

# SELF-MONITORING AND REHABILITATION IN THE AGGREGATES INDUSTRY: CHANGES TO PROVINCIAL POLICY IN ONTARIO<sup>1</sup>

by

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**Abstract.** The aggregate industry in Ontario has just begun a shift in its regulatory structure regarding the operations and rehabilitation of lands used in stone, sand and gravel extraction. Ongoing fiscal constraints within the provincial government initiated critical review of existing policy. This has resulted in a transfer of sections of the regulatory process that governs monitoring and rehabilitation to the aggregate industry. Consequently, this process of self-monitoring, being the first of its kind in the aggregate industry in North America, is expected to bring about changes in the way rehabilitation is planned and completed in Ontario. Changes to the regulatory structure also include the transfer to the industry of the management of the newly created Abandoned Pits and Quarries Rehabilitation Fund. The new regulatory framework will be detailed along with results of the first year of self-monitoring. Changes to the framework governing the reimbursement of rehabilitation funds will also be presented along with the new structure and current projects underway as part of the Abandoned Pits and Quarries Fund.

## Introduction

In 1997 the Aggregate Resources Act, the existing legislation governing the licencing and operations of gravel pits and quarries in Ontario, will be reformed. Paradigm changes will take place, including the transfer of several parts of the provincial aggregates program (in trust) to the Aggregate Producers' Association of Ontario. Fiscal restraints at the provincial level have reduced the scope of government programs drastically, eliminating over half the aggregates program work force. The industry has, in response to these constraints and in co-operation with the government, taken on the responsibility for several of the ongoing program elements. Two of the programs, the Abandoned Pits and Quarries Rehabilitation Fund, and the Yearly Self-Monitoring Program began in April 1997. The structure of both programs and their expected effects on the industry are detailed in this paper.

## The Aggregate Industry in Ontario

The aggregate industry in Ontario produces on average 110 million metric tonnes of aggregate products each year. Produced in over 4,800 pits and quarries, shipped by truck, train, and ship, and processed into an infinite variety of products, it is the raw material of many industrial and commercial "processes" in Ontario and Quebec.

The glaciers that covered Ontario during the last ice age retreated to leave a landscape rich in sand and gravel. Moraines, outwash deltas, eskers, and ancient shoreline deposits are common in southern Ontario, and provide excellent sources of sand and gravel. The Niagara Escarpment also provides a source of very high quality limestone and dolostone within a very short distance to the metropolitan Toronto area. Rich in aggregate resources, southern Ontario is also home to 75% of Ontario's population. Many licensed operations are within urban areas or on the edge of the urban envelope, which creates constant pressure on the industry to progressively rehabilitate pits and quarries in preparation for new land use options.

The industry is regulated provincially by the Aggregate Resources Act, which has, in the past, been administered (provincially) solely by the Ministry of Natural Resources (MNR). The Act regulates the licencing of aggregate properties in Ontario, provides a set of standard regulations for each licence, and provides the framework for collecting licence fees and tonnage levies. Yearly tonnage levies assist the

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province in encouraging progressive rehabilitation, reimburse upper and lower tier municipalities for infrastructure maintenance, and provide funding for the Abandoned Pits and Quarries Rehabilitation Fund.

The number of hectares licensed in the province totals over 79,000 hectares (196,000 acres). Of that total, over 20,000 hectares (49,000 acres) (25.3%). The balance of the properties are held in reserve or are not yet stripped for extraction. In any given year, the number of hectares disturbed roughly equals the number rehabilitated.

A production levy of 6 cents per tonne is charged to producers in the province and is distributed as follows;

- ◊ 1 cent per tonne to the Ministry of Natural Resources for program delivery;
- ◊ 1/2 cent per tonne to upper tier municipality (county or region);
- ◊ 4 cents per tonne to local municipality (township), and;
- ◊ 1/2 cent per tonne to the Abandoned Pit and Quarry Rehabilitation Fund.

The province has historically been divided by the MNR into "districts" in which each district has one or more aggregate inspectors to enforce the Aggregate Resources Act. This included annual inspections of each licensed property, inspecting and approving rehabilitation claims, investigating complaints from the public, and bringing the mining plans of each licence up to date on a regular basis. In the past few years, these inspectors have also been responsible for the submission of candidate rehabilitation sites under the Abandoned Pit and Quarry Rehabilitation Fund.

#### The Government of Ontario and the Aggregate Resources Program

By 1995, the Ontario government was carrying a \$10 billion dollar a year deficit. An election in 1995 brought to power a new provincial government with a mandate to reduce this deficit, and things began changing dramatically in 1996 in the offices of the various government ministries. Reductions in staff of up to 45% were not uncommon, and many of the Regional offices of the provincial governments closed their doors and consolidated into more central locations. The aggregate resources program staff of the Ministry of Natural Resources was reduced drastically.

Additionally, in the last five years, ongoing cutbacks by the government had already reduced field staff in the aggregate resources program to the point that many licensed operations had not been inspected in over four years (a yearly legislative requirement), and many operations that had applied for operational or rehabilitation changes could not get approvals (or even opinions) within the operating season.

The aggregate resources program had begun to draw criticism from industry, environmental groups, and politicians due to the government's inability to deliver the programs efficiently and on time. Changes were inevitable.

Along with the mandate of deficit reduction, the new government realized that it must streamline its programs, and begin to give industries the autonomy they have been requesting for years. An active political lobby from the aggregate industry enabled the Ministry of Natural Resources to work with the industry to create dynamic new partnerships. New changes to the legislation have resulted in the development of several new industry-led program initiatives that will be more cost-effective. The industry-led programs will effectively replace the programs that were previously implemented by the government.

#### Industry-Led Initiatives

As part of a legislative overhaul of the Aggregate Resources Act in 1997, the government identified five areas in which partnerships with the aggregate industry could be effectively administered. Through the development of a trustee to administer the yearly licence fees and provide for the rehabilitation of derelict sites, several new programs were developed. These changes in the resource management structure have created a method by which the delivery of services can be cost-effective and industry can take more direct responsibility for the management of licensed areas. Two of these program areas were:

1. Yearly Site Inspections (self monitoring)
2. Abandoned Pit and Quarry Rehabilitation Fund

Both are in their first year of operations under the new legislation, and this year will prove to be a year of great change and exciting challenges for the industry in Ontario.

## Self Monitoring

The self-monitoring program is the evolution of the yearly inspection requirements, originally completed by MNR inspectors. Each year, inspectors were required to visit each licensed operation to ensure compliance with the Act and with the mining plans for each site. Disturbed areas and rehabilitated areas were noted on the plans, as were any deviations from the existing regulations. These deviations most often involved issues with setbacks, fencing and/or berming, stockpile heights, and other day-to-day activities common in aggregate operations. Quite often these annual inspections were completed with the owner present during the inspection.

As mentioned earlier, the industry has been under intense public scrutiny for decades due to its proximity to major urban areas. Consequently, the majority of producers are extremely careful to ensure that all fencing, site screening requirements and operations are in compliance with the legislation at all times. It seemed logical that the industry could complete these annual inspections themselves, provided that the legislation was directed to swift enforcement and penalties should any producer be in contravention of annual inspection reports.

A pilot project was completed in 1995 involving 12 municipalities in the province, and the system of self-monitoring worked quite well. The majority of the producers felt that it gave them an excellent opportunity to assess their properties at the beginning of the operating season, reacquainting them with site-specific issues and providing for goal setting for each site based on the inspection results.

Although the government inspectors are no longer responsible for annual inspections, they still perform an audit function, and may inspect any site at any time to verify claims made on self-monitoring reports.

Self-monitoring was completed by all members of the Aggregate Producers' Association of Ontario in 1996, and became mandatory for all licensees in the province in 1997. The basic rules for self-monitoring are as follows:

- ◇ Licensees must complete an annual inspection and report between May 1st and September 20th of each year;
- ◇ If the licensee does not submit a self-monitoring report by the September deadline,

the licence is immediately suspended (no notification required)

- ◇ In the self-monitoring reports, the licence holders must identify any site conditions that do not comply with the Act. A grace period of 90 days (which can be extended by the Minister) is applied to all compliance issues requiring remediation.
- ◇ Should the compliance issues still exist in 90 days, and the licensee has not requested a time extension, the licence may be immediately suspended.
- ◇ Licence suspension and revocation can now be quickly enacted if any licensees are in contravention of major regulations (such as mining outside the licence boundary, mining below the allowable extraction depth, etc.). Historically, there have been few licence revocations in the province and almost all of them have been due to non-payment of licence fees.

Initial results of the self-monitoring program indicate an excellent success rate, and, to date, no major problems have been encountered. The industry has been ready to take on the responsibility of autonomy in inspections for quite some time, and will continue to deliver the self-monitoring program successfully and economically.

## Abandoned Pit and Quarry Rehabilitation Fund

This fund was created as a result of changes to the Aggregate Resources Act in 1989. It was created in response to public and agency concerns over the large number of pits and quarries in the province that were abandoned prior to the first legislation in the province in 1971, or abandoned prior to the new Act in 1989. Initial inventories conducted by the Fund in the first few years of operation turned up over 6,000 abandoned sites in the province, ranging in size from 30 hectare quarries to small borrow pits.

A portion of the tonnage levy charged in the province ( 1/2 cent per tonne) is apportioned to the Fund each year, resulting in an annual income of over half a million dollars. The monies collected by the fund are held by a trustee, the Aggregate Resources Corporation, which in turn directs the Aggregate Producers' Association of Ontario (APAO) to administer and deliver the programs of the fund. While being administered by the province, the fund's primary goal was to rehabilitate the abandoned sites. Since the

APAO has begun to deliver the program, the goals of the fund have expanded to explore research and monitoring opportunities involving aggregate resource management, utilizing the fund to exchange information and gather scientific data on sites that were rehabilitated with support from the Fund.

In the past several years, over 20 sites per year have been rehabilitated. These ranged in size from small excavations for farm activities to large water filled quarries with exposed excavation faces and ongoing trespassing problems. The fund has also participated in a few small research projects focusing primarily on abandoned quarry sites on the Niagara Escarpment, now recognized as a world biosphere reserve. Several research projects involving tall grass prairie re-establishment in southern Ontario are also ongoing.

The challenges and opportunities associated with the fund are truly exciting. The industry now will have the opportunity to apply its broad and varied technical experience with aggregate lands rehabilitation to sites that have been an environmental and public relations eyesore for the industry for decades. As we gain knowledge along the way through the actual rehabilitation as well as monitoring and research projects, the information will be available for all those interested in the reclamation of aggregate lands and aggregate resource management.

### The Future

Amidst the criticism that the industry cannot objectively "police" itself, the new partnerships created by the downsizing of the government will lead the industry into a decade of self-awareness and more profound responsibility. Aggregate producers in the province consider themselves to be responsible, community-oriented businesses determined to continue conducting their business in accordance with the Act, while providing a competitively priced product to the consumers of Ontario. They are ready and willing to take on the responsibility of the two programs detailed in this paper, and look forward to the first year of results with optimism and objectivity.