

HALIFAX

P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 14.1.2
Halifax Regional Council
January 15, 2019

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: November 21, 2018

SUBJECT: Utilizing Wetland Compensation Funding for Municipal Projects

ORIGIN

On July 17, 2018, the following motion of Regional Council was put and passed:

“THAT Halifax Regional Council request a staff report on utilizing wetland compensation funding for municipal projects.”

LEGISLATIVE AUTHORITY

See Appendix 1.

RECOMMENDATION

It is recommended that Halifax Regional Council direct staff to prepare and maintain a list of HRM-based potential wetland projects where wetland compensation funding, collected by Nova Scotia Environment, could be readily directed, and to share this information with Nova Scotia Environment.

BACKGROUND

Wetlands have vast benefits. They:

- keep our drinking water clean, safe, and abundant by removing organic waste and bacteria, filtering out excess nutrients, contaminants, and silt, and by storing and slow-releasing surface water, and refilling groundwater reservoirs.
- minimize erosion and storm damage by moderating flood waters, slowing runoff rates, and protecting coastlines from storm surges.
- provide habitat, often for rare or endangered species of plants and animals.

A wetland is defined by Nova Scotia Environment (NSE) as “land commonly referred to as a marsh, swamp, fen or bog that either periodically or permanently has a water table at, near or above the land’s surface or that is saturated with water, and sustains aquatic processes as indicated by the presence of poorly drained soils, hydrophytic vegetation and biological activities adapted to wet conditions.” Whereas a watercourse is defined in the Nova Scotia Environment Act as “The bed and shore of every river, stream, lake, creek, pond, spring, lagoon or other natural body of water, and the water therein, within the jurisdiction of the Province, whether it contains water or now, and all groundwater.” Wetlands are not considered a watercourse unless they are contiguous with a lake or stream. Wetlands can be privately owned, but wetland alterations are governed by NSE under the Environment Act [(Part X, Section 105 (1))].

When wetlands are destroyed or altered in the course of development, NSE requires parties to compensate for the destruction by funding or executing projects to enhance wetlands elsewhere (at a minimum ratio of 2:1, that is 2 acres of wetlands are created for every 1 acre destroyed). This compensation is designed to mitigate the negative environmental impact of development and can include wetland restoration, enhancement or creation, among other options at higher compensation ratios. NSE’s role in wetland compensation is to support applicants to develop a comprehensive plan that provides compensation for the alteration proposed. NSE neither maintains nor manages an inventory of lands suitable for wetland compensation. NSE would approve proposed compensation sites and plans, and/or collect monetary compensation.

When a developer applies for a subdivision in HRM, they are required to identify the location of wetlands and buffers in accordance with the HRM Regional Subdivision By-Law. This applies to a Concept, Tentative or Final Plan of Subdivision. If alterations to the wetland are proposed, Staff will then request, as part of the subdivision application, a letter from NSE confirming requirements for alterations have been met and approved.

DISCUSSION

HRM is actively seeking to develop innovative approaches to managing stormwater, which could include the creation of more naturalized stormwater ponds, or wastewater retention wetlands. There is an opportunity to improve stormwater management and enhance the environment, and to do so with funds that are already available.

NSE states that the preferred method of compensation is restoration of highly degraded wetland habitats or wetlands previously lost to historic conversion. Enhancement of existing wetlands and creation of replacement wetlands will also be considered, although generally at higher compensation ratios.

Urban restoration opportunities require more planning and detailed design work than most rural restoration projects, due to a combination of factors, such as:

- human surface water influences and interferences;
- potential contaminant issues in soils and sediment;
- the potential for contaminated urban stormwater;
- multiple landowners and the developed nature of urban watersheds;

- community or landowner expectations; and,
- urban infrastructure and underground utilities.

As a result of these factors, the restoration opportunities in urban areas are more complex, time intensive and costly than an equivalent sized rural restoration project.

NSE does not currently have information readily available on the amount of compensation received from or returned to specific areas. NSE staff have expressed that although they aim to return compensation to the source area, the historical result is that when wetlands are destroyed in HRM, the compensation and restoration occurs outside HRM. Due to trends of increased urban development, a large amount of wetland destruction occurs from development in HRM. As a result, there is a disproportionate percentage of compensation projects that are situated outside of the HRM.

Over the past several years, NSE has expanded their compensation requirements to include:

- Studies to identify potential restoration sites;
- Developing naturalized stormwater or wastewater retention wetlands;
- Preserving existing wetlands of special significance or upland buffers adjacent to wetlands;
- Building public access facilities and interpretative centers;
- Developing public education materials; and,
- Conducting or supporting wetland research.

These options create more opportunity for feasible wetland compensation within HRM. The Municipality could help balance the distribution of wetland compensation funds by identifying municipal pilot projects for green stormwater infrastructure that include enhancing or building wetlands and naturalized stormwater ponds. Identifying an inventory of available projects will simplify the process when developers are looking for opportunities for compensation in HRM.

Some local developers have also expressed a desire to direct compensation credits to improve the environmental impacts of the areas they are developing. NSE staff have indicated that they allow developers to replace naturalized stormwater ponds within Halifax, but that in several cases the applicants had suggested options without reaching out to Halifax Regional Water Commission (HRWC) or the Municipality to coordinate or without owning the suggested land. Often the developers end up reverting to monetary compensation, believing there will be schedule delays to the project if coordination between levels of government is required.

NSE staff also indicated there have been issues regarding who will own and maintain the new infrastructure proposed by developers as compensation. Again, to avoid perceived schedule delays, developers often revert to providing monetary compensation for NSE to spend on sites throughout Nova Scotia.

Staff have spoken to NSE staff and have indicated that HRM is interested in facilitating these projects and that NSE staff can direct developers to the municipality for coordination. Staff have been and will continue to work with NSE staff in the departments governing wetlands as well as stormwater, to ensure opportunities are discussed when available.

FINANCIAL IMPLICATIONS

There are no financial implications of this recommendation. A list of potential wetland compensation projects can be compiled within existing staff resources and budgets.

RISK CONSIDERATION

There are no significant risks associated with the recommendations in this Report.

Adopting a strategy to redirect NSE wetland compensation funding to naturalized stormwater ponds would improve stormwater management, thus will aid in protecting property, and promoting protection of the environment by decreasing stormwater run-off and increasing soil absorption of stormwater. This is supported by the Regional Plan.

COMMUNITY ENGAGEMENT

Community Engagement, as described by the Community Engagement Strategy, is not applicable to this Report.

ENVIRONMENTAL IMPLICATIONS

Reaching an understanding with NSE to refocus and increase Wetland Compensation within HRM will help protect property and protect water resources. The approach is also consistent with the Regional Plan policies relating to the municipal role in stormwater management.

ALTERNATIVES

Regional Council could choose to not accept the staff recommendations. This is not recommended for the reasons outlined in this Report.

ATTACHMENTS

Appendix 1 Legislative Authority

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Shannon O'Connell, P.Eng., M.A.Sc., Program Engineer, 902.476.2917

Report Approved by: Peter Duncan, P.Eng., Manager, Infrastructure Planning, 902.490.5449

Report Approved by: Kelly Denty, Director, Planning and Development, 902.490.4800

**Appendix 1
(Legislative Authority)**

The Halifax Regional Municipality Charter states:

- 353 (1) The Council may make by-laws,
- (a) setting standards and requirements respecting stormwater management;
 - (b) requiring stormwater to be directed to or retained in areas specified in the by-laws;
 - (c) setting standards and requirements respecting the design, construction and installation of stormwater systems and related services and utilities;
 - (d) providing further criteria for the approval of stormwater systems that do not meet the standards and requirements set by by-law, but that are an improvement over an existing stormwater system;
 - (e) regulating the use and maintenance of municipal and private stormwater systems;
 - (f) providing for the protection of municipal and private stormwater systems;
 - (g) prescribing when connection of stormwater systems to a municipal stormwater system is required;
 - (h) providing for exemptions from the requirement to connect stormwater systems to a municipal stormwater system;
 - (i) prescribing the circumstances under which the engineer may undertake the work required to connect stormwater systems to a municipal stormwater system;
 - (j) regulating and setting standards for drainage;
 - (k) regulating and setting standards for grading, describing when the standards and requirements must be met, and exempting those classes of lots described in the by-law;
 - (l) prohibiting the issuance of any municipal permits or approvals if a by-law pursuant to this Part is not complied with and prescribing conditions under which, in such cases, the issuance of permits or approvals may be allowed, and any conditions that may be attached to them;
 - (m) regulating and setting standards with respect to the alteration, diversion, blocking or infilling of stormwater systems.
- (2) The Engineer may direct a person to comply with a by-law made pursuant to this Section and may direct restoration to the original condition if any work is done contrary to the by-law.
- (3) Where the Engineer undertakes the work required to connect stormwater systems to a municipal stormwater system pursuant to a by-law, the cost may be recovered from the owner of land that the stormwater system benefits and is a first lien on that land.

The Regional Plan states:

SU-7 HRM shall consider adopting a stormwater management and erosion control by-law with provisions made that may be area specific and may vary by type of development and, where required, be subject to

approval by the Review Board. When considering adoption or amendments to the by-law, the following matters may be considered:

(a) the cost and effectiveness of methods to reduce increased stormwater flows caused by development with consideration given to problems associated with downstream flooding, stream bank erosion, groundwater contamination and inflow and infiltrations into wastewater systems;

(b) the potential for employing naturally occurring soils and native plant species in stormwater management plans;

(c) means to reduce site disturbance and impervious surfaces in new developments;

(d) methods of reducing sediments, nutrients and contaminants being discharged into watercourses; and

(e) the recommendations contained in a watershed study undertaken pursuant to policy E-23 of this Plan.

SU-8 HRM may consider regulatory and operational measures to reduce the quantity and improve the quality of stormwater entering public stormwater facilities and watercourses including, but not limited to, public education programs, animal waste control, spill prevention plans, removing illegal connections, enhanced street sweeping, reduction in road salts, land use restrictions and revisions of development standards. Any such measures may apply in whole or in part of HRM and may require approval of the Review Board.

SU-9 HRM may consider supporting retrofits to existing stormwater facilities where it has been determined that such retrofits could be expected to mitigate flooding or to improve the quality of stormwater entering watercourses.

SU-10 Where public stormwater collection infrastructure must undergo significant repair or replacement, HRM may consider supporting funding for daylighting of the watercourse involved with consideration given to:

(a) feasibility in relation to the surrounding environment, land use and ownership, adequacy of space, drainage and potential flooding issues, safety and other practical or engineering considerations as appropriate.

(b) replacement of culverts with bridges or a three-sided culvert rather than straight pipe is preferred wherever possible;

(c) the potential for legal and liability issues arising; and

(d) costs and the availability of funding.

SU-11 In the event that the Province of Nova Scotia considers imposing standards on the quality of stormwater entering watercourses, HRM shall participate in consultations and shall consider amending any stormwater management by-law approved pursuant to Policy SU-7 to be consistent with or complement standards adopted by the Province of Nova Scotia.

SU-12 HRM shall support efforts by Halifax Water to create a rate structure for stormwater management services that provides incentives for the retention of on-site stormwater and may consider any amendments to municipal by-laws which would assist in facilitating these efforts.

Administrative Order One, *Procedures of the Council Administrative Order*, Schedule 5, Environmental and Sustainability Standing Committee Terms of Reference, clause 6(c)

6. The Environment and Sustainability Committee shall:

(c) perform other related activities in the area of Water Resource management as identified by the Standing Committee and approved by the Council.

The HRM Municipal Planning Strategy states:

8.4 The City shall identify areas of natural significance and natural areas which are environmentally sensitive. The City will protect these areas from environmental degradation insofar as possible, through such means as zoning, development standards, and public education.

8.5 The City shall establish standards, insofar as it has the power, for maintaining lake systems and their watersheds in a healthy state. These standards should address the infilling of lakes or their tributaries, the preservation of natural resources which are visually or ecologically complementary to those lakes and their tributaries, the control of discharges into lakes or tributaries resulting from public or private developments which would cause long-term degradation of the water quality, and the prevention of any other environmentally damaging effects.
