

COMMENT

**Legislation – Ontario Moves to Protect Topsoil**

by Joe Castrilli\*

*Wherever climate and vegetation had laid down a few inches of topsoil, man began to multiply. Each and every civilization has been poised precariously on this thin, life-giving carpet. ... Great empires have risen and flourished only to fall with the loss of their topsoil. ...*

*Mesopotamia was the cradle of European agriculture. Five thousand years ago the valley of the Tigris and the Euphrates was an extraordinarily productive area, giving rise to the belief that it contained the Garden of Eden. When men multiplied, they cut off the forests at the headwaters of these rivers. Irrigation ditches spread water and sediment over the valley, gradually raising its height. In consequence, the rivers flooded and changed their course. Control of the irrigation system was lost, pastures were overgrazed, topsoil was washed out to sea, shifting the shoreline 200 miles to the south. Deprived of moisture, vegetation and topsoil, most of the area was surrendered to the wind, the sand and the desert. ...*

– Report of the Ontario Select  
Committee on Conservation, 1950.

Much of the earth's surface is covered by a thin mantle of topsoil, normally only a few inches in depth.<sup>1</sup> Nature produces new soil very slowly; much more slowly than the rate at which it is now being lost from poor agricultural crop production practices, new urban and transportation development, resource extraction and related land disturbing activities.<sup>2</sup> Once topsoil is lost, as the three-decade old select committee report (*supra*) indicates, a vital capacity to sustain life is diminished.

Topsoil loss has both adverse environmental and food supply consequences. Uncontrolled erosion and stripping of topsoil can result in air<sup>3</sup> and water<sup>4</sup> pollution as well as a significant decline in crop production.<sup>5</sup>

Under these circumstances, an institutional mechanism that could alleviate these problems would be a timely contribution to both the cause of better land stewardship and pollution control for present and future generations. It is in this context that recent topsoil preservation initiatives in Ontario must be viewed.

*The Statute and Background to Topsoil Preservation in Ontario*

*The Topsoil Preservation Act*,<sup>6</sup> which came into force November 25, 1977, allows municipalities to pass by-laws regulating or prohibiting the removal of topsoil<sup>7</sup> anywhere in the municipality or in a specified area defined in the by-law. The *Act*, administered by the Ministry of Agriculture and Food, authorizes municipalities to control topsoil removal by permit issuance, renewal or revocation, on

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such grounds as may be prescribed in the by-law. Rehabilitation standards and procedures may also be prescribed under the by-laws. The *Act* also enumerates the activities to which such municipal topsoil stripping by-laws do not apply. The general enforcement provisions of *The Municipal Act*<sup>8</sup> are incorporated into this statute.

The immediate reasons for the statute's enactment included complaints by some municipalities, particularly in rural and urban fringe areas, that individuals were acquiring land, stripping the topsoil for quick revenue and letting the mortgage lapse. The mortgagee was left with land of little asset value and useless from an agricultural perspective. It was also frequently the case that developers could more successfully argue before municipal councils that land zoned for agriculture should be rezoned for development where crop production possibilities had been eliminated.

From this perspective, the *Act* is a welcome opportunity for municipalities to control topsoil removal in most pre-development situations. In the past, unscrupulous or careless developers, pit and quarry operators or others have bulldozed first and asked for permission later, if at all.

#### *The Statute's Limitations*

There are, however, a number of important matters that the *Act* addresses inadequately or not at all. These include:

- The statute is an enabling statute under which many municipalities may not choose to enact by-laws controlling topsoil removal;
- The statute contains a long list of exempted activities to which municipal by-laws do not apply. The list includes many activities which result in substantial topsoil loss and related problems;
- The statute is silent on the minimum grounds under which permit issuance, renewal or revocation may be made;
- The statute is silent on the minimum rehabilitation standards and procedures to be followed;
- The statute does not specifically authorize fees or security deposits to help ensure that proper rehabilitation will take place; and
- The statute is only a partial approach to a much larger issue; that is, the problem of soil erosion as it contributes to both declines in crop productivity and increases in pollution, especially water pollution by sediment transport to lakes and streams.<sup>9</sup>

These flaws can all work to retard the development and application of proper land management and pollution control techniques.<sup>10</sup>

#### *Permissiveness*

Though some municipalities will enact by-laws, many may not,

with a result that considerable topsoil may be removed from the uncontrolled areas to supply neighbouring municipalities that have passed such by-laws. This possibility was noted by opposition members, during second reading debate on the Bill. The situation is analogous to one which prevailed respecting pits and quarries prior to the enactment of more widespread provincial legislation on that subject.<sup>11</sup>

Provincial action to deal with the problem on a wider geographic basis or to supplement municipal action could serve to remedy this gap. In the alternative, or in conjunction with this, mandatory municipal by-law control could be required whenever problems of topsoil stripping were identified. As the *Act* is presently drafted, these options are not open to the provincial government.

#### *Exemptions*

The number of exemptions to such municipal by-laws are also cause for concern when taken in their entirety. Exempted topsoil removal activities include:<sup>12</sup> normal agricultural practices including sod-farming, green house operations and nurseries; drainage construction operations under *The Drainage Act*<sup>13</sup> and *The Tile Drainage Act*<sup>14</sup>; operations authorized under *The Pits and Quarries Control Act*,<sup>15</sup> and *The Mining Act*<sup>16</sup>; Ontario Hydro or other Crown agency activities; county and regional government activities; construction activities approved under *The Ontario Energy Board Act*<sup>17</sup>; underground construction services, such as those for water, where the topsoil is removed and held for subsequent replacement; topsoil removal that does not exceed five cubic meters in a three-month period from any one lot; and public highway construction activities.

In addition a municipal topsoil removal by-law would not apply<sup>18</sup>: where it would be inconsistent with the terms of any approval or agreement under *The Planning Act*<sup>19</sup> (e.g. subdivision or re-development approvals); where it would prevent construction activity authorized by a municipal by-law pursuant to section 35 of *The Planning Act* or under section 32 of the same statute; under a land use regulation pursuant to *The Parkway Belt Planning and Development Act*<sup>20</sup>; or under a development permit or exemption pursuant to *The Niagara Escarpment Planning and Development Act*.<sup>21</sup>

Ron McNeil, the Parliamentary Assistant speaking on behalf of the Agriculture Ministry, argued that "all exemptions mentioned are relatively small-scale removals and we feel they're incidental to legitimate activities with respect to this bill."<sup>22</sup> It is certainly true that municipal topsoil preservation by-laws would apply prior to the commencement of many of the development activities listed in the exemptions – where that can be determined. As a result they could provide a measure of protection in these previously uncontrolled situations. It is submitted, however, that the problem of topsoil loss is far greater than the limited pre-development purposes of the *Act*. The

public should be assured that topsoil will be preserved to the maximum extent feasible under all the otherwise exempted activities. This statute does not provide that assurance.

Moreover, the record of some agencies that administer statutes that are exempt from by-law compliance also gives no cause for comfort, and raises further questions about the exemption process. For example, the Ontario Mineral Aggregate Working Party found that the province has lacked credibility in its administration of *The Pits and Quarries Control Act*, as a result of "a failure to enforce the Act." It also noted that there has been "little evidence of rehabilitation achieved to date."<sup>23</sup> Other government studies – published by the same agency which has been found to be inadequately enforcing that statute – indicate that proper moving and storing of overburden and topsoil are essential to the rehabilitation of pits and quarries.<sup>24</sup> One could readily conceive of a situation where despite continued provincial ineffectiveness in ensuring that pit and quarry operators adequately deal with rehabilitation matters, including topsoil, such operators would ironically be exempt from municipal topsoil by-laws – by-laws which might be a key to obtaining better land rehabilitation.

#### Rehabilitation

Rehabilitation may vary from one municipality to another because the *Act* does not establish any provincially referable standards or procedures. As topsoil varies from area to area, municipal action is important in providing a flexible response to differing local conditions. However, proper land management may require greater safeguards to avoid potential abuses and ensure systematic control. Pressures to minimize rehabilitation standards are not unheard of in Ontario, and may be most effective at the local government level where staff and resources are weakest. The *Act* does not establish any cost-sharing mechanism between the province and municipalities to ensure that the best standards and procedures will be investigated and applied.

Security deposits are frequently a key to ensuring that land rehabilitation takes place. Other provincial statutes, such as *The Pits and Quarries Control Act*, explicitly authorize agencies to require such deposits.<sup>25</sup> *The Topsoil Preservation Act* is silent on this subject. It may therefore be inferred that if the legislature intended municipalities to require security deposits to ensure topsoil preservation, it would have specifically authorized them to do so. Because the courts will often strictly interpret legislation limiting the use of private property, it is arguable that a judicial determination might hold that, without specific legislative authorization, municipalities do not have the power to require security deposits under their topsoil by-laws.

The *Act* is also silent on mechanisms that a municipality might invoke for recovering its costs where it has been compelled to engage

in rehabilitation itself. Such costs could be recovered in the same way as municipal taxes. However, the statute would probably require amendment to permit this approach.

#### Soil Erosion and Water Pollution

Soil erosion is an important land management problem, as noted above, not only for reasons of crop productivity but in respect of water pollution control as well. In this light, *The Topsoil Preservation Act* is a very modest beginning indeed. It is not broad enough to cover erosion and sedimentation from construction sites, from plowing and tilling operations on farmland, from resource extraction and related land disturbing activities. If recent studies are correct, such as those on land-based sources of Great Lakes water pollution,<sup>26</sup> institutional mechanisms are urgently needed to systematically ensure that soil conservation and sediment control will take place. This will undoubtedly require a comprehensive approach utilizing planning, fiscal, regulatory and educative strategies. This statute cannot be regarded as an adequate substitute for a program addressing these needs.

#### Conclusion

The ambit of *The Topsoil Preservation Act* has been very narrowly drawn by the legislature. It should not expect more than narrow results.

#### NOTES

1. Ontario Ministry of Agriculture and Food. *Ontario Soils*. Publication 492. Edited by L. R. Webber. (September 1975).
2. United Nations Environment Programme. *1976 Annual Review*.
3. *R. v. Glen Leven Properties Limited* (1977), 15 OR (2d) 501; 34 CCC (2d) 349; 6 CELN 2 (Ont. Div., Ct.). Sand is an air contaminant under the meaning of *The Environmental Protection Act*, S.O. 1971, c. 86 as amended, if it is moved or exposed from its natural state by human activity and made subject to wind movement. (The facts of the case indicated that a land developer permitted topsoil to be stripped from his construction site and left the sand exposed for several months. The court found that he did not use all available methods to control the blowing of the exposed sand onto neighbouring lands and property.)
4. International Joint Commission: *Reference Group on Great Lakes Pollution From Land Use Activities*. Final Report, July 1978.
5. Lewis A. Jones. Chief of the Division of Drainage and Water Control, Soil Conservation Service, U.S. Department of Agriculture, in a paper delivered to the Agricultural Institute of Canada at Guelph, June 22, 1948. See also, U.S. General Accounting Office. *Report to the Congress: To Protect Tomorrow's Food Supply, Soil Conservation Needs Priority Attention*, C.E.D.-77-30 (Washington, D.C., 1977).
6. S.O. 1977, c. 49.
7. "Topsoil" is defined as the "A" horizon in a soil profile, containing organic material. s. 1 (b).
8. R.S.O. 1970, c. 284, as amended.
9. Sediment can also frequently be contaminated by chemical, nutrient and pesticide

residues thereby making it an even more potent threat to water quality. See, for example, International Joint Commission; *Reference Group on Great Lakes Pollution From Land Use Activities. Annual Progress Report*. July 1977.

10. Proper land management and related pollution control techniques are directed to controlling wind and water erosion. In an agricultural context good land management to control water erosion would include, but not be limited to, strip cropping, use of grass waterways and terracing. Control of wind erosion would include planting windbreaks, using strips of different crops at right angles to the prevailing wind direction and sowing of cover crops. In an urban context good management procedures include channelling drainage from construction sites through sedimentation ponds; temporary seeding and soil stabilization of slopes to reduce erosion; timing construction to minimize disruption to streams; plugs at the downstream end of ditches to hold back sediment-laden water during excavations, etc.
11. *Hansard*. Legislative Assembly of Ontario. Debates. First Session, 31st Legislature, November 8, 1977. Second Reading of Bill - 72 (Topsoil Preservation), pp. 1645-1652.
12. *Supra*, 6, s. 2(2) (a)-(j).
13. S.O. 1975, c. 79, as amended.
14. R.S.O. 1970, c. 461, as amended.
15. S.O. 1971, c. 96.
16. R.S.O. 1970, c. 274, as amended.
17. R.S.O. 1970, c. 312, as amended.
18. *Supra* 6, s. 3(a) (b) (i)-(iv).
19. R.S.O. 1970, c. 349, as amended.
20. S.O. 1973, c. 53, as amended.
21. S.O. 1973, c. 52, as amended.
22. *Supra*, 11, p. 1651.
23. Ontario Ministry of Natural Resources. *A Policy for Mineral Aggregate Resource Management in Ontario*. Report of the Ontario Mineral Aggregate Working Party. December 1976.
24. Ontario Ministry of Natural Resources. *Vegetation for the Rehabilitation of Pits and Quarries*. 1975.
25. *Supra*, 15, s. 11.
26. *Supra*, 4.