

Date: May 2011 meeting

Subject: Large Scale Fill Operations within the CA Regulated Area.

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Concern #1 (Municipal Site-Alteration By-Laws having No Effect)

By virtue of the Municipal Act, Section 142, site alteration by-laws can only be enforced by municipal staff in areas which are not subject to regulations made under **Clause 28(1) of the *Conservation Authorities Act***.

CA's issue "**Development, Interference with Wetland, Alterations to Shoreline**", permits. They do not currently issue "fill permits" the way a municipality could with all the considerations.

The CA may grant permission for "development" (which includes site alterations) within Regulated Areas provided it has been determined that there will not be an adverse affect on the following five tests:

- **Control of flooding;**
- **Erosion;**
- **Dynamic beaches;**
- **Pollution; or**
- **Conservation of land.**

Only two of these tests really allow for conditions of any consequence to be put on the CA permit that approves a large fill site-namely "pollution and conservation of land".

The Problem

The definition of pollution in the Conservation Authorities Act is very vague:

"pollution" means any deleterious physical substance or other contaminant that has the potential to be generated by development

The definition for "conservation of land" is non-existent but only understood and interpreted any number of ways by various CA's. (Note that CLOCA has stated that for the term "conservation of land", "common interpretation includes protection of land within the watershed ecosystem for the purpose of maintaining or enhancing natural features and hydrologic and ecological functions.")

The Reality

Large scale fill operations can pose a significant threat to human and ecosystem health. Aside from the very contentious social issues of noise, dust and traffic, there is the issue of potentially contaminating ground and surface waters. If CA's are going to allow these large fill operations in their regulated areas, they must "incorporate additional requirements as part of the permit/approval process in order to ensure that the placement of fill material will not have a negative or adverse impact on the environment". (CLOCA report April 12, 2010)

Concern #2 (How Municipalities and Conservation Authorities Regulate the “Quality” of Fill)

The following is taken from the LSRCAs Staff Report No. 23-11-BOD entitled “Interim Permit Requirement – Fill Quality

“For larger fill volumes (greater than 250m³) the applicant would be required to include a description of the source of fill by way of a letter from the party from whom the fill was acquired attesting that the fill meets the **MOE definition of “clean fill”** along with the soil analysis data results documenting the fill quality.”

The Problem

There are **no current MOE definitions** in the acts or the regulations of what constitutes “**clean fill**” or “**contaminated fill**”. **The MOE has no definitions for clean fill-this fact must be understood and recognized.** (As well, “a letter from the party from whom the fill was acquired...”, is not an assurance that the fill is “clean”-to be discussed further in the presentation.)

For CLOCA, they choose to address fill quality in the following way as stipulated in the CLOCA report (April 2011) entitled: Draft Protocol for Large Fill Sites

“The authority may apply any one of the following conditions to the permit
d) A requirement for testing of fill and or groundwater to ensure the material is inert.”

Unfortunately no definition of “inert fill is provided in the report, leaving this term to be interpreted in various ways and not necessarily providing adequate protection of human health or the environment. The MOE defines inert fill as: “earth, rock or fill waste that contains no putrescible materials or soluble or decomposable chemical substances.” This term is inadequate in protecting sites from potential contamination due the Ministry recognized need for a “clearer and more comprehensive definition” (EBR Registry Number: RA8E0030).

Concern #3 (Use of MOE tables)

The MOE prescribes Site Condition Standard Tables (MOE Tables 1-9) for use with Regulation 153/04 - Filing a **Record of Site Condition (RSC)**. This is a document that is filed when you are going from one property use such as commercial or industrial, to a more sensitive property use. In essence, these Tables are prescribed for use as minimal cleanup standards at contaminated sites. The following is an excerpt of one of the Tables:

TABLE 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

TABLE 2: Contaminant	Soil Standards (other than sediment) (µg/g)			Potable Ground Water (µg/L)	Sediment (µg/g)
	Agricultural or Other Property Use	Residential/ Parkland/Institutional Property Use	Industrial/ Commercial/Community Property Use	All Types of Property Use	All Types of Property Use
ACENAPHTHENE	15	15	15	20	NV
ACENAPHTHYLENE	100	100	130	310	NV
ACETONE	3.5	3.5	3.5	3000	NV
ALDRIN	0.05	0.05	0.05	0.01	0.002
ANTHRACENE	28	28	28	12	0.22
ANTIMONY	13	13	(44) 40	6.0	NV
ARSENIC	(25) 20	(25) 20	(50) 40	25	6

However, **Table 1** standards list **current background** soil conditions achievable just about anywhere in Ontario where there has been **no point source contamination**.

The other MOE tables (Tables 2-9) carry assumptions with them that cannot be guaranteed outside of their prescribed use.

Therefore, **“Clean sites”** and sites outside of the MOE reg. 153/04, should only be accepting fill that is consistent with Table 1 standards

Ganaraska CA, for example, has used MOE tables as part of their conditions when issuing Development, Interference with Wetland... permits. Other Authorities and Municipalities have used the MOE Tables as a surrogate as well, as no tables exist outside of the Ministry O. Regulation 153/04 for the municipalities’ purposes. An example is given below.

As per Town of Georgina Report, EPW-2011-0014

“Following discussion with Town staff, the LSRCA has indicated that they would be introducing as a condition of their permits, that all fill material be required to meet MOE guidelines as outlined in Table 1 and **Table 2** of the *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act.*”

It is our (LCCW's) informed belief that Conservation Authorities and Municipalities alike should only be accepting Table 1 soils (fill) for sites outside the MOE Reg. 153. (However, "like to like" would be the optimum choice.)

Please consider the following quotes taken directly from the MOE document entitled:

RATIONALE FOR THE DEVELOPMENT OF SOIL AND GROUND WATER STANDARDS FOR USE AT CONTAMINATED SITES IN ONTARIO

December 22, 2009

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"Soil standards are for the cleanup of contaminated sites and must not be used to judge the contamination of clean sites. They represent "clean down to" levels at contaminated sites and not "pollute up to" levels for less contaminated sites. (CCME 1996)"

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"Overview of Development Process for Generic Site-Condition Standards

1.3.1 Background

The use of the Tables of Site Condition Standards fits into a broader framework for the **assessment and remediation of contaminated sites."**

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"vii) The generic SCS approach is intended to protect **"typical"** receptors potentially exposed at contaminated sites **rather than the most sensitive** of all possible receptors. However, the generic SCS may not provide adequate protection for sites that are considered "Potentially Sensitive". As such, additional work may have to be undertaken to ensure adequate protection based on site-specific conditions."

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"It is noted that the original intent was to include reptiles and amphibians as well, but due to the lack of information on these classes, criteria protective of them have not been included in this revision..."

Also to consider, is that the standards will continue to change. The new MOE standards will come into effect this July. There will be a **significant decrease in allowable concentration levels** for the majority of contaminants listed in the tables. In effect, many standards considered acceptable today for protecting human and ecological health will no longer be acceptable for use once the new tables come into full effect. Point being is that the science used to develop these tables is by no means absolute. As well, these tables come with statements of limitations that must be recognized.

As stated in the Technical Update for the “**Rationale for Site condition standards in O/ Reg. 153/04**” **4. Use of the Tables of Site Condition Standards**

“The tables of Site Condition Standards referred to in the RSC Regulation were derived for use in the assessment and remediation of the majority of contaminated sites in Ontario and filing a RSC for those properties. The numeric criteria **contain many assumptions** that are appropriate for use at contaminated sites being redeveloped under Ontario RSC legislation, regulations and guidelines. However, **some of these assumptions may not be appropriate for other uses of these numeric criteria**. It is recommended that use of these numbers for other purposes occur only with a thorough understanding of the development process, assumptions used, and the potential consequences, and after discussion with the Standards Development Branch of the Ministry of the Environment”

As well, starting in July 2011, the MOE will strictly regulate which RSC sites will be able to accept table 2 and 3 soils and so on. Generally, they will only be sites where there was an historic potentially contaminating activity on site and a contaminant of potential concern was identified. For all other sites, Table 1 soils only will be accepted. Why then would one allow Table 2 soils, for example, for “Greenfield” sites? **The cumulative impact of hundreds of thousands cubic metres of this fill has not been determined.**

It should also be noted, the MOE prescribes **Table 1** soils for sites it considers “**Environmentally Sensitive Sites**” as described in their reg. Why then would you not apply the same standard for a “Greenfield” site if you are using the Tables as a surrogate?

What does the MOE consider to be an environmentally sensitive site? Please see below.

Site condition standards, environmentally sensitive areas (Pasted from Section 41, Reg. 153)

41. (1) This section applies in relation to a property if,

(a) the property is,

(i) within an area of natural significance,

(ii) includes or is adjacent to an area of natural significance or part of such an area, or

(iii) includes land that is within 30 metres of an area of natural significance or part of such an area;

“area of natural significance” means any of the following:

1. An area reserved or set apart as a provincial park or conservation reserve under the *Provincial Parks and Conservation Reserves Act, 2006*.

2. An area of natural and scientific interest (life science or earth science) identified by the Ministry of Natural Resources as having provincial significance.

3. A wetland identified by the Ministry of Natural Resources as having provincial significance.

4. An area designated by a municipality in its official plan as environmentally significant, however expressed, including designations of areas as environmentally sensitive, as being of environmental concern and as being ecologically significant.

5. An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the *Niagara Escarpment Planning and Development Act*.

6. An area identified by the Ministry of Natural Resources as significant habitat of a threatened or endangered species.

7. An area which is habitat of a species that is classified under section 7 of the *Endangered Species Act, 2007* as a threatened or endangered species.

8. Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the *Oak Ridges Moraine Conservation Act, 2001* applies.

9. An area set apart as a wilderness area under the *Wilderness Areas Act*;

Considerations for clear and comprehensive fill quality protocols are necessary for Conservation Authorities.

Reasons:

1) Commercial Fill Operations are **multimillion dollar businesses**. If certain large fill operators find municipal by-laws too daunting, they may be looking to CA regulated areas to **by-pass** strict municipal fill regulations.

2) Much of the fill may be coming from **“brownfield sites”**. Brownfields are defined by the MOE website as abandoned, idle or under-utilized industrial and commercial properties where the previous property use caused environmental contamination.

“To date, a frequently selected option for managing contaminated soil is off-site disposal.” (Records of Site Condition - A Guide on Site Assessment, the Cleanup of Brownfield Sites and the Filing of Records of Site Condition pg. 26)

Much of this fill ends up in these large scale commercial fill dump sites potentially contaminating sensitive areas.

3) There are **dangers when accepting soil reports without an independent peer review**. To put this point into perspective: With regards to the Scugog “clean fill “ dumpsite, the “Qualified Person” (namely the professional engineer) retained by the site operators reviewed and approved soil origin and quality reports in order to maintain a “clean” operation. When these same reports were reviewed by MOE staff, the MOE found the reports to be **“incomplete, inadequate and inaccurate”**.

The reason is that many soil “reports” or assessments of the soil origin properties **were not prepared for the use of the fill dump site operation**. Most reports were prepared for a specific purpose and were quite dated. These reports often contain statements of limitations that warn against use in situations other than those for which they were prescribed.

To further demonstrate this point, a recent MOE order issued with regards to a large fill site in Clarington under a **Ganaraska CA permit**, states the following: “

Although the Site owner did receive some sample results from its engineering consultant, who in turn was relying on information received from the Pier 27 consultant, I have concerns regarding this information. The amount of the sampling was not sufficient and how the sample information relates to the material that was, in fact, deposited at the Site is not clear. As

Further to this point, **CLOCA**, through their large fill site protocol (April 2010), has indicated that soil reports are to be prepared “by a qualified person in accordance with pertinent Ministry of the Environment Guidelines”- however, any MOE guidelines would not be prescribed for large fill sites which are outside of MOE jurisdiction. **Concerns with this aspect of the CLOCA protocol are of concern and may merit review.**

4) There is the potential **for non-compliance with the ORMCP, Greenbelt Plan and Provincial Policy Statement**, as the CA (due to the limited scope of their regs.) may not consider these when issuing their permits. However the “conservation of land” authority test could allow for incorporation of these considerations.

5) The **potential contamination of aquifers** and impairment to groundwater recharge may be overlooked, as CA’s tend to deal with surface waters-as per CA regs.

Requests: (Respectfully)

- 1) If Conservation Authorities (including CLOCA), are going to issue permits that allow these large fill operations in their regulated areas, please consider the following conditions in your permits (**to name a few**):
 - allow only **MOE Table 1** (as amended) in regulated areas
 - accept the need for **independent** review of soil reports, by CA hired consultants, at the owner's expense.
 - address the need for soil reports to be current, prescribed for use at the fill site, and prepared by **professional engineers or professional geoscientists**
 - large fill sites should require **board approval**
 - include frequency and costs for independent testing of fill by the CA (ie. split samples, audit samples, etc.)
 - address the need for an **EIS and a Terms of Reference** to address site specific issues (as suggested in CLOCA's protocol) such as: significant groundwater recharge areas (fill that is mostly clay can have a significant impact in these areas), highly vulnerable aquifers, environmentally sensitive features, species at risk, etc.
 - a plan of **survey of the property by an Ontario Land Surveyor** identifying various environmentally sensitive features such as Provincially Significant Wetlands, Key Natural Heritage Features, etc.
 - detailed hydrogeological assessments should be performed prior to any filling
 - include conditions that address other types of "contaminants" (ie. **noise, and dust**)
 - **caution regarding "Soil Remediation" facility soil** in "sensitive sites" (sensitive sites being defined in Section 41. MOE reg. 153/04). For instance, the Certificate of Approval for Direct Line (a soil remediation facility), does not permit their remediated soil to be shipped to "environmentally sensitive areas", however according to the MOE, it is on the onus of the owner at the receiving site to know this fact (as discussed in a January 2011 meeting with MOE).
- 2) Define your interpretation of "pollution" to include a broader understanding, i.e. pollution of underlying aquifers. Define and interpret "conservation of land" to include "landform conservation area criteria" in the ORMCP (when required) and conservation of natural heritage features and hydrologically sensitive features.
- 3) **Appeal to the MNR** and Conservation Ontario and let them know of the "fill issue". Encourage the MNR to amend CA regulations (parts of the regulation are currently being re-visited) to come up with a **more clear and comprehensive definition** for "pollution" and a broad definition for "conservation of land". Please note that some CAs, like Ganaraska, have indicated that they may only be able to impose permit conditions regarding "pollution" and "conservation of land" that effect the specific feature-ie. the wetland and not the land around the wetland-hence not the groundwater if the groundwater does not directly affect the wetland. This is a serious concern. **Appeal to all CAs and Conservation Ontario to share info** on how to deal with the "large-scale "fill issue and to share their reasoning on what can be defended when "tested". **Use existing court "decisions"** to support more strict conditions on your permits. Other definitions that need clarification are "contaminant" (contained in the "pollution" definition and "hydrological function"-none currently exist in the regs.
- 4) Consider the question: **Should large scale fill operations even be allowed in your regulated area given the very real risks they pose to the environment?**

