, the special fund may generate net revenues for municipalities if funds are borrowed for projects that increase the tax base. In other cases, the fund may generate net savings by funding projects that have operating cost paybacks.

7.5.2 EXAMPLES

Surrey, British Columbia has established a number of reserve funds. It has a legacy fund to be used for special projects as needed. It is available to cover the capital costs of new facilities, vehicles or equipment. The fund system is designed so the operating costs of a project will repay the fund in due time. For example, it is intended to support the appropriation of $2,000,000 to expand the Surrey Arts Centre. They also have a capital works reserve fund to be used for the provision of facilities and amenities within neighbourhood concept plan areas. In addition, there is a municipal lands reserve fund intended to support the appropriation of $7,394,000 for the parkland acquisition, the YMCA (year 2001 contribution), the Surrey Arts Centre expansion, joint venture land sales and land sale costs. They also have a parkland reserve fund. The by-law is intended to support the appropriation of $1,120,000 to acquire parkland in Surrey.

Yellowknife, Northwest Territories, is using stabilization funds to maintain an adequate level of financial resources for infrastructure, to protect against reduced service levels or higher taxes, or fees, because of temporary revenue shortfalls or unpredicted expenditures. Stabilization fund balances are maintained according to preset balance targets. A general fund and funds for solid waste management, and water and sewers target no less than 10 percent and no more than 15 percent of budgeted expenditures A reserve fund is used to set aside amounts to fund expenditures in accordance with the Capital Improvement Plan. Fund balances may be used at Council's discretion for emergencies, unanticipated economic downturns and one-time opportunities. If feasible, minimum fund balances are restored in the following year and, at a maximum, within five years. The budget must include a five-year plan to attain minimum fund balances by December 31, 2005 and, thereafter, maintain minimum fund balances.

Toronto, Ontario indicated it strategically allocates funding for economic goals, such as in business improvement areas of the city. Toronto also uses landfill tipping fees to establish reserves to help pay for legislated perpetual care programs for landfill decommissioning.

7.5.3 ASSESSMENT

Strategic allocations do not appear to be very prevalent among the municipalities interviewed. Although not particularly "creative," they do require a strong commitment from Council that can only be achieved through sustained education and presentation of a clear business case. The approach can be applied in all types of municipalities regardless of size or growth pattern. The above examples are from both a slow-growth and a high-growth city. Although the benefits for infrastructure funding are clear, there is a danger of raising expectations. Municipalities are also likely to encounter scepticism regarding the need for such allocations.

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