

NO: R035

COUNCIL DATE: March 1, 2010

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **February 26, 2010**

FROM: **General Manager, Engineering**

FILE: **3900-20(16138)**

SUBJECT: **Erosion and Sediment Control By-law Implementation Update**

RECOMMENDATION

The Engineering Department recommends that Council receive this report as information.

INTENT

The purpose of this report is to apprise Council about the successes and challenges related to the City's Erosion and Sediment Control management program since its inception in March 2007 and the City's continuing efforts to inform and educate stakeholders.

BACKGROUND

Many of the Region's local governments have adopted Erosion and Sediment Control (ESC) by-laws recently. Surrey has been one of the leaders in this regard by focusing on industry education, setting the standard for by-law development and through cooperative enforcement.

The introduction of ESC measures on construction sites is a relatively inexpensive undertaking costing approximately 1 to 2% of the total site servicing costs. In comparison to the potential environmental impacts and additional costs associated with the damage to the City's drainage systems caused by construction on development sites the costs are relatively minor.

Educating the development industry to the new practices related ESC has been challenging despite the fact that applying ESC can yield considerable project savings through better site management and preventing recurring cleanup works and can result in improved public/buyer perceptions about the project.

Internal Business Development

To date the City has made considerable progress in integrating the new ESC requirements into the construction planning process. The ESC By-law has a two-tiered structure that separates smaller projects from larger ones. This tiering enables the higher risk sites to be better managed while not incurring an onerous burden on sites where the risks are lower. The following is a synopsis of the two tiers:

- **Lower tier projects:** These are construction projects that will result in a disturbed area under 2000 m². These projects are required to implement standard Best Management Practises that are specified under Schedule B of the By-law. This is intended to allow home builders and landscapers more flexibility in complying with the By-law without being burdened with permit costs.
- **Higher tier projects:** These are construction projects that have a disturbed area greater than 2000 m² in area. These projects are required to obtain an ESC Permit from the City prior to the commencement of construction. The permitting process ensures that all phases of the construction or development project have erosion and sediment control measures consistent with the expected impacts of the project. The permit requires the appointment of an ESC supervisor for the project and regular monitoring of site runoff. Currently, City staff is tracking ESC performance on 126 active ESC-permitted construction sites.

As part of the ESC Permitting process, the Engineering Department has implemented an online application and tracking system using the City's website to facilitate the permit issuance process and to allow up to date permit processing transparency.

The ESC By-law and permitting requirements apply to all City projects, which demonstrates to the private sector that the City adheres to the same guidelines as it sets for the construction and development industry.

External Communications and Expertise Development

Through the development and implementation of the ESC By-law, the Development Advisory Committee, the Agricultural Advisory Committee and the Greater Vancouver Home Builders Association (GVHBA) have all been consulted. There have also been many on-site and off-site training and information sessions to which consulting firms, contracting companies, the GVHBA and other government agencies have been invited. These sessions have been focussed on disseminating information regarding the ESC By-law and related requirements.

Educational brochures and handouts have also been developed for distribution to interested and affected parties. A web page has been included on the City's website dedicated to the ESC program. It provides viewers with key background and other information including available external training and products to assist in ESC program compliance.

One of the most significant achievements of the program that was accomplished in partnership with the Pacific Northwest International Erosion and Sediment Control Association (PNWIECA) and the Township of Langley was the hosting of a two-day ESC conference showcasing the latest developments and available products in the ESC area. The program included field demonstrations amongst other things. Last November, this annual event attracted 200 delegates from across B.C. including product suppliers, industry experts, consultants, contractors, developers and representatives of regulatory agencies.

Enforcement and Site Monitoring

Since the adoption of the ESC By-law in 2007, the City has seen a marked improvement in construction site management. Contractors have been installing sediment fencing, covering soil stockpiles, regularly cleaning the streets around their sites and installing catchbasin inserts to

filter runoff water. The ESC supervisors (required by the permitting process) have been submitting monitoring reports, especially after significant rainfall events as required by the By-law. Upon submission of these reports, if concerns are identified, City staff work with the monitors to resolve any problems, offering suggestions to site supervisors on ways to improve site infrastructure to assist in ensuring that the storm runoff from the site meets applicable quality requirements.

By-law compliance is being lead by the City's By-law Enforcement Section and the Drainage and Environment Section in the Engineering Department. Staff has focused on ensuring ESC permits are issued prior to construction commencing, monitoring water quality emanating from construction sites and ensuring that contractors install ESC measures on site. Since the adoption of the By-law, over 1,600 advisory notices have been issued to contractors for shortcomings in relation to the requirements of the By-law with about 6% of these being Municipal Ticket Informations (MTIs) for repeat violations or violations where there are significant shortcomings related to sediment discharges or for commencing work without an ESC permit. For significant violations, the issuance of an MTI combined with issuance of a Notice to Comply order has been an effective tool in bringing about site compliance.

The majority of construction sites that have received an ESC permit since the inception of the program have been in compliance with the By-law with minor issues being resolved between City staff and the respective site contractor.

DISCUSSION

Consistency in the application of ESC program requirements by builders of single family detached homes on individual lots has been the most significant challenge to the City. These builders are often not present on the site and their workers and/or sub-trades in some circumstances are not familiar with ESC measures that are in place on the site. This has lead in some circumstances to sediment releases to roadways from the site either from vehicles exiting the site and/or from uncovered soil stockpiles on site and/or other similar shortcomings. City staff is continuing to work with this sector of the construction industry to improve ESC awareness and practices. Working with the City's Building Division, Engineering staff is continuing to develop and issue education material and undertake field reviews and performance inspections to inform builders of their responsibilities and to confirm that these responsibilities are being fulfilled.

Overall, there has been a noticeable improvement in runoff water quality in the vicinity of construction sites. Since implementation of the By-law, the City has received fewer pollution complaints, the frequency for cleaning catch basins has decreased and roads are generally cleaner. This is resulting in reduced maintenance costs for City infrastructure and improved protection of fisheries habitat and the City's natural watercourses.

In addition to continuing education and enforcement efforts, a number of projects are planned for 2010 to improve the City's ESC program. These projects include:

- Development of enhanced web-based business processes that will allow for online submission of monitoring reports;
- Development of additional educational materials for stakeholders; and
- Development of detailed ESC policy documents.

SUSTAINABILITY CONSIDERATIONS

The City's Erosion and Sediment Control management program supports the Environmental Pillar of the City's Sustainability Charter in relation to goals:

- EN8: Sustainable Engineering Standards and Practices; and
- EN9: Sustainable Land Use Planning and Development Practices,

by minimizing the environmental impact of development through the practice of sediment control which, if left unmanaged, can lead to degraded water quality, the destruction of fisheries habitat and the obstruction of drainage infrastructure.

CONCLUSION

Surrey is at the forefront of Erosion and Sediment Control (ESC) regulation development and implementation at the local government level in the Lower Mainland and is considered by many to be a leader in the area. By working with the construction industry, City staff is continuing to create and disseminate relevant education materials and to assist in site implementation of ESC requirements to ensure By-law compliance. The results are an educated group of stakeholders who are protecting and maintaining healthy waterways in Surrey.

Vincent Lalonde, P.Eng.
General Manager, Engineering

VL/CAB/JA/brb