

REPORT  
ON  
DRAINAGE - PRIVATE PROPERTY

DECEMBER 1997

This policy "Drainage - Private Property" was adopted by Halifax Regional Council at their meeting of December 16, 1997.

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## **1. Water and Ice in the Street**

A common problem in the Municipality is the accumulation of water and ice in the street caused by the discharge of water from private property. Both the street travelway and the sidewalk may be affected.

Ice tends to be a much more significant problem, as safety is a key issue, both for vehicular traffic and for pedestrians. Where the accumulation of ice may represent an unsafe condition, then it is necessary for Municipal Operations staff to remove the ice, either by using a machine to physically remove it, or by salting.

These maintenance activities represent a drain on the resources of the Municipality. The use of a machine to physically remove the ice often results in damage to the street surface. Also, the salt used to melt the ice has an adverse impact on the watercourses to which the local stormwater will drain.

The Halifax Regional Municipality Act provides at Sections 132 and 133 that adjacent owners of land are responsible to resolve this type of situation.

A usual situation is that a property owner has a drain pipe from the backyard area discharging stormwater unto the street surface. The cost in that circumstance to connect the drain pipe to the storm sewer in the street would be in the vicinity of \$2,000, including the cost of street repair. If the connection can be made to a catch basin located at the curb, the cost would be much less. If more extensive work is required to intercept the drainage on private property (e.g. a catch basin, or additional piping), then the cost would be more. There are various other factors that may also influence the cost, e.g. bedrock, the location of the storm sewer and other services in the street, etc.

### **Recommendation 1-1**

*That the Municipality require the owners of land to control the discharge of stormwater unto the street, where the discharge is causing water and ice problems in the street, as provided for in the Halifax Regional Municipality Act.*

### **Recommendation 1-2**

*That the individual property owner be responsible for any drain required pursuant to Recommendation 1-1, as provided for in Section 157(1) of the Act.*

The function of a catch basin is to receive surface water. It is typically not to receive drainage from pipes connected to it from private property. If a catch basin or catch basin lead should plug, and if such drains are connected to the catch basin, then there is a significantly higher risk of damage to adjacent property, and potential liability to the Municipality.

### **Recommendation 1-3**

*That where the property owner wishes to connect to a catch basin, the Municipality require a waiver to prevent claims against the Municipality related to damage from back-ups from the catch basin.*

There is one circumstance in which the Municipality may choose a somewhat different course of action. It is not unusual that a number of adjacent properties may have similar conditions on their properties to cause all of them to discharge water unto the street.

It may be advantageous in that circumstance for the stormwater to be intercepted using a “community system” rather than for each of them to resolve their problems individually (see sketch on next page). The benefits of a community system are as follows:

- 1) If done individually, there will be a significant number of “cross cuts” in the street, which weakens the street structure and often results in a poor riding surface. With a community system, the number of “cross cuts” would be reduced significantly.
- 2) The cost of a community system would typically be less than the total cost of a number of individual connections.
- 3) If the community system is installed behind and parallel to the curb, it can also be designed to reduce the flow of ground water to the road bed, which typically can have a significant positive impact on the life of the street.

#### **Recommendation 1-4**

*That - where it is determined to be advantageous to do so - the Municipality construct “community systems” to resolve water and ice problems in the street, and recover full costs from the owners of land for this work, as provided for in the Halifax Regional Municipality Act.*

#### **Recommendation 1-5**

*That community systems within the street right-of-way be owned by the Municipality, if they are constructed in accordance with the Municipality’s policies, procedures and specifications.*

The circumstances which result in property owners discharging stormwater unto the street are often predictable. The topography, the drainage patterns (both surface and sub-surface) and the soil type are all contributing factors.

#### **Recommendation 1-6**

*That - in circumstances where it is likely that such problems will occur in the future - the Municipality will require in its Municipal Service Systems General Specifications, that developers be required to install drainage infrastructure to prevent this problem from occurring.*

## **2. Maintenance and Alteration of Stormwater Systems on Private Property**

The phrase “stormwater system” is defined in the Halifax Regional Municipality Act as:

“Stormwater system” means any method or means of carrying stormwater, including ditches, swales, pipes, sewers, drains, canals, ravines, gullies, pumping stations, retention ponds, streams, watercourses, floodplains, ponds, springs, creeks, public or private streets, roadways or driveways.

Many stormwater systems in the Municipality are on private property. If the system is not properly maintained, or if it is filled, obstructed, diverted, or piped in an inappropriate fashion, it may hinder the flow of the stormwater, causing damage to others.

The Halifax Regional Municipality Act at Section 177 provides that the Municipality may make by-laws to regulate such activities. Of the four former municipalities, only the City of Halifax had a by-law of this sort - Ordinance 142 “Respecting Streams and Drains”. Such a by-law would enable the Municipality to assist property owners in circumstances where other property owners have caused or may cause flooding by not maintaining or by altering stormwater systems on their properties.

### **Recommendation 2-1**

*That the Municipality develop, implement and administer a by-law to regulate the maintenance and alteration of stormwater systems on private property, and that a permitting system be developed in conjunction with this.*

Ordinance 142 of the City of Halifax regulated watercourses, drains and sewers. Alterations to water courses are the jurisdiction of the Province of Nova Scotia, pursuant to the Environment Act.

It is the view of staff that the Municipality should not endeavour to regulate activities which are the mandate of the Province.

### **Recommendation 2-2**

*That the by-law be drafted so as to not regulate activities which are the jurisdiction of the Province.*

There are many activities on private property which may result in flooding, which are not intended to be regulated by this by-law. Some examples are as follows: the alteration of the grade of land, the construction or installation of a stormwater system where one did not previously exist, and the erection of a building. It is not contemplated that this proposed by-law regulate such activities, unless it in some way relates to the maintenance or alteration of an existing stormwater system.

### **3. Ownership of Systems on Private Property**

Stormwater systems are sometimes constructed on private property to prevent or resolve a drainage or flooding problem, or to convey stormwater from a private or public system. These systems may have been approved by the Municipality as part of the subdivision process and constructed by the developer prior to endorsement of the subdivision. In some cases, the system may have been designed and constructed by one of the former Municipalities, or it may have been designed and/or constructed by some other party - owner, builder, etc.

The ownership of these systems is important as to the inspection, maintenance, repair and eventual replacement of these systems, and potential liability attached to these responsibilities. Ownership is also important as to the right to use the system, e.g. adjacent property owners, including the Municipality. In the past, depending upon the circumstances, some of the former Municipalities have accepted ownership of stormwater systems on private property.

#### **Recommendation 3-1**

*The Municipality will accept ownership of stormwater systems on private property, if a number of conditions can be satisfied, as follows:*

- (1) That the system is utilized to drain stormwater from a system of the Municipality's, and/or that it forms part of a trunk storm sewer system.*
- (2) That it can be shown that the system is constructed to the Municipality's standards.*
- (3) That an easement can be provided in a form acceptable to the Municipality.*
- (4) That, by accepting the system, the Municipality is not unduly exposing itself to liability or to unreasonable costs associated with inspection, maintenance, repair or replacement.*

### **4. Drainage Complaints - Advice to Property Owners**

Staff receive complaints from many owners of private property within the Municipality. Responding to such complaints virtually always requires a site visit by staff to determine the nature of the problem and the responsibility, if any, of the Municipality.

Where the Municipality does have some responsibility, appropriate action will be taken. If the action is maintenance related, the problem may be addressed quite promptly. Where a new system or a system upgrade is required, the resolution to the problem will likely require more time. In many such circumstances, it will be necessary to include the work in the draft Capital Budget for consideration by the Regional Council.

Even where the Municipality does not have direct responsibility, the problem may be investigated and analysed. If the situation is complex or the solution is not clearly evident, or where the Municipality may unreasonably expose itself to liability by providing

advice, the property owner will be advised to retain the services of a consulting engineer or other professional, and/or a contractor.

Where the solution is obvious, the Municipality may provide advice to the property owner which is general in nature only. It is not intended that the Municipality conduct surveys or prepare designs or site-specific sketches for an individual property owner. If standard details or sketches are available which may assist, then these may be provided.

It may also be appropriate that the Municipality write the property owner to document the advice provided.

In some circumstances, the Municipality will attempt to identify the individual or agency best able or willing to resolve the problem, e.g. developer, builder, consulting engineer, land surveyor, landscape architect, provincial or federal government department, other municipal department, Atlantic New Home Warranty, insurance company, adjacent property owner, or lawyer.

The Municipality is often requested by property owners to investigate and assist regarding a drainage or flooding problem which has been caused by the action of a neighbouring property owner. One example is the diversion of stormwater unto the property of Owner A by the regrading of land or by the construction of a pipe, ditch, drain, roof down spout or other facility on the property of Owner B. Another example is the filling of the property of Owner B so that the land of Owner A can no longer be effectively drained.

These matters are civil matters between adjacent owners, and not a matter for resolution by Municipal by-law.

The Municipality may provide advice in an attempt to resolve such disputes amicably, but must be careful not to interfere with the legal rights and responsibilities of property owners involved in a dispute.

Providing any advice will potentially expose the Municipality to some risk of liability. On the other hand, over the years that the former Municipalities provided this service, the instances in which the property owner has subsequently cited the Municipality for providing bad advice have been very rare. On balance, this practice provides a very beneficial and cost-effective service to property owners, with limited risk to the Municipality.

#### **Recommendation 4-1**

*The Municipality will provide advice to property owners to assist in the resolution of drainage problems on private property, as described above.*

### **5. Cost Sharing to Resolve Drainage Problems on Private Property**

Some drainage problems on private property are very expensive to resolve. Others involve a group of property owners, in which the solution may comprise a system which is to be constructed on a number of properties. In these situations, it is very difficult for property owners to deal with such a problem on their own.

Prior to amalgamation, some of the former municipalities assisted property owners - both technically and financially - in the resolution of these types of problems, even where they had no legal obligation to do so.

For example, the former Halifax County Municipality allocated funds each year specifically for such works on private property. During the six years prior to amalgamation, the amount ranged from \$40,000 to \$100,000 annually.

These funds were utilized only in conjunction with contributions from the property owners who would benefit from the work, or from the developer. The maximum contribution for the County was 70%.

This program was successful in the County in that it resulted in the resolution of chronic flooding problems on private property, which otherwise might not have been resolved.

However, the process of negotiating with groups of private property owners was very time-consuming and labourious. Also, in today's fiscal climate, it may not be appropriate to spend public funds to resolve problems which the Municipality is not legally obligated to resolve.

It will be more productive to look for ways to prevent these problems from occurring in the future through appropriate land development standards and controls, than to attempt to resolve them post-development. The Grade Alteration By-Law has been in effect in Bedford for a number of years. Also, the Lot Grading and Drainage By-Law was recently put into effect in the serviced areas of the former Halifax County Municipality. Many drainage problems in the Regional Municipality would have been prevented if such by-laws had been in effect previously. Drainage problems now brought to the attention of Halifax Regional Municipality will be analysed to determine whether they could have been prevented if a Lot Grading and Drainage By-Law were in effect. Following a monitoring period, a report will be provided to Council as to whether a by-law of this type should be put into effect in other areas of the Halifax Regional Municipality.

### **Recommendation 5.1**

*That the Municipality consider implementing controls to resolve drainage problems on private property. In general, that the Municipality not contribute to the cost of resolving the drainage on private property, except in exceptional cases where Council so chooses.*

## **6. Drainage Works on Lands of Halifax Regional Municipality**

In some circumstances, it may be possible for the Municipality to resolve or to assist in resolving drainage problems on private property, by constructing works on its own land, even though it has no legal obligation to do so.

For example, a piece of land owned by the Municipality may drain unto the backyards of a number of private properties which may suffer wet and poorly drained backyards. It may be possible to alleviate this problem by constructing a drain on the Municipality's land.

If the Municipality's land has not been altered in any way, or if it has been altered but there has been no significant change in the surface water flow to the private properties in question, then the Municipality will have no legal responsibility to resolve this problem.

Again, given the current fiscal climate, it is the view of staff that it would be inappropriate to utilize public funds in this manner.

Also, if a drain were to be constructed on the Municipality's land, then the Municipality would be responsible to inspect, maintain, repair and eventually replace the drain, which would represent a further financial drain on the Municipality. Further, if we did not maintain the drain effectively, and the neighbouring properties flooded because of that, then the Municipality might find itself liable for the resultant damages.

### **Recommendation 6-1**

*That the Municipality not construct storm sewer systems/stormwater systems on its property to resolve problems on neighbouring properties, unless the municipally owned property is the cause of the problem. If the municipally owned land is the cause of the problem, then the Municipality would be part of the solution.*

## **7. Drainage from School Lands**

The Municipality is often contacted by property owners relative to the flow of storm water from school lands unto their properties. The Municipality should allow such matters to be resolved between the Regional School Board and the property owners.

The one exception may be where the storm water originates from a portion of school lands, which is maintained by the Municipality. A typical example is a sports field which is mowed by the Municipality, but would not include Regional School Board property or facilities where the Municipality merely provides maintenance service to the Regional School Board under contract.

### **Recommendation 7.1**

*That the Municipality not be involved in drainage issues relative to storm water flow from school lands, unless the flow is from land which is maintained by the Municipality, as detailed above.*