

## Section I – Items for Board of Directors Action

**TO:** Chair and Members of the Board of Directors  
Meeting #3/20, Friday, April 24, 2020

**FROM:** Darryl Gray, Director, Education and Training

**RE:** **NEW EROSION AND SEDIMENT CONTROL GUIDE FOR URBAN CONSTRUCTION**

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### KEY ISSUE

Board endorsement of the *Erosion and Sediment Control (ESC) Guide for Urban Construction* and a development review streamlining initiative for construction sites applying continuous monitoring. The Guide was circulated for comments and is now finalized for use in the review of ESC submissions under planning, environmental assessment and TRCA permit processes.

### RECOMMENDATION

**WHEREAS** over 2018 and 2019, based on up-to-date knowledge from science and practice, Toronto and Region Conservation Authority (TRCA) staff developed the draft *Erosion and Sediment Control (ESC) Guide for Urban Construction* (hereafter referred to as ‘the Guide’) as an update to the 2006 *Greater Golden Horseshoe Area Conservation Authorities ESC Guideline for Urban Construction*, and to provide updated information on TRCA expectations related to the design of ESC plans and reports subject to TRCA review, and the inspection and maintenance of ESC measures during construction;

**AND WHEREAS** in 2019, TRCA staff sought and received input on the draft Guide from provincial agencies, conservation authorities, municipalities, and private sector stakeholders, including the Building Industry and Land Development Association (BILD), and the Greater Toronto Sewer and Watermain Contractors Association, and have now finalized the Guide;

**THEREFORE LET IT BE RESOLVED THAT** the Board of Directors endorse the Erosion and Sediment Control Guide for Urban Construction for use, beginning in September 2020, by public and private proponents of construction projects and TRCA staff involved in the development review and approval processes, and enforcement;

**THAT** in the time leading up to the Guide coming into effect in TRCA’s jurisdiction in September 2020, TRCA conduct training workshops for staff, municipal partners and practitioners in the development industry, recognizing changing COVID-19 directives, in order to allow all stakeholders to become familiar with how the Guide will be applied in the review and approval of development applications;

**THAT** TRCA staff establish a voluntary program to allow for streamlined review and approvals of ESC submissions (plans and reports) for construction projects where the proponent agrees to institute continuous real-time turbidity (suspended sediment concentration) monitoring to evaluate their compliance with the turbidity targets defined in the Guide;

**AND FURTHER THAT** TRCA assesses, over a three year period, the extent to which

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**turbidity targets are being achieved by collecting information from pilot sites that are applying continuous turbidity monitoring, and, at that point in time, re-consider the targets and best management practices recommended in the Guide as needed.**

### **BACKGROUND**

The *Greater Golden Horseshoe Area Conservation Authorities ESC Guideline for Urban Construction* was published in December 2006, received TRCA board approval, and was adopted by nine conservation authorities in the Greater Golden Horseshoe Area. For the past 13 years the Guideline has been used as the basis for review of ESC submissions at TRCA. Since its release there have been many significant and fundamental changes in the field of ESC, including greater availability of professional training programs, new policies for the protection of species at risk and other legislative changes, emergence of new products and techniques, and advancements in our knowledge of optimal application of best practices. The new ESC Guide for Urban Construction has been developed in order to address this evolution, providing current, concise, relevant and solution-oriented ESC guidance. The information contained in the new Guide details TRCA expectations for ESC submissions, the review of which is a mandated CA responsibility.

The Guide was scoped in co-operation with an advisory committee comprised of representatives from various stakeholder groups, including the construction and development industry, product suppliers, federal, provincial and municipal government, conservation authorities, and academia. The draft Guide completed in March 2019 was thoroughly vetted through senior technical and planning staff, and was widely circulated to external stakeholders. Following an announcement at TRIECA 2019, the guide was circulated to the advisory committee and then disseminated to key CA and municipal stormwater contacts by Conservation Ontario, the Municipal Stormwater Discussion Group and the Municipal Engineers Association. The draft was downloaded over 1,300 times during this review period. During the public review period staff offered a training webinar and provided presentations to BILD, the Ministry of Environment, Conservation, and Parks (MECP), the Municipal Stormwater Discussion Group, and other stakeholder groups. Based on the feedback received through this external review process, TRCA staff have now revised and finalized the Guide for staff use in the review of ESC submissions under planning, environmental assessment and TRCA permit processes.

It is anticipated that other CAs will adopt this Guide in their jurisdictions as a replacement for the 2006 Guideline, as many have indicated their intention to do so. During consultation with the development industry, representatives often expressed their desire for a more consistent approach to the review of development applications among CAs. In order to facilitate the adoption of the new Guide by other CAs, the information contained therein was intentionally kept general enough to be applicable in other jurisdictions in Ontario. Through consultation with MECP, it was also determined that adherence to the Guide will be listed as a criterion for pre-approval of stormwater management projects in the MECP's forthcoming linear consolidated permissions initiative, which will see the establishment of system-wide environmental compliance approvals for stormwater infrastructure.

### **RATIONALE**

Ontario CAs are responsible for reviewing, commenting on and approving ESC plans as regulators issuing permits under section 28 of the Conservation Authorities Act, and also as part of their delegated responsibilities under the Ontario Planning Act. On sites that are determined to be within the CA's area of interest, applications are circulated to the CA for comment. CA areas of interest include, but are not limited to: features and hazards governed under the

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“Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” regulations, areas requiring special stormwater management controls, Areas of Natural and Scientific Interest, Environmentally Significant Areas, and CA property. CAs are required to provide technical review and commentary regarding how the proposal would impact natural hazards or natural heritage features and functions. In the absence of appropriately designed, installed and maintained ESC measures, construction activities can result in destabilized land, increased erosion risk, and the transport of sediment offsite and into natural features and other private property.

Among Ontario's conservation authorities, TRCA has for over a decade acted as a leader in the field of construction site erosion and sediment control, serving to advance the state of practice by conducting research, offering professional training programs (e.g. Canadian Certified Inspection of Sediment and Erosion Control), and developing resources and guidance to educate the industry on best practices. Having also led the development of the 2006 Guideline, TRCA has continued to show leadership by developing the new Guide, in partnership with Credit Valley Conservation, which advances the conversation around ESC further by advocating for more progressive approaches, such as the adoption of performance-based targets for turbidity levels in construction runoff, and the use of erosion risk assessment outcomes to inform ESC plan design.

By establishing clear and consistent turbidity targets for construction sites, and a protocol for how compliance with those targets is measured, both the development industry and regulatory agencies stand to benefit. The adoption of turbidity (or suspended solids) targets for construction site runoff is seen in many other jurisdictions in North America, including locally through the *Silt Smart Protocol* established by Credit Valley Conservation, the Ministry of Natural Resources and Forestry, the Ministry of Environment, Conservation and Parks, and Fisheries and Oceans Canada. The approach represents a shift towards performance based monitoring and away from being prescriptive in terms of the specific types of controls that should be applied on the construction site. This performance based approach emphasizes the continuous assessment of ESC performance and promotes more rigorous inspection and timely response to elevated sediment releases because they are being identified in real time.

Further, the turbidity targets and continuous monitoring guidance set out in the Guide will be applied as the foundation of a streamlining initiative for review and approval of ESC submissions. A voluntary program will be established to provide streamlined and expedited review on construction projects where the proponent agrees to institute continuous real-time turbidity monitoring to evaluate their compliance with the turbidity targets defined in the Guide. This addresses strategy #4 in the Updated TRCA Strategic Plan, which specifically speaks to identifying opportunities to facilitate more timely reviews as part of the development review process.

### **Content of the Guide**

The Guide provides practitioners, developers and regulatory agencies with up-to-date, relevant, clear and practical information on the effective application of erosion and sediment control measures. The Guide addresses the following specific objectives:

- Defines key terms and concepts necessary for understanding the science of erosion, sediment transport and sedimentation
- Defines erosion risk assessment methods and how risk assessment outcomes can aid in the selection of best management practices
- Details strategies for effective application of ESC through all stages, including plan design, installation, inspections, maintenance, and decommissioning

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- Provides guidance on protecting certain vulnerable features from impacts of nearby construction, such as low impact development areas and natural water features
- Clarifies ESC plan submission requirements and approvals processes
- Clarifies the roles and responsibilities of all parties involved in ESC
- Outlines expectations for ESC inspections and performance monitoring on construction sites, including turbidity targets for receiving water systems and construction effluent
- Provides updated guidance on best management practices for erosion prevention, erosion control, sediment control, and isolation of in-water works
- Provides a summary of relevant legislation and how it governs construction activities

### **Feedback received during draft review**

During the comment period, representatives from BILD and the Greater Toronto Sewer and Watermain Contractors Association provided feedback on the new construction site turbidity targets in the Guide, expressing some concern that they would be challenging to achieve using current best practices. TRCA staff re-considered the targets in light of past research on construction sites and experiences with the *Silt Smart Protocol*, and developed revised targets that will provide more flexibility for proponents while still promoting a performance based approach that encourages more rigorous site inspection and quick problem response.

Written and verbal comments submitted by conservation authorities, provincial ministries, municipalities, and other private sector practitioners were addressed through several fairly minor revisions made throughout the Guide. Feedback was generally positive and comments did not suggest the need for any fundamental changes to the content of the Guide.

### **Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan**

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

**Strategy 2 – Manage our regional water resources for current and future generations**

**Strategy 4 – Create complete communities that integrate nature and the built environment**

**Strategy 8 – Gather and share the best sustainability knowledge**

**Strategy 10 – Accelerate innovation**

### **FINANCIAL DETAILS**

The development of the ESC Guide was supported through capital funding to account 416-96 (Sustainable Technologies Evaluation - Clean Water) from the regional municipalities of Toronto, Peel and York. Staff secured additional funding (into account 416-96) for the development of the Guide from the Toronto and Region Remedial Action Plan. Credit Valley Conservation provided in-kind support to the development of the Guide by developing content and attending working meetings to help navigate key issues. Moving forward, costs incurred to develop and deliver the planned training events associated with the Guide will be recovered through participant registration fees.

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### **DETAILS OF WORK TO BE DONE**

The Guide will be rolled out over four months, with TRCA-wide adoption planned for September 2020. Leading up to this date, TRCA staff will hold at least one internal training workshop with all staff involved in review and approval of ESC plans and construction site enforcement. This workshop will help to establish how the adoption of the new Guide will change the review and approval of ESC submissions, and contribute to defining the key aspects of the voluntary program that will be established to offer streamlined approvals for continuously monitored construction sites. Following this internal workshop, training will also be offered to development industry professionals and municipal staff, with the number of events or webinars to be determined based on demand. The training offered will focus primarily on new aspects of the Guide, providing the information necessary to allow practitioners to develop ESC submissions that adhere to the Guide. Providing this internal and external training to all the practitioners involved in ESC plan development, review and approvals, and enforcement will ensure a seamless transition when the new Guide is adopted in September 2020.

The second aspect of the roll out is the establishment of the voluntary program to provide streamlined and expedited review on construction projects that institute continuous real-time turbidity monitoring. The parameters of the program will be established by TRCA staff in the various groups involved in development review and enforcement. It will be finalized and published prior to the September 2020 adoption date for the Guide. As proponents sign on to this voluntary program, monitoring outcomes and practitioner experiences will be thoroughly documented to help inform program improvements and future updates to the Guide.

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**Date: February 3, 2020**

**Attachments: 1**

Attachment 1: Erosion and Sediment Control Guide for Urban Construction (TRCA, 2019)