

## SCHEDULE "A"

### HALIFAX REGIONAL WATER COMMISSION

#### SCHEDULE OF RATES AND CHARGES FOR WASTEWATER AND STORMWATER SERVICE

**(Effective for wastewater and stormwater services rendered  
on and after March 3, 2008)**

The schedule of rates and charges set out below are the rates and charges approved by the Nova Scotia Utility and Review Board for wastewater and stormwater services as follows:

Bills other than those for a specific one time service or charge shall be issued on a monthly or quarterly basis.

Bills issued and which are not paid within thirty (30) days shall be subject to an interest charge of 1.5% per month or part thereof, or a maximum of 19.56% per annum. The amount due within thirty (30) days and the effective date of the interest charge shall be clearly shown on the bill. Charges for establishing an account and NSF cheques will be the same as for water service whether or not the customer is receiving a water service.

1. **Environmental Protection Charge**

- a. Where any property is serviced by the wastewater system and metered water service, the charge will be based on volume of water consumed and is due and payable on the same date as the water bill. The following charges apply:

Environmental Protection Charge	\$0.8404 per cubic metre
---------------------------------	--------------------------

- b. Unmetered customers and non users of the water system that are connected to the wastewater system will be billed based on the average consumption in a similar size and class of metered customer multiplied by the Environmental Protection Charge as identified in item 1(a).
- c. The Environmental Protection Charge for unmetered and non users of the water system will be billed on the same date as the water bills are rendered to metered users and shall be due and payable on the same date as the water bills.
- d. A customer to whom wastewater service is available in an abutting street or abutting service easement but is not connected to the wastewater system, is entitled to an exemption from the Environmental Protection Charge upon application to the Commission.

- e. The Environmental Protection Charge shall be used for the operational, administrative, development, maintenance and capital costs including debt servicing charges of that portion of the wastewater collection and treatment systems comprising the interceptor sewers, wastewater treatment plants, pumping stations, and associated forcemains which directly transfer wastewater to an interceptor sewer or wastewater treatment plant and other facilities of a similar nature, inclusive of primary collection system which charge shall be recorded in a reserve account called Environmental Protection Reserve and used for the purpose for which they are collected.

2. **Wastewater and Stormwater Management Charge**

- a. Where any property is serviced by the wastewater system and metered water service, the charge will be based on volume of water consumed and is due and payable on the same date as the water bill. The following charges apply:

Wastewater and Stormwater Charge	\$0.3286 per cubic metre
----------------------------------	--------------------------

- b. Unmetered customers and non users of the water system that are connected to the wastewater system shall pay the average consumption in a similar size and class of metered customer multiplied by the Wastewater and Stormwater Management Charge as identified in Item 2(a).
- c. The Wastewater and Stormwater Management Charge for unmetered and non users of the water system will be billed on the same dates as the water bills to metered users and shall be due and payable on the same date as the water bills.
- d. A customer to whom wastewater service is available in an abutting street or abutting service easement but is not connected to the wastewater system, is required to pay the Wastewater and Stormwater Management Charge.
- e. The Wastewater and Stormwater Management Charge shall be used to cover the annual cost of operating, maintaining and administering the wastewater and stormwater primary collection system and shall be recorded in an account to be called the Wastewater and Stormwater Management Account and used for the purposes for which they were collected.

3. **Serviced Land Charge**

- a. Notwithstanding Items 1 and 2, every owner of serviced, vacant land shall pay a minimum Serviced Land Charge calculated at a rate of \$0.1538 per day for each lot or parcel of land.
- b. The Serviced Land Charge will be billed on the same date as the water bills and shall be due and payable on the same date as the water bills.

- c. The Serviced Land Charge shall be used to cover the annual cost of operating, maintaining, and administering the wastewater and stormwater primary collection system and shall be recorded in the Wastewater and Stormwater Management Account and used for the purposes for which it is collected.

4. **Sewer Redevelopment Charge**

- a. A Sewer Redevelopment Charge shall be levied and imposed on all new buildings, including buildings which are moved onto a new lot, and all building additions in serviced areas.
- b. This charge shall be \$0.30 per square foot of floor space. The payment will be due and payable to the Halifax Regional Municipality as agent for the Halifax Regional Water Commission, prior to the issuing of a building permit.
- c. The Sewer Redevelopment Charge shall only be payable in cases of accessory buildings that contain facilities which can discharge effluent to the public sewer.
- d. Notwithstanding Item 4(b), the payment of a Sewer Redevelopment Charge shall not apply to buildings or building additions which are located on a parcel of land which was subject to an Infrastructure Charge containing a component related to new or expanded wastewater facilities or stormwater systems.
- e. The Sewer Redevelopment Charge collected will be placed in a separate reserve account and will be used to upgrade or oversize trunk sewers upon application and approval of the Board.

5. **Trunk Sewer Charge**

- a. A Trunk Sewer Charge shall be levied and imposed on an unserviced lot of land occupied by a building when it becomes serviced with the wastewater and/or stormwater system. The Trunk Sewer Charge will be as follows:
  - 1. Dwelling Units                      \$500.00 per unit
  - 2. All other Buildings                 \$0.30 per square foot
- b. The Trunk Sewer Charge is due and payable to the Halifax Regional Municipality as agent for the Halifax Regional Water Commission when the land is serviced.
- c. The Trunk Sewer Charge collected will be placed in a separate reserve account and will be used to upgrade or oversize trunk sewers upon application and approval of the Board.

6. **Extra Strength Surcharge**

- a. On application and approval by the Commission, a user of the wastewater system may be allowed to discharge extra strength wastewater into the wastewater system as set out in the Schedule of Wastewater Rules and Regulations. The extra strength surcharge will be in addition to the approved rate. The Extra Strength Surcharge shall be established by the Commission as set out in the attached Addendum "A". The additional cost is to be added to the monthly or quarterly wastewater bill of the customer.

7. **Wastewater and Stormwater Capital Cost Contribution Charge**

- a. The Commission may establish a Wastewater and Stormwater Capital Cost Contribution Charge from developers and/or future users requiring extension or improvements of the wastewater system and/or the stormwater system. The total amount of the Capital Cost Contribution Charge shall ensure that the Commission is cost neutral to the design, construction, financing and applicable overhead, as prescribed by the Commission. The Wastewater and Stormwater Capital Cost Contribution Charge shall be calculated for charge areas and allocated on the basis of the Water, Wastewater and Stormwater Capital Cost Contribution Formula, as set out in Addendum "B" attached.
- b. A Capital Cost Contribution Charge for wastewater and stormwater infrastructure for the following areas shall be levied and imposed on lands within the identified charge areas as previously approved by the HRM Council:

1.	Bedford South Charge Area	\$3,305.29 per acre
2.	Portland Hills Charge Area	\$ 16.20 per acre

- c. Funds collected under the Wastewater and Stormwater Capital Cost Contribution Charge will be placed in a reserve account and will be used for extension or improvements of the stormwater and wastewater system within the area related to the charge upon application and approval by the Board.

8. **Capital Cost Charge for Wastewater Treatment Facilities**

- a. A charge in the amount of \$877.00 shall be paid to the Halifax Regional Municipality as agent for the Halifax Regional Water Commission prior to the issuing of a building permit for all new single detached residential buildings that will be connected to the wastewater system.
- b. A charge in the amount of \$584.00 per dwelling unit shall be paid to the Halifax Regional Municipality as agent for the Halifax Regional Water Commission prior to the issuing of a building permit for all new multiple unit residential buildings that will be connected to the wastewater system.

- c. A charge at a rate of \$0.27 per square foot of floor space shall be paid to the Halifax Regional Municipality as agent for the Halifax Regional Water Commission prior to the issuing of a building permit for all other new buildings and building additions in serviced areas.
- d. When an un-serviced lot of land, occupied by a building, existed prior to the coming into force of these Rates and Charges, the charge shall be payable to the Commission, when the building is connected to the wastewater system.
- e. Buildings accessory to a residential use and containing facilities which can discharge to the wastewater system shall pay a charge at a rate of \$0.27 per square foot of floor space payable to the Commission when the building is connected to the wastewater system.
- f. Funds collected under the Capital Cost Charge for Wastewater Treatment Facilities will be placed in a reserve account and used for providing capacity in Wastewater Treatment Facilities upon application and approval by the Board.

9. **Rebate**

Where the volume of liquid discharged into the wastewater system is less than half of the volume of water used by the property, as established by the Customer to the satisfaction of the Commission, a rebate of one-third of the Environmental Protection Charge and the Wastewater and Stormwater Management Charge attributable to the difference between the amount of the water used and the amount of liquid discharged to the wastewater system shall be given. Application for this rebate must be made annually by the Customer to the Commission.

**ADDENDUM "A"**

**EXTRA STRENGTH SURCHARGE FORMULA**

The Extra Strength Surcharge shall be based on the following formulas. The surcharge may apply to one or more of the parameters. When more than one parameter applies, the surcharge shall be calculated for each parameter separately and then added together to arrive at the total Extra Strength Surcharge.

**Surcharge Parameters**

- BOD<sub>5</sub> = Biochemical Oxygen Demand
- S.S. = Suspended Solids, Total
- T.P. = Total Phosphorus
- TKN = Total Kjeldahl Nitrogen
- Oil & Grease = Solvent Extractable - animal or vegetable in origin

**Limit Values**

Surcharges shall be calculated based on the following limit values:

<b>Parameter</b>	<b>Limit (Milligrams per Litre)</b>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	300
Suspended Solids, Total (S.S.)	300
Total Phosphorus (T.P.)	10
Total Kjeldahl Nitrogen (TKN)	100
Oil & Grease	150

**Rate**

The rate shall be calculated based on the actual costs from the Mill Cove Wastewater Treatment Facility from the previous year's records and the total amount of the surcharge parameter handled during that same period.

**Load**

The value of the load shall be based on test results from the customer. The testing program to be used to arrive at the limit shall be approved by the Commission.

**Flow**

The flow will be the flow from the customer measured at the location approved by the Commission. The measurement method and frequency shall be approved by the Commission.

**Extra Strength Surcharge Formulas**

The surcharge shall be calculated for each parameter using the following formulas:

$$\text{BOD}_5 \text{ CHARGE} = (\text{Load (mg/L)} - \text{Limit (mg/L)}) \times \frac{\text{Flow (m}^3\text{)} \times \text{Rate (\$/kg)}}{1000}$$

$$\text{S.S. CHARGE} = (\text{Load (mg/L)} - \text{Limit (mg/L)}) \times \frac{\text{Flow (m}^3\text{)} \times \text{Rate (\$/kg)}}{1000}$$

---

$$\text{T.P. CHARGE} = (\text{Load (mg/L)} - \text{Limit (mg/L)}) \times \frac{\text{Flow (m}^3\text{)} \times \text{Rate (\$/kg)}}{1000}$$

---

$$\text{TKN Charge} = (\text{Load (mg/L)} - \text{Limit (mg/L)}) \times \frac{\text{Flow (m}^3\text{)} \times \text{Rate (\$/kg)}}{1000}$$

---

$$\text{O \& G CHARGE} = (\text{Load (mg/L)} - \text{Limit (mg/L)}) \times \frac{\text{Flow (m}^3\text{)} \times \text{Rate (\$/kg)}}{1000}$$

---

## ADDENDUM “B”

### **WASTEWATER AND STORMWATER CAPITAL COST CONTRIBUTION POLICY**

#### **PART I: WASTEWATER AND STORMWATER CAPITAL COST CONTRIBUTION POLICY**

##### **Preamble**

The Wastewater and Stormwater Capital Cost Contribution (WWS CCC) Policy provides for the recovery of costs required to provide oversized wastewater and stormwater infrastructure within a ‘charge area’. The costs of providing this infrastructure are shared by developers, and in some cases, by the Commission. After the completion of a Master Plan Study, a charge area will be established that becomes the basis for the development of a WWS CCC Charge. The WWS CCC Charge shall take into consideration all aspects of the required infrastructure, financial risks to the Commission, timing of contributions, phasing of development and any other considerations that could have a financial impact on the Commission.

##### **Policy 1 Master Plan Study Area & Charge Area**

- 1.1 The Master Plan area and terms of reference for the study as it relates to the Commission must consider such factors as density, existing stormwater and wastewater systems, drainage basins, existing & proposed water service districts, service boundaries, land use development areas, soil conditions, topography, and other factors deemed appropriate. The Master Plan area is not constrained by land ownership.
- 1.2 The charge area will generally be the Master Plan study area. However, depending on service considerations, the charge area may also include areas outside the Master Plan area.

Oversized wastewater and stormwater infrastructure will be defined in the Master Plan for the charge area. Notwithstanding, the impact on existing or planned infrastructure outside the Master Plan study area will be taken into account in the Master Plan Study.

The Commission may require information from the developer(s) regarding the planning and system requirements in the preparation of the Master Plan.

##### **Policy 2 Oversized Components**

- 2.1 Oversizing components of a charge area may include, but are not necessarily limited to wastewater collection system including pumping stations and stormwater collection systems including retention ponds. The infrastructure required to service a charge area may be located outside of the charge area and may include land costs associated with providing required infrastructure.

- 2.2 Infrastructure which is exterior to a charge area, such as wastewater treatment plants and related infrastructure may be included in the capital cost calculations. In any event, all costs of Oversized Infrastructure to provide service to the charge area will form part of the WWS CCC.

**Policy 3 Oversized Infrastructure Required to Serve Future Developments**

Where oversizing of infrastructure within a charge area is identified as providing benefit to future development, the Commission may invest in the Oversized Wastewater and Stormwater Infrastructure required for the future development. The oversizing required to service future development on lands adjacent the charge area, shall be determined, and the investment by the Commission shall be evaluated in accordance with the Funding Criteria defined in Policy 18.

**Policy 4 Drainage from Adjacent Lands**

If drainage from adjacent lands requires the oversizing of storm sewers, the cost of providing the oversizing will form part of the WWS CCC for the charge area.

**Policy 5 Oversized Infrastructure that Benefits Existing Developed Areas**

- 5.1 Where an existing developed area receives a direct service benefit from Oversized Wastewater and Stormwater Infrastructure, the Commission may pay a share of the oversized system costs based upon the Capital Costs per acre. The Commission's share is not included in the WWS CCC recovered from new development within the charge area.
- 5.2 The Commission will establish the extent to which the existing developed areas receive a benefit from Oversized Wastewater and Stormwater Infrastructure. This benefit will be determined according to the procedures and guidelines of this Policy.
- 5.3 Where system capacity provided by new infrastructure within a charge area is used by existing serviced areas, to a degree less than or equal to that existing system capacity used by the charge area, the Oversized Wastewater and Stormwater Infrastructure required for the charge area will not be considered a benefit to the existing area.
- 5.4 Existing developed areas may be excluded from a charge area if they are not included in the new infrastructure design calculation, or do not derive a direct benefit from these new systems.
- 5.5 Where the Commission has contributed to existing developed areas contained in a charge area, the Commission may recover from WWS CCC from infilling or by way of rezoning, or subdivision, the Equivalent Capital Cost Contributions from new development within the existing community. In effect, the Commission may make payment of Wastewater and Stormwater Capital Cost Contributions in advance for future development in existing areas and recover the contributions when new development occurs.
- 5.6 The Commission's expenditures shall be evaluated in accordance with the Funding Criteria defined in Policy 18, Funding Criteria.

## **Policy 6 Upfront Payment of Oversized Infrastructure by the Commission**

To fulfill its leadership role, the Commission may consider it necessary to invest in the oversized and required wastewater and stormwater infrastructure in a charge area in advance of the revenue stream necessary to construct the systems. The Commission may also decide to facilitate the acquisition of rights-of-ways, land, and other required systems or facilities beyond the control of one or more developers. Commission investments shall be evaluated in accordance with the criteria determined in Policy 18, Funding Criteria.

## **Policy 7 Infrastructure Exterior to the Charge Area**

- 7.1 Oversized and required infrastructure exterior to the charge area will be included in the capital Oversized Wastewater and Stormwater Infrastructure for the charge area. The Commission will be required to accurately establish the Oversized Infrastructure that is attributed to a specific charge area.
- 7.2 Wastewater or stormwater facilities would only be included in the capital cost if their upgrade or expansion can be directly attributable to a specific charge area.

## **Policy 8 Cost Estimates**

- 8.1 The basis for the WWS CCC is an estimate of the Oversized Infrastructure required to service the charge area. The estimated costs shall be escalated to account for the year in which the construction takes place and shall include interest during construction. The Commission will use the ENR Canada Indices to estimate costs in the future, in accordance with Policy 14, Timing and Sequencing of Development. In addition, the Commission will include appropriate administration costs for the projects.
- 8.2 The Commission, in consultation with the developers, will develop the cost estimates for Oversized Wastewater and Stormwater Infrastructure, both within and outside the charge area, that will form the basis of the CCC. The Commission will make every effort to establish cost estimates in consultation with the Stakeholders. The Commission may accept the developers' estimates to construct the systems if the developers agree to construct the Oversized Wastewater and Stormwater Infrastructure at the estimated cost.

## **Policy 9 Cost Apportionment Criteria**

The revenue stream arising from cost apportionment will be used in the Financial Plan of the charge area.

For wastewater and stormwater infrastructure costs, a density factor related to system demand will be utilized to apportion costs.

The WWS CCC is based on average density per acre for the entire charge area, adjusted for the actual density or land use within the parcel being subdivided. Actual density of the parcel being subdivided shall be determined at the time of Subdivision Approval using the maximum density which is permitted by the Municipality's Land Use Bylaw.

If the density in a sub-division is lower than the average, the WWS CCC may be accelerated based on the average, ratio amount until the total WWS CCC for the subdivision is collected from a developer. This process may be applied if cash flow requirements dictate more funds are needed to pay for required infrastructure.

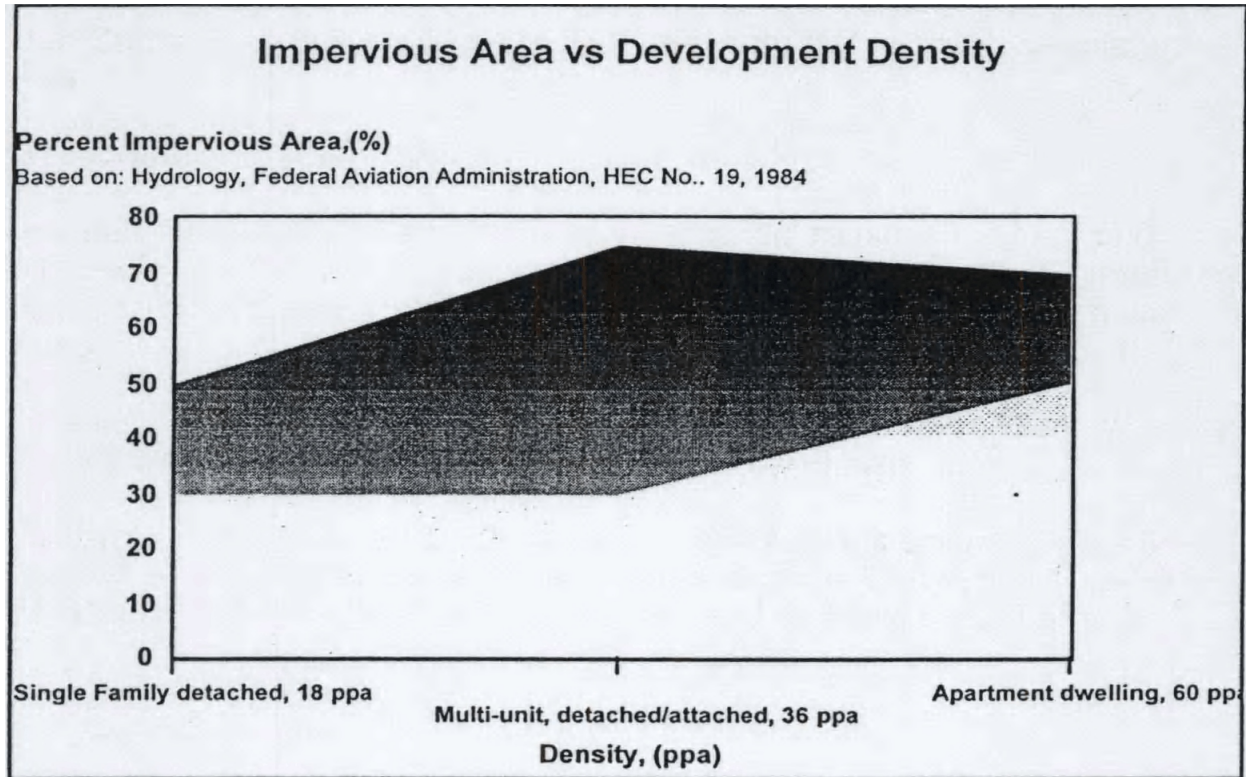
In institutional, commercial or industrial zones or uses, the average density for the charge area will apply. The area of the parcel being developed will be adjusted to allow for multiple stories.

Stormwater Collection Systems are considered in the same manner as wastewater systems. This approach implies there is a relationship between development density and the amount of stormwater run-off which is generated. Given the accuracy and factor of safety inherent in estimating run-off, there is a direct relationship between density and run-off for residential development. (Refer to Figure 1).

Although the same relationship does not exist for industrial, commercial, or institutional uses, this policy accepts that apportioning stormwater collection system costs on the basis of density is a reasonable, fair, and equitable approach. This approach is also supported by the fact that storm sewers often share the same trench as other services, and are administered in the same construction contract.

The fairness and equity of this approach may be enhanced by implementing land use policies which require run-off levels to be maintained at residential levels. Such policies are easily implemented through a development agreement.

Figure 1



**Policy 10 Charge Area Boundary Changes**

After a charge area has been established and phased development has commenced, there may be reasons to increase or decrease the charge area. The Commission may permit a change in the charge area based on the Oversized Wastewater and Stormwater Infrastructure capacity to provide service to the new area. Changes to charge area boundaries will be considered as either minor additions or major changes.

- 10.1 A minor addition to a charge area may be considered when the infrastructure within the existing charge area is adequate to provide the required service to the additional area. All new development within the adjusted charge area boundary will pay WWS CCCs, based on the same charges that apply to the original charge area.
- 10.2 A major change to a charge area is required when the proposed additional area cannot be adequately serviced by the existing infrastructure. New, Oversized Wastewater and Stormwater Infrastructure will be required and a new WWS CCC must be calculated. Capital costs collected from the original charge area will be applied to the funding of the new infrastructure.

Where a major change in the charge area is required, a revised Master Plan Study, a new charge area and corresponding WWS CCC will be calculated. These changes may require amendments to the Municipality's Subdivision Bylaw to the charge area under consideration. Major changes may include expansion or extension of the charge area boundary or; a combination of two existing charge areas requiring a revision to the capital cost contributions calculated from the area.

A developer in the original charge area will not be required to pay a WWS CCC which exceeds the amount calculated in the original charge area.

### **Policy 11 Combined Charge Areas**

Where two charge areas are adjacent and there are valid reasons to share some or all of the entire Oversized Wastewater and Stormwater Infrastructure, the Commission may combine the charge areas and recalculate the WWS CCCs.

The Commission will determine the components of Oversized Wastewater and Stormwater Infrastructure that will be included in the new charge area.

WWS CCCs collected from the original charge area will be included in the new charge area, and they will be collected on a go forward basis.

### **Policy 12 Cost Exceptions**

Costs that will be deducted from the developers' portion of the WWS CCC include the following:

- The proportion which is considered to benefit the existing Customers of the Commission, as determined in accordance with Policy 5.
- Commission investments in infrastructure for future development or another charge area, determined in accordance with Policy 3.

### **Policy 13 Interest and Risk Mitigation**

13.1 The Commission supports new development; however, it is not prepared to accept the financial risk of new development. As a result, where the Commission decides to invest in the Oversized Wastewater and Stormwater Infrastructure before the required contribution is collected, interest will be added to the WWS CCC.

13.2 In the event that a major component of infrastructure is required before the contributions are collected, the Commission may require the developers to assume the risk and invest in the infrastructure. The developer(s) would be subsequently reimbursed when CCCs are received by the Commission through continued development in the charge area.

#### **Policy 14     Timing and Sequencing of Development**

- 14.1     The development phasing will be taken into consideration when designing and costing oversized infrastructure in the charge area. Since WWS CCCs are calculated on the basis of best estimates, reasonable and appropriate estimates must also be made in respect of development timing and corresponding cost escalators and interest rates that are dependent on the developers' schedule.
- 14.2     The infrastructure capital cost estimate will be factored upwards to reflect prudent and appropriate cost escalators based upon interests and escalated cost of servicing, indicated through the ENR Canada index factor.

The Commission will track and record all WWS CCC funds and expenditures. Interest will be charged when the account is in deficit and will be credited when the account is in surplus.

The Commission may require significant components of infrastructure be built at a predetermined time frame; or based upon system demands or capacity loading arising from new or existing development. The significant components will be constructed within the time frame established by the Commission. As an example, the timing of a major interchange, pumping station or water reservoir which may be required and administered by an outside agency.

The timing and sequence of development phasing may also have an impact upon the design capacity (or size) of infrastructure needed to provide adequate interim service standards throughout development stages in the charge area. It would be inappropriate for the Commission to approve the installation of services that did not adequately meet the design guidelines and minimum service standards to provide requisite services to its citizens. Therefore, additional Oversized Wastewater and Stormwater Infrastructure may be required at interim stages of the development as deemed appropriate by the Commission.

The Commission may require security on the property when a development agreement has been approved by the Municipality, to indemnify the Commission in the event that the development does not proceed in the prescribed period of time. The amount of the lien will be equal to the WWS CCC that would have been collected from the area in question.

The Commission will determine the sequence of oversized system construction, based upon information from the developer, and the requirements of the development. The Commission in consultation with the Municipality will determine the densities for each phase of the development in the charge area. The Commission may, in some cases, construct infrastructure prior to receiving the necessary WWS CCC; or require the developers to construct the Oversized Wastewater and Stormwater Infrastructure. Developers may be required to construct Oversized Wastewater and Stormwater Infrastructure in an earlier phase that will be used in latter phases of the development.

#### **Policy 15     Developers Acting as Contractors**

- 15.1     The developer may be allowed to construct some or all of the Oversized Wastewater and Stormwater Infrastructure based on the agreed upon estimates in compliance with the

Commission's standards and guidelines. In most cases developers will be required to construct Oversized Systems in their development lands, but the Commission reserves the right to construct oversized or required infrastructure for the charge area.

- 15.2 When the Developer is acting as a contractor, the Commission will inspect service system construction to ensure the system(s) meet Commission Design Guidelines. The developer will be required to build the infrastructure as required by the phased development determined in the Master Plan Study.
- 15.3 Cost estimates for Oversized Systems and associated payment schedules may require formal Development Agreements to determine & implement WWS CCCs. The payment to the developer is based upon agreed cost estimates amongst the participating Stakeholders and approved by the Board.
- 15.4 The Commission will inspect the system construction to ensure it meets its guidelines.

#### **Policy 16 Specific Infrastructure Components**

- 16.1 Specific components of wastewater and stormwater systems such as sewage pumping stations, and stormwater storage facilities will form part of the Capital Cost if they provide a Direct Benefit to more than one developer within the charge area. In this instance, the costs will be apportioned in accordance with the WWS CCC Policy using the appropriate design criteria, and may include land costs.
- 16.2 Components that provide only local benefits, and service a part of one development within the charge area, are solely the responsibility of the developer of the parcel.
- 16.3 The Commission may require the developer who first requires a pumping station to build the Oversized Infrastructure and subsequently reimburse oversizing costs when the Commission has collected from future developments or apply a WWS CCC credit to the developer for the Oversized Wastewater and Stormwater Infrastructure investment.

#### **Policy 17 Oversized Infrastructure Criteria**

##### **17.1 Oversizing Criteria**

The cost of providing Oversized Wastewater and Stormwater Infrastructure will be funded through the WWS CCCs levied in a charge area.

The cost of providing Oversized Wastewater and Stormwater Infrastructure may also include discrete upgrades of, or new connections to, existing systems outside of the charge area.

There are several methods of calculating the oversize cost, which generally fall into one of two broad categories:

Incremental basis - where the oversize cost would be calculated by determining the incremental or marginal cost of up-sizing to the required Oversized Wastewater and Stormwater Infrastructure defined in the Master Plan. This method is most fairly applied if there is a base value or benefit associated with providing the minimum service requirements without considering oversizing. For the purpose of oversizing, minimum service requirements would be those necessary to provide service to an area being developed and may be based on minimum pipe sizes and local road standards.

Capacity basis - where the oversize cost is determined on the basis of capacity allocated to the charge area. The cost to be recovered through a WWS CCC would be calculated by pro-rating total cost on the basis of capacity. This method is most fairly applied for a discrete upgrade of an existing system outside of the charge area.

#### 17.2 Wastewater and Stormwater Systems within a Charge Area

The oversized costs to provide wastewater and stormwater systems within a charge area will be determined on an incremental basis. There are various methods for calculating incremental costs of piped systems:

Dual Design Method - where the oversize cost is determined by deducting the total cost of the minimum required pipe size from the total cost of the oversized pipe.

Cost Ratio Method - which assumes a direct relationship between the cost of providing a service and the size of the pipe. A cost factor can be determined and applied similar to the Cost Sharing Policy of the former City of Halifax, or a simple percentage based on nominal dimensions may be applied.

#### 17.3 Infrastructure Exterior to a Charge Area

The portion of the cost of an upgrade, expansion, or provision of a discrete component of wastewater and stormwater infrastructure to be recovered through a WWS CCC will be determined on the basis of capacity allocated to the charge area.

### **Policy 18 Funding Criteria**

- 18.1 Opportunity costs should be considered and calculated in an effort to prioritize the Commission's investment. These costs may be used to compare and contrast the investment potential in one charge area versus another request for funding. Opportunity costs may include consideration of existing system capacities, potential diversion of demand and capacity allocations, or mitigation of future capital expenditures arising from strategic Commission investments from a regional perspective. Other cost factors for consideration include treatment plants, trunk piping systems and other support services including operations and maintenance.

- 18.2 The Commission in consultation with the Municipality may opt to encourage development and growth in strategic areas by supporting Master Plan funding on a priority basis. The Commission may initially invest in comprehensive Master Plan studies where it wishes to promote growth and development optimizing use of existing systems and services.
- 18.3 Inevitably, the demand for the Commission's and the Municipality's contributions and investments for Capital Cost Contribution Policy may require priority decisions from the Commission's Board and Council. A balance of strategic master planning will mitigate future capital costs through good planning and optimized infrastructure utilization.
- 18.4 The Commission may determine the risk too high in consideration of upfront payments for Oversized Wastewater and Stormwater Infrastructure. In this case, development may proceed if the developers build the required infrastructure. The developers may be given Wastewater and Stormwater Capital Cost credits to future contributions or may be re-paid when the Commission collects future WWS CCC from subsequent development utilizing these Oversized Wastewater and Stormwater Systems.

The requirement for security would reduce the risk to the Commission if development does not proceed. Time will be the essence of any agreement and may determine the type and condition of the security required to mitigate the Commission's financial risk.

**PART II: WWS CCC POLICY TEMPLATES**

The capital cost templates and supporting notes will be used to calculate Wastewater and Stormwater Capital Cost Contributions.

**WASTEWATER AND STORMWATER CAPITAL COST CONTRIBUTION FORMULA**

---

**Wastewater and Stormwater**

---

Total cost of Oversized Infrastructure and other required infrastructure	A
Interest during construction	B
Total cost of infrastructure (A + B)	C
Deduct infrastructure that benefits the Commission	D
Total Capital Cost Contribution (C - D)	E
Gross area (acres) in charge area	F
Area of land that cannot be developed	G
Area of land that can be developed (F - G)	H
Development charge per acre	$I = \frac{E}{H}$
Average Density (ppa) of charge area	J

---

**Adjustments for Density of the Parcel being Subdivided**

---

Area of Parcel Being Subdivided	K
Density (ppa) for parcel being subdivided	L
Capital Cost Contribution per Acre	$M = I \times \frac{L}{J}$
Total Capital Cost Contribution	$N = M \times K$

---

**Notes to Capital Cost Formula**

- (1) The cost of Oversized Infrastructure and other required infrastructure is based on an estimate of construction that includes engineering design and inspection fees. Other items to be included are planning studies, land purchases, surveying costs, legal costs and Commission audit inspection costs. The costs will be escalated based on the ENR index to the year costs are incurred for each component of the infrastructure.
- (2) The interest rate shall be the prime bank rate plus one percent. The construction period is assumed to be two years.
- (3) Benefits to the Commission may include infrastructure costs that benefit the existing population of the Commission.
- (3a) If there is an area within the charge area that benefits the Commission and the Commission pays a portion of the oversized and other infrastructure costs, any vacant land within the area that is developed shall pay a WWS CCC equal to cost per acre paid by the Commission.
- (4) Gross area includes all land, including streams and lakes within the charge area.
- (5) Area that cannot be developed will include streams, lakes, flood plains and any other land deemed non-developable by the Commission.
- (6) Average density shall be established by the Commission or the Municipality.
- (7) For industrial, commercial, and institutional uses with multiple storeys, the area of the parcel being sub-divided shall be increased by an amount equal to the *allowable* floor space of the additional storeys. For the purpose of this calculation, underground parking is considered an additional storey.
- (8) Development of a parcel of land within a charge area that has density below the average may be required to accelerate contributions on the basis of the average density, until the total required WWS CCC for the original parcel has been made.

For industrial, commercial, and institutional uses, density shall be taken as the average density for the charge area.