

Report To:	Chair and Members of the Planning and Public Works Committee
From:	Mark G. Meneray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	April 20, 2010
Report No. - Re:	LPS52-10 - Province of Ontario - The State of the Aggregate Resource in Ontario Study - Consolidated Report

## RECOMMENDATION

1. THAT the Regional Chair write to the Minister of Municipal Affairs and Housing advising of the Region's concerns on the Province of Ontario "The State of the Aggregate Resource in Ontario Study - Consolidated Report" as outlined in Report No. LPS52-10.
2. THAT the Regional Clerk forward a copy of Report No. LPS52-10 to the Town of Oakville, the Town of Milton, the Town of Halton Hills, the City of Burlington, Conservation Halton, Credit Valley Conservation, Grand River Conservation Authority, and the Niagara Escarpment Commission for their information.

## REPORT

### **Purpose**

The purpose of this report is to inform Regional Council of the release of the Province of Ontario "The State of the Aggregate Resource in Ontario Study – Consolidated Report" which can be found on the Ministry of Municipal Affairs website at <http://www.mnr.gov.on.ca/286996.pdf>. This report also assesses the information contained within the Consolidated Report and provides Regional Council with an assessment of the implications to Regional interests, and seeks Council's support to send a letter to the Minister of Municipal Affairs and Housing outlining the Region's concerns with regard to the Consolidated Report.

### **Background**

The Province of Ontario - The State of the Aggregate Resource in Ontario Study - Consolidated Report is a compilation of information gathered from a series of six background papers. Unfortunately, the Province did not communicate to stakeholders that these background papers (the value of aggregates, aggregate consumption and demand, reuse and recycling, aggregate reserves in existing operations, future aggregate availability and alternatives analysis, and rehabilitation) had been commissioned and as such, staff were not able to obtain copies of the

background papers to review. As a result, the assessment provided in this report is that which is found in the Consolidated Report.

There have been many changes to the planning landscape over the past 20 years since the previous study of aggregate resources in Ontario was undertaken including new Provincial policy documents such as the Provincial Policy Statement (PPS), Oak Ridges Moraine Conservation Plan, Greenbelt Plan, Places to Grow Growth Plan, and Source Water Protection Planning. There is also growing concern within Halton Region and in other municipalities that the existing provincial direction related to aggregate management in Ontario is outdated and does not adequately reflect the values of the communities in which extraction is and will take place; nor does it appropriately conserve and protect the environmental features and functions and cultural landscapes valued by communities. ROPA 38 responds to these concerns within the Halton community and challenges the status quo by providing for a new and responsive approach to aggregate management within the Region.

In 2007, the Premier announced that the Province, working with multiple ministries and stakeholders, would undertake a study to update information on aggregate resources within the province. This exercise would include updating key parts of the first aggregates study undertaken in the province which was completed in 1992 and entitled: Aggregate Resources of Southern Ontario — A State of the Resource Study. Since the study's initiation in 2007, it appears that individual municipalities were not directly consulted during the process, aside from the representations provided by the Association of Municipalities of Ontario. The release of the Consolidated Report is the first real opportunity for the Region to identify its concerns about the process, the advisory committee composition and lastly, the strategic direction outlined in the report and to identify potential implication to the Region.

### **Study Process and Objective**

The purpose of the State of the Aggregate Resource in Ontario Study is to gain a better understanding of aggregate resources by gathering the most recent information and current science on:

- value of aggregates to the province;
- consumption of aggregates in the province;
- demand for aggregates in the province;
- recycling/reuse of aggregates in the province;
- current reserves of aggregates in the province;
- availability of aggregates in the province;
- alternatives to aggregates;
- transportation of aggregates; and,
- rehabilitation of extraction sites.

The objectives of the study are identified as follows:

- provide updated information about aggregate resources in Ontario;

- provide information to support provincial, regional and municipal strategic planning for aggregate supply to meet long term demand;
- provide a more definitive understanding of the current supply and future aggregate resource constraints that may affect long term supply;
- develop a methodology to track recycling activities to account for present use and enable more recycling and reuse of aggregates;
- provide an analysis of alternative sources of aggregates including an assessment of transportation issues;
- develop a methodology to forecast future aggregate demand;
- provide an overview of the social, economic and environmental value of aggregates to Ontario;
- provide insight into the status of rehabilitation in Ontario and global applications of science and technology to enhance rehabilitation; and,
- provide a credible source of information on aggregate resources available online to the general public.

It should also be noted that the scope of the Provincial report has now been extended beyond the scope of the 1992 report (being just Southern Ontario) to include all of Ontario.

### **Advisory Committee and Expert Panel Composition**

The study was completed under the direction of an advisory committee made up of 11 members, with three representatives from the aggregate industry. There was one member representing municipal interest from the Association of Municipalities of Ontario's (AMO), through the Executive Director, Pat Vanini. There was a further technical expert panel (17 members) established to provide advice to the advisory committee, four of whom represent the aggregate industry. Municipal input was provided by Ken Forgeron, who is a Senior Planner with Niagara Region.

The consultant team that was established by the Province to prepare the background reports that informed the final Consolidated Report consisted of firms that primarily represent the aggregate industry through the development approval process and in the ongoing operation of pits and quarries. Further more the representatives selected from the Ontario Professional Planners Institute to sit on this consultant team were planners employed by the aggregate industry and not planners from the many municipalities in which the aggregate operations are located. Halton staff are of the opinion that much greater municipal input and representation is required on such initiatives to ensure a complete and balanced perspective is provided.

### **Consolidated Report Overview**

#### The Value of Aggregates in Ontario

There is a sense when reading the report that it emphasizes the aggregate industry's interests and it appears to build on a report commissioned by Dufferin Aggregates and prepared by the Canadian Urban Institute in 2009, entitled "Between a Rock and a Hard Place". The report discusses the findings of the six background papers and presents its conclusions in a manner that illustrates the

implied importance of aggregate extraction to the ongoing well being of the Provincial economy. It is also well documented in the report how aggregates impact our everyday activities and are required on a daily basis to maintain the standards that we have become accustomed to. The report outlines the various uses of aggregate material including the assertion that the majority of virgin material is used in construction projects, including road building. Aggregates are also used in the manufacturing processes of iron, steel, aluminium, plastics, and are critical for the manufacturing of glass, coated paper, paint, pharmaceuticals, floor coverings and even toothpaste.

The report illustrates the economic, social and environmental value of aggregates to the Province. In 2007, 184 million tonnes of primary and secondary production (including recycled material) was consumed in the province. The economic value of this production was estimated to be \$1.3 billion. Taking into account the direct, indirect, and induced effects of this production and the downstream impacts, the aggregate sector generated approximately \$44.7 billion in gross production, \$22 billion in Gross Domestic Product (GDP), and 245,000 full time jobs. As aggregates are an essential ingredient in many manufacturing processes, this primary resource plays an important role in our economy. Until such time as we are able to identify a readily available substitute, the need for this resource will continue. In addition, although the economic value of aggregates is fully discussed, the economic and environmental costs associated with extraction and the manufacturing processes are not and the report provides no discussion on this issue.

The report further illustrates the social and environmental value of aggregates to the Province. This was measured through a telephone survey which tried to rank how people felt about things like development, improving infrastructure, etc., leading to the authors drawing the conclusion that people seemed unwilling to trade the things they value in their community for more growth and development. The responses from those living near a pit or quarry also outline the nuisance effects as a social cost of extraction. One interesting conclusion drawn in the report is that those people living on a haul route see the economic benefits of extraction and do not see the social costs or nuisances. It has been our experience in Halton Region that this is not the case and that the perception is in fact, the opposite. The discussion in the report relates to the environmental value surrounding the use of aggregates in projects that provide environmental benefits like landscape restoration initiatives, water quality treatment, removal of pollutants and the use of aggregates to maintain biodiversity. The report goes on to state that the rehabilitation of aggregate extraction sites provides a culturally important function and that in an assessment of 31 ARA licences, that environmental features are almost entirely preserved. The authors suggest that it may be acceptable to remove some environmental features in light of the growing need for aggregate resources, especially when the resource is located close to market. The report also asserts that current legislation is having a positive effect on the end result, being a positive environmental impact to the landscape and that the environmental cost of the loss of a small amount of habitat is acceptable, since these areas would be restored through rehabilitation efforts. On the question of agricultural land displacement resulting from extraction, the report only states that there will be a loss of agricultural land.

Staff do not share this perspective, and are of the opinion that the removal of environmental features undermines the intent of the Regional Natural Heritage System as approved by Regional Council through ROPA 38.

## **Aggregate Consumption Demand and Recycling**

Consumption of aggregates in the province continues to increase over time as no suitable substitute can be found. Even recycling efforts have done little to reduce demand. The GTA uses about 1/3 of all aggregates extracted within the province. As development densities increase, the demand per capita appears to be going down but the overall volume of aggregates used continues to rise. When compared to other provinces and Western Europe, the demand in Ontario appears to be similar to that of other provinces but slightly less than in Europe. Some of the reasons provided for the higher demand related to Western Europe are attributed to lower temperatures, higher population growth rates, higher economic growth rates and a lower use of recycled and secondary sources of aggregate.

The use of recycled material in the province has however, risen from 4 per cent in the 1990s to approximately 7 per cent today. The Province's report also states that based on the authors' review of municipal Official Plans, most municipalities do not contemplate the use of recycled aggregates in terms of permitted uses or through specific policies. Halton Region is the only municipality which has addressed this issue through the Official Plan (ROPA 38). The report does however, illustrate the reality that in most municipalities there seems to be a reluctance to use recycled materials in construction projects, primarily due to unfavourable past experience, higher costs over time and the movement towards higher performance materials to reduce the life cycle costs of projects. The Province asserts that the use of recycled and alternative materials will have a limited impact on reducing primary aggregate demand even with an increased use of these materials.

One of the limitations or deficiencies identified in the Provincial policy framework is in the tracking of the amount of recycled or alternative materials used in the province. Based on a survey of public agencies (Halton Region was not contacted) the Province has recommended a process for the tracking of material reuse in the province. This process involves the development of guidelines and a database for use by public agencies to record data over time for use by the province in reporting on matters related to the use of recycled aggregates. The Province does however, acknowledge the need for additional funding to be provided to public agencies to undertake this initiative. Annual report cards may be considered to promote the social benefits of recycling and reuse of aggregate resources. The report outlines the current state of recycling and the reuse of aggregates but does not explore in much detail the opportunities to expand and build upon the recycling efforts required to reduce the demand for virgin material.

## **Aggregate Reserves**

Even though the demand for aggregates has remained steady, the Province is reporting that aggregate reserves are in decline. This has resulted in a 2.5 to 1 consumption to replacement ratio in the province and the assertion that the licensed reserves supplying the GTA are rapidly being depleted. The report advises about the need to protect the remaining reserves close to market but provides little information on where these reserves are located. The report does however, identify that the majority of high quality material is located at least 75 km from the GTA (in Vaughan) and within this area (75 km), about 1/3 of the material present may be appropriate for use in concrete

and asphalt applications. The report makes it clear that the majority of the reserves supplying the GTA market are coming either from moderate or scarce reserves. As it appears that the existing reserves are being depleted at a greater rate than new licences are being granted, changes in how and where the resource is extracted, may be forthcoming from the Province at a later date. Some of the options being considered are to reduce or eliminate regulatory setbacks, to remove road allowances where possible, to extract to a greater depth, or to import most material required for rehabilitation rather than using on-site reserves. All of these alternatives will impact the local communities and their environmental systems, features and functions, and potentially extend the life of a pit or quarry. The report goes on to say that the intent of these alternatives is to minimize the impact to the surrounding environmental and social receptors (local community). The authors of the report were very careful not to say “no impact”. It acknowledged that any operation would have an impact and the significance of this impact would not be known until the Province issues the licence.

### **Future Aggregate Availability**

The Province does acknowledge that there is significant local concern regarding the environmental effects and opposition to proposals for new and expanding pits and quarries. They also state that there has been increasing pressure to evaluate alternative sources of aggregates and the need for the extraction of resources as close to market as possible, which is an existing policy in the Provincial Policy Statement and the Regional Official Plan. There are policies in the Niagara Escarpment Plan that protect over 70 per cent of the Plan’s area from extraction but aggregates are still required in large quantities in economically active areas like the GTA. The Province has also identified that the costs of transporting aggregates for a substantial distance to market (GTA) is cost prohibitive and that extracting the resource close to where it is being used avoids unnecessarily transferring the effects of extraction to other jurisdictions. It maybe that as Halton continues to grow in population as required by the Province through the Growth Plan, and a local supply of aggregates to sustain this growth will be required. This would have an impact on the Region and the ongoing efforts to balance the benefits and costs associated with aggregate extraction in our community. Through ROPA 38, staff believe that the Region has established a “Made in Halton” solution for the supply of the resource that will protect the environment, allow for extraction to take place and allow for greater accountability to the public.

Aggregate is by its very nature found in landforms that also contain wetlands, rivers, woodlots and agriculture. The Province undertook an analysis that looked at a variety of constraints to extraction, including Provincially Significant Wetlands (PSW), Prime Agricultural Lands, and Significant Woodlands. This analysis identifies that 93 per cent of the known aggregate resource in the province is subject to an overlapping Provincially Significant constraint. Of the 7 per cent that was not subject to these Provincially Significant constraints, 91 per cent was located in Eastern Ontario. The constraint analysis also determined that the majority (9 per cent for Significant Woodlands, 94 per cent for Significant Wetlands, and 96 per cent Prime Agricultural Lands) of the Provincially Significant constraints are located outside the selected bedrock resource areas. This may suggest that the Province has through this report acknowledged that in those areas where the resource exists close to market, that the value of resource must be weighted against the other Provincially Significant features, such as PSWs, Woodlands or Prime Agricultural Lands. Staff will continue to monitor Provincial initiatives related to the pending update of the Provincial

Policy Statement and will report back on matters affecting Regional interests as more information is released.

The Provincial report discusses alternative extraction methods for aggregates, ranging from dredging in both lakes and further below the water table, to mining the resource as is done in other jurisdictions, to mining tailings in Northern Ontario. Most of these alternatives have been deemed by the Province to be too expensive or unfeasible for other reasons, including for environmental reasons. The report also identifies the possibility of a mega-quarry as is being contemplated in Dufferin County by the Hyland Group of Companies. It appears from the report that significant government intervention would be required to change the current close-to-market philosophy of sourcing aggregates, which would include such matters as market interventions and compensation including incentives, expropriation, and municipal land use controls. Such interventions would also require significant capital investment and construction for new infrastructure, vehicles and facilities, and would take years to achieve. Close to market sources would still be needed during the interim and phase-in periods.

## **Rehabilitation**

Current Provincial and Regional land use policies applicable to aggregate extraction and rehabilitation are in effect to ensure that aggregate extraction is an interim land use only and rehabilitation is carried out to return the lands to the previous use, or one that is compatible with adjacent land uses. The Report makes the statement that there is less of a need to modify existing legislation, policies, and guidelines than to work with them and use additional supporting tools to help realize the full potential of rehabilitation programs. The Region through ROPA 38 has adopted a much different perspective on this matter. Staff believe that fundamental changes to Provincial Policies and procedures are required to ensure that rehabilitation is done in a timely and appropriate manner. This would echo the responses received by the Province through their limited telephone survey. Some of the sentiments provided by the public related to rehabilitation were the lack of visible progress towards rehabilitated sites, delays in rehabilitation, a lack of provincial enforcement and a shortage of staff resources, limited evidence of successful rehabilitation beyond a few commonly referred-to showcase examples, lack of information about rehabilitation reaching operators to help them understand and implement rehabilitation on their sites and a lack of information about rehabilitation reaching the public. Additional feedback also indicated that additional policies are needed to establish time limits for permitting, maximum disturbed areas and strengthening rehabilitation requirements. The public feedback as illustrated in the report appears to be consistent with what staff heard from Halton residents through the Sustainable Halton process. The study process as established by the Province could have benefited from additional public consultation in areas where extraction is taking place. This would have provided the authors of the report with a broader perspective on the issues faced in these communities.

The report identifies that the end land uses are often not the same as the end land uses envisioned through the approval process. It has been the Region's experience that the local municipalities have traditionally expressed the need to understand how the ultimate land use will be integrated into the community, post extraction. One perception on this approach is that it limits the decision making powers of the future residents and does not acknowledge society's ongoing refinements in the body of knowledge related to rehabilitation, the natural environment and the evolution of

community character. Time will tell if comprehensive planning and decision-making in a healthy communities context will lead to enhanced potential and the achievement of a range of socio-economic and ecological objectives that will benefit the landscape and its inhabitants.

The Province states that there is a need for agencies (which would include the Region) to ensure a streamlined and consistent review process and to provide as many varied opportunities as possible for public engagement. The Region already has one of the most comprehensive and inclusive application processes available, in the JART (Joint Agency Review Team) process. This process to some extent, levels the playing field with the aggregate industry by allowing agencies to benefit from shared knowledge and perspectives.

### **Implications to the Region of Halton**

Regional staff has identified a number of concerns with this Provincially lead “The State of the Aggregate Resource in Ontario Study - Consolidated Report”. Overall, the report paints a positive image of the economic benefits from the aggregate sector, with less emphasis on the more controversial issues such as the environmental costs and impacts, poor track records on progressive rehabilitations and the nature of promised rehabilitations over time.

The discussion of these issues in the report appears to favour the perspectives of the aggregate industry, and a balanced and objective presentation on the state of the aggregate resource in Ontario is required.

Staff is of the opinion that this Provincial report:

- Illustrates a new and more positive approach to aggregate extraction in Halton and in other urbanizing municipalities, without full consideration of the impacts that this approach may have on the social, cultural, environmental and economic well being of the communities affected. A more balanced approach is needed.
- That there is a need to begin a dialogue between the Province and municipalities on how to balance the need for aggregate resources in a manner that will ensure our long term prosperity. This includes the need to consider aggregate supplies outside the GTA and alternative means to transport them to market in order to reduce the pressure on the natural environment, transportation systems and the local communities that are impacted by these activities.
- Does recognize that policy and legislative change may be needed in the future and that more research is necessary to fully understand the nature of the resource and the impacts arising from extraction operations. The changes needed should be addressed as part of the next 5-year review of the Provincial Policy Statement.
- Lacks public consultation with municipalities, the impacts of these operations on Local Municipalities, and the decision making process used in the identification and selection of consultants hired to conduct the background research, are just a few of the concerns identified by staff.

As a result, staff is recommending that a letter be forwarded to the Minister of Municipal Affairs and Housing outlining the potential implications to Region as outlined in this report.

FINANCIAL/PROGRAM IMPLICATIONS

There are no immediate financial implications to this report.

RELATIONSHIP TO THE STRATEGIC PLAN

This report has a direct relationship to the 2010 Planning and Public Works Committee Plan Theme 2 – “Protect and Enhance our Natural Environment”; Goal #7 - “Develop a “Made in Halton” aggregate management strategy”.

Respectfully submitted,



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Official



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Approved by



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