

Aggregate Resources of Ontario

Provincial Standards

Version 1.0

Introduction

These Standards¹ have been developed to support the Aggregate Resources Act as amended by Bill 52, the Aggregate and Petroleum Resources Statute Law Amendment Act, 1996. There are three main headings:

- 1) Licences - subdivided into eight categories with respect to Class 'A'. Class 'A' licence is to remove more than 20,000 tonnes of aggregate annually and a Class 'B' is to remove 20,000 tonnes or less of aggregate annually;
- 2) Aggregate permits - subdivided into six categories; and
- 3) Wayside Permits - one category.

These categories were developed to provide more concise, user friendly and understandable minimum requirements for the delivery of the Aggregate Resources Act.

Each category has a template of six major topics and all categories are developed to be proponent driven. The proponent will refer to the appropriate categories depending on the type of undertaking being contemplated. The reason for 15 categories is to reflect the numerous types of applications that can be applied for. In order to accomplish an easy-to-follow format, the standards and categories are repetitive in some cases or have slight modifications between categories based on whether the application is for a pit or quarry, and whether extraction will occur above or below the water table.

The enabling authority in Bill 52 allows for six major topic areas to be reflected in the standards. They are:

- ◆ Site Plan Standards;
- ◆ Report Standards;
- ◆ Prescribed Conditions;
- ◆ Notification and Consultation;
- ◆ Operational Standards; and
- ◆ Annual Compliance Reporting.

Each category includes Site Plan Standards, Report Standards, Prescribed Conditions and Notification and Consultation. Operational and Compliance Standards for all categories are found at the back of this document.

Site Plan Standards

These standards have been developed to reflect the type of undertaking: application for a licence (pit vs. quarry) or aggregate permit (pit vs. quarry). The site plan requirements are all encompassing for each category and no additional information will be required.

¹ These standards will apply only to sites which go through the licensing or permitting process subsequent to the proclamation of Bill 52. The exceptions are the Annual Compliance Report requirement and compliance with Operational Standards which will apply to existing licences and permits.

Report Standards

The report standards have two components: a summary statement and technical reports. All categories of applications are required to submit these reports. The author of these reports may be:

- 1) the applicant for summary statements where the applicant possesses the qualifications or experience; and
- 2) qualified individuals for the technical reports.

For very unique issues on a site specific basis, additional information to that identified in the Report Standards may be requested.

Prescribed Conditions

The prescribed conditions are conditions that pertain to the individual category and cannot be varied or rescinded by either the Minister or the Ontario Municipal Board. On a site-by-site basis, additional conditions can be attached to the licence or site plan at the discretion of the Board or Minister, however these conditions do not form part of the prescribed conditions.

Notification and Consultation

These standards identify the required steps in order for a proponent to process an application once an application has been accepted by the Ministry. It will be a requirement of the applicant to ensure that all aspects of the standards have been met. Ministry staff will no longer be facilitating and guiding proponents through the process.

Operational Standards

These standards identify the day-to-day operational requirements that are not part of an existing site plan. If the site plan requirements already deal with the same factors but in a different way, the site plan provision prevails over these operational standards.

Annual Compliance Reporting

These standards place the responsibility of reporting non-compliance items and remedial work on the licensee and permittee to self-assess their operation on a yearly basis. The information gathered will be evaluated by the Ministry of Natural Resources to ensure compliance is being achieved. Although the "Guide to Completion of the Assessment Report" is not part of the standards, it is advisable to read this guide in order to assist in the completion of the assessment report.

Terminology & Definitions

For the purpose of these standards reference should be made to the Provincial Policy Statement (Revised February 1, 1997) issued under Section 3 of the Planning Act for definitions and terms used in the Natural Environment Level 1 and 2 and Archaeology Resources Stage 1, 2 and 3.

Established Groundwater

Table

For unconsolidated surficial deposits, the groundwater table is the surface of an unconfined water bearing zone at which the fluid pressure in the unconsolidated medium is atmospheric. Generally the groundwater table is the top of the saturated zone.

For confined water bearing zones or consolidated bedrock materials, the groundwater table, or potentiometric surface, is a level that represents the fluid pressure in the water bearing zone and is generally defined by the level to which water will rise in a well.

Sensitive Receptor

Includes residences or facilities where people sleep (nursing homes, hospitals, trailer parks, camping grounds, etc.); schools; day-care centres.

Mitigate

To alleviate, moderate or reduce the severity of impacts.

Recommended References

When applying for a licence or aggregate permit and depending on the location of the proposed site, the applicant may wish to pre-consult with the affected agencies that will be involved.

In searching and/or preparing reports to accompany an application, reference should be made to the following documents and agencies:

- a) Provincial Policy Statement and Associated Training Manuals;
- b) Zoning by-law(s);
- c) Official Plan(s);
- d) Environmental Protection Act;
- e) Ontario Water Resources Act;
- f) Conservation Authorities Act;
- g) Niagara Escarpment Commission;
- h) Guide to Completion of the Compliance Assessment Report for licences and aggregate permits;
- i) Flow chart for the Notification and Consultation Standards for licences, aggregate permits, wayside permits, Category 13 and the annual compliance reporting;
- j) MOEE Guidelines including:
 - ◆ MOEE Guideline NPC-205, Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban);
 - ◆ MOEE Guideline NPC-232, Sound Level Limits for Stationary Sources in Class 3 Areas (Rural);
 - ◆ MOEE Guideline NPC-233, Information to be Submitted for Approval of Stationary Sources of Sound;
 - ◆ MOEE Guideline NPC-119, Blasting.
- The above list serves only as a guide and should not be interpreted as all inclusive.
- k) Provincial and Federal references to endangered species;
- l) Federal Fisheries Act and Associated Guidelines;
- m) Environmental Assessment Act and Exemptions.

Application Standards for

Category 2: Class “A” licence for a quarry operation which intends to extract aggregate material from below the established groundwater table.

- ◆ Application Standards
 - ◇ Site Plan Standards
 - ◇ Report Standards
- ◆ Prescribed Conditions
- ◆ Notification and Consultation Standards

Category 2

1.0 Site Plan Standards for Below Groundwater Extraction of Quarry Operations

The site plan accompanying an application for a Class A quarry licence which intends to extract aggregate material from below the established groundwater table must show the following information on at least three separate drawings using a combination of the headings identified. Two (2) copies of the site plan and reports must be submitted with the application:

1.1 Existing Features

- 1.1.1 each drawing must be numbered and indicate the total number of drawings submitted (e.g. 1 of 4);
- 1.1.2 a key map showing the location of the quarry site;
- 1.1.3 a general description of the site by lot and concession, if any, and the municipality, county or the region where the quarry is located;
- 1.1.4 a scale reference using both ratio and graphic methods between a scale of 1:1000 and 1:5000;
- 1.1.5 applicant's name and address;
- 1.1.6 a statement that "this site plan is prepared under the Aggregate Resources Act for a Class A licence, Category 2";
- 1.1.7 a stamp and signature of a Professional Engineer, Ontario Land Surveyor, Landscape Architect or signature of other qualified person as approved under subsection 8(4) of the Aggregate Resources Act under whose direction this plan was prepared and certified;
- 1.1.8 north arrow, normally pointing towards the top of the page;
- 1.1.9 a section for recording site plan amendments, including approval dates;
- 1.1.10 a list of references which apply specifically to the preparation of the site plan;
- 1.1.11 a legend;
- 1.1.12 the boundary of the area to be licensed, including the dimensions and hectareage of the site;
- 1.1.13 demarcation of lot and concession lines;

- 1.1.14 the use and existing zoning of land on and within 120 metres of the site;
- 1.1.15 the topography of the site illustrated by a one or two metre contour interval, expressed as metres above mean sea level;
- 1.1.16 the location and use of all buildings and other structures existing on and within 120 metres of the site;
- 1.1.17 the location of every existing entrance to and exit from the site;
- 1.1.18 main internal haul roads on the site;
- 1.1.19 the elevation of the established groundwater table on site;
- 1.1.20 existing surface water drainage and drainage facilities on and within 120 metres of the site;
- 1.1.21 the location and type of existing fences on the site;
- 1.1.22 the location of existing tree cover (i.e. wood lots and hedgerows) on the site and within 120 metres of the site;
- 1.1.23 the location of existing stockpiles of topsoil and overburden on the site;
- 1.1.24 the location of existing aggregate stockpiles, including any recyclable materials on the site;
- 1.1.25 existing scrap location(s) on the site;
- 1.1.26 existing fuel storage area(s) on the site;
- 1.1.27 significant natural features on and within 120 metres of the site;
- 1.1.28 significant man-made features on and within 120 metres of the site;
- 1.1.29 all existing excavation faces and rehabilitated areas;
- 1.1.30 the location of existing processing area(s) and whether or not the equipment is stationary and/or portable;
- 1.1.31 the location of existing berms and their height; and
- 1.1.32 location of cross-section(s).

1.2 Operations

- 1.2.1 the sequence and direction of the proposed quarry development;
- 1.2.2 details of how the stripping and stockpiling of the topsoil and overburden will be dealt with;
- 1.2.3 the maximum number of lifts and the maximum height of the lifts;
- 1.2.4 main internal haul roads on the site;
- 1.2.5 the location of every proposed entrance to and exit from the site;
- 1.2.6 the elevation of the established groundwater table on the site;
- 1.2.7 any proposed water diversion and points of discharge to surface water;
- 1.2.8 the location, type and installation schedule or phasing for any proposed fencing around the licensed boundary of the site;
- 1.2.9 the location of any proposed buildings and other structures to be erected on the site;
- 1.2.10 the location of any proposed stockpiles of topsoil and overburden on the site;
- 1.2.11 the location of any proposed aggregate stockpile area(s), including any recyclable materials on the site;
- 1.2.12 any proposed scrap location(s) on the site;
- 1.2.13 the location of any proposed fuel storage area(s) on the site;
- 1.2.14 the area in hectares to be extracted;
- 1.2.15 the location and labelling of all excavation setbacks from the licensed boundary;
- 1.2.16 the final extraction elevation of the site using spot elevations;
- 1.2.17 the location of any proposed permanent and/or temporary processing area(s) on the site;
- 1.2.18 the location of any proposed berms and the minimum height;
- 1.2.19 details on how berms will be vegetated and maintained;
- 1.2.20 the general types of equipment that will normally be used on site;
- 1.2.21 the location, design and phasing of any proposed tree screens and identify whether deciduous, coniferous or both;

- 1.2.22 details on the hours of operation of the site taking into account all facets of the operation which involves the actual physical movement of aggregate;
- 1.2.23 details of how trees and stumps shall be disposed of or utilized;
- 1.2.24 location of cross-section(s);
- 1.2.25 a section to record any variations from the operational standards that relate to the site;
- 1.2.26 details of frequency and timing of blasts;
- 1.2.27 a statement to indicate the maximum number of tonnes of aggregate to be removed from the site in any calendar year. This may be expressed as unlimited; and
- 1.2.28 any recommendations and/or monitoring program(s) identified in the technical reports.

1.3 Progressive Rehabilitation

- 1.3.1 the sequence and direction of progressive rehabilitation;
- 1.3.2 details on how the overburden and topsoil will be used to facilitate progressive rehabilitation;
- 1.3.3 the location, design and type of vegetation (e.g. grasses, legumes, shrubs and trees, etc.) that will be established on the site during progressive rehabilitation;
- 1.3.4 how the slope will be established on the excavation faces and the quarry floor;
- 1.3.5 details on how progressive rehabilitation will be conducted in relation to the operational sequences; and
- 1.3.6 if proposed, details on the importation of topsoil or inert material to facilitate rehabilitation of the site.

1.4 Final Rehabilitation

- 1.4.1 if proposed, details on the importation of topsoil or inert material to facilitate rehabilitation of the site;
- 1.4.2 how the final slopes will be established on all excavation faces and the quarry floor;
- 1.4.3 the location, design and type of vegetation (e.g. grasses, legumes, shrubs, and trees, etc.) that will be established on the site during final rehabilitation;
- 1.4.4 any building(s) or structure(s) to remain on the site;
- 1.4.5 anticipated elevation of the groundwater table;

- 1.4.6 any internal haul roads that will remain on the site;
- 1.4.7 final surface water drainage and drainage facilities on the site;
- 1.4.8 the final elevations of the rehabilitated areas of the site illustrated by a one or two metre contour interval, expressed as metres above mean sea level; and
- 1.4.9 location of cross-section(s).

1.5 Cross-Sections

- 1.5.1 one or more cross-sections of existing conditions, rehabilitation and the anticipated final elevation of the groundwater table, within the licensed boundary;
- 1.5.2 the final slope gradient that will be established;
- 1.5.3 cross-section of a typical berm design that will be constructed on the site; and
- 1.5.4 appropriate horizontal and vertical scales.

2.0 Report Standards for Category 2 Applications

2.1 Summary Statement

A summary statement accompanying an application for a licence must be signed by the author and provide information on the following:

- 2.1.1 any planning and land use considerations;
- 2.1.2 the agricultural classification of the proposed site, using the Canada Land Inventory classes. For the land being returned to agriculture, the proposed rehabilitation techniques must be identified;
- 2.1.3 the quality and quantity of aggregate on site;
- 2.1.4 the main haulage routes and proposed truck traffic to and from the site, and necessary entrance permits; and
- 2.1.5 the progressive and final rehabilitation and the suitability of the proposed rehabilitation having regard to the adjacent lands.

The summary statement may be prepared by the applicant.

2.2 Technical Reports

Technical reports accompanying an application for a licence must provide information on the following:

- 2.2.1 Hydrogeological Level 1: Preliminary hydrogeologic evaluation to determine the final extraction elevation relative to the established groundwater table(s) in both unconsolidated surficial materials (if present) and the consolidated bedrock strata, and the potential for adverse effects to groundwater and surface water resources and their uses (e.g. waterwells, groundwater aquifers, surface water courses and bodies, discharge areas, etc.);

NB: A Permit to Take Water may be required if any part of the operation utilizes, ponds by flow restriction, or diverts ground and/or surface water on, or from the site.
- 2.2.2 Hydrogeological Level 2: Where the results of Level 1 have identified a potential for adverse effects of the operation on ground water and surface water resources and their uses, an impact assessment is required to determine the significance of the effect and feasibility of mitigation. The assessment should address the potential effects of the operation on the following features if located within the zone of influence for extraction below the established groundwater table, where applicable;

A technical report must be prepared by a person with appropriate training and/or experience in hydrogeology to include the following items:

- (a) waterwells;
- (b) springs;
- (c) groundwater aquifers;
- (d) surface water courses and bodies;
- (e) discharge to surface water;
- (f) proposed water diversion, storage and drainage facilities on site;
- (g) methodology;
- (h) description of the physical setting including local geology, hydrogeology, and surface water systems;
- (i) water budget;
- (j) impact assessment;
- (k) mitigation measures including trigger mechanisms;
- (l) contingency plan;
- (m) monitoring plan; and
- (n) technical support data in the form of tables, graphs and figures, usually appended to the report.

- 2.2.3 Natural Environment Level 1: determine whether any of the following features exist on and within 120 metres of the site: significant wetland, significant portions of the habitat of endangered or threatened species, fish habitat, significant woodlands (south and east of the Canadian Shield), significant valley lands (south and east of the Canadian Shield), significant wildlife habitat and significant areas of natural and scientific interest;
- 2.2.4 Natural Environment Level 2: impact assessment where the level 1 identified any features on and within 120 metres of the site in order to determine any negative impacts on the natural features or ecological functions for which the area is identified and any proposed preventative, mitigative or remedial measures;
- 2.2.5 Cultural Heritage Resource Stage 1: determine if there are any known significant archaeological resources on the subject property and the potential of the site to have heritage resources;
- 2.2.6 Cultural Heritage Resource Stage 2: property survey by a licenced archaeologist if stage 1 identifies known resources or a medium to high potential for heritage resources on the site and mitigation, if recommended;
- 2.2.7 Cultural Heritage Resource Stages 3 and 4: detailed site investigation by a licensed archaeologist (e.g. test pits, plowing fields and survey) when recommended by stage 2 and mitigation through excavation, documentation or avoidance, if recommended;
- 2.2.8 If extraction and/or processing facilities are within 500 metres of a sensitive receptor, a noise assessment report is required to determine whether or not provincial guidelines can be satisfied;

2.2.9 A Blast Design report is required if a sensitive receptor is within 500 metres of the limit(s) of extraction to demonstrate that provincial guidelines can be satisfied; and

2.2.10 Each report shall state the qualifications and experience of the individual(s) that have prepared the report(s).

The technical report(s) must be prepared by a person with appropriate training and/or experience.

3.0 Prescribed Conditions that Apply to Category 2 Licences

The licence is subject to the following conditions:

- 3.1 Dust will be mitigated on site.
- 3.2 Water or another provincially approved dust suppressant will be applied to internal haul roads and processing areas as often as required to mitigate dust.
- 3.3 Processing equipment will be equipped with dust suppressing or collection devices, where the equipment creates dust and is being operated within 300 metres of a sensitive receptor.
- 3.4 Any recommendations and/or recommended monitoring program identified in the technical reports will be described on the site plan and all records will be retained by the licensee and made available upon request by the Ministry of Natural Resources for audit purposes.
- 3.5 A Spills Contingency Program will be developed prior to site preparation.
- 3.6 Fuel storage tanks will be installed and maintained in accordance with the Gasoline Handling Act.
- 3.7 If required, a Certificate of Approval will be obtained for the discharge system should water be discharged off site.
- 3.8 If required, a Certificate of Approval will be obtained for processing equipment to be used on site.
- 3.9 If required, a Permit to Take Water will be obtained for utilizing ground and/or surface water.
- 3.10 The licensee will monitor all blasts for ground vibrations and blast overpressure and will operate to ensure compliance with current provincial guidelines.
- 3.11 Blasting will not occur on a holiday or between the hours of 6 p.m. on any day and 8 a.m. on the following day.
- 3.12 All blast monitoring reports must be retained by the licensee and made available upon request by the Ministry of Natural Resources for audit purposes.

4.0 Notification and Consultation Standards for Category 2 Applications

The applicant shall submit all required documentation to the Ministry of Natural Resources. Within twenty (20) days, the Ministry of Natural Resources shall determine if the application is complete. Once the application is determined to be complete, the applicant may proceed with the following Notification and Consultation Standards.

4.1 Notification

- 4.1.1 The applicant must provide public notice as identified in 4.1.2. The 45 day notification period will begin with publication in the local newspaper as described in 4.1.2.3.
- 4.1.2 Public notice must be completed concurrently in the following manner:
 - 4.1.2.1 by written notice delivered personally or by registered mail, which must include a copy of Form 1 (Notice of Application for a licence), and Form 2 (Notice of Information Session), to landowners within 120 metres of the licensed boundary according to the most recent assessment available at the time of application;
 - 4.1.2.2 by signage (1 metre by 1 metre) posted on the boundary of the site to be clearly seen from adjoining areas to which the public has access. The sign(s) must be placed on site on or before the notification appears in the newspaper and must be maintained during the 45 day notification period. The sign(s) will contain the following information:
 - (a) Notice of Application under the Aggregate Resources Act;
 - (b) Category 2, Class 'A' Quarry Below Water;
 - (c) Applicant: Name, Address and telephone number;
 - (d) Lot, concession, upper & lower tier municipality, geographic township (if applicable) and the size of the site in hectares;
 - (e) Application is on file at the local Ministry of Natural Resources office; and
 - (f) Date, time and location of the information session.
 - 4.1.2.3 by publication of Form 1 and Form 2 concurrently, in one issue of one local newspaper having general circulation in the locality in which the site is located.
- 4.1.3 The applicant must circulate on or before the date of publication of Form One in the newspaper, the complete application package and Form 2 to the agencies identified below for comments. It is the applicant's responsibility to determine the appropriate contact office and person prior to notification.
 - 4.1.3.1 the local Ministry of Natural Resources office;
 - 4.1.3.2 the local municipality in which the site is located;

- 4.1.3.3 the Region/County in which the site is located;
- 4.1.3.4 the local Conservation Authority (if within their jurisdiction);
- 4.1.3.5 Ministry of Agriculture, Food & Rural Affairs (OMAFRA)(only if prime agricultural land is not being restored to the same average soil quality);
- 4.1.3.6 Niagara Escarpment Commission (NEC)(if within their jurisdiction);
- 4.1.3.7 utility corporations (if an easement exists on site or within 120 metres of the boundary); and
- 4.1.3.8 Ministry of Environment and Energy.

4.2 Consultation

- 4.2.1 Consultation by the applicant with the public is required by hosting a presentation to the public, in the locality of the application, outlining all details of the proposal (information session, open house, community meeting, etc.) within the 45 day notification period.
 - 4.2.1.1 Timing of the information session must provide at least:
 - a) 20 days notice from publication as in 4.1.2.3 prior to the session; and
 - b) 10 days for comments after the information session, prior to the closing of the 45 day comment/notification period.
- 4.2.2 Any person or agency objecting to the application must serve upon the applicant and District Manager of the Ministry of Natural Resources, a written notice of objection to the issuance of the licence applied for and the reasons therefore, within the 45 day notification period, after which it will be deemed there are no objections.
- 4.2.3 If no objections, applicant submits documentation of notification and consultation to the Ministry of Natural Resources.

4.3 Resolution of Objections

- 4.3.1 During the consultation process, the applicant shall attempt to resolve all the objections.
- 4.3.2 If all objections have been resolved, the applicant shall:
 - 4.3.2.1 amend the licence application, site plans or reports, if required, in consultation with the Ministry of Natural Resources to reflect the resolution of the objections;
 - 4.3.2.2 obtain written confirmation (withdrawal) from all objectors indicating that their objections have been addressed and submit to the Ministry of Natural Resources; and
 - 4.3.2.3 submit documentation to the Ministry of Natural Resources of landowner and stakeholder contacts and agencies circulation.

4.3.3 If all objections are not resolved:

- 4.3.3.1 the applicant shall submit to the Ministry of Natural Resources and the remaining objector(s) by written notice delivered personally or by registered mail:
 - (a) list of unresolved objections;
 - (b) documentation of attempts to resolve objections;
 - (c) applicant's recommendations for resolving objections; and
 - (d) a notice of a 20 day response period as per section 4.3.3.2.
- 4.3.3.2 the objector(s) shall submit to the Ministry of Natural Resources and the applicant within 20 days of receiving the information from the applicant as identified in Section 4.3.3.1 recommendations that may resolve the objections. The recommendations shall be delivered personally or by registered mail within the 20 days or, it will be deemed that there is no longer an objection; and
- 4.3.3.3 the applicant shall submit to the Ministry of Natural Resources documentation of landowner and stakeholder contacts and agencies circulation.

4.3.4 Once the Ministry of Natural Resources has received:

- 4.3.4.1 agency comments under section 4.2.2, if any;
- 4.3.4.2 applicant's recommendation and documentation under section 4.3.3.1;
- 4.3.4.3 objector's withdrawal under section 4.3.2.2 or recommendations under section 4.3.3.2, if any; and
- 4.3.4.4 documentation of landowner and stakeholder contacts and agencies circulation

the application shall be processed in accordance with Section 11 of the Aggregate Resources Act.

- 4.3.5 Within 30 days of receiving information as noted in section 4.3.4, the Ministry of Natural Resources will make a recommendation to the Minister in accordance with Section 11 of the Aggregate Resources Act.
- 4.3.6 If the applicant does not submit the required information as noted in sections 4.3.2 and 4.3.3 within 2 years of public notification as per section 4.1.1, the application is considered withdrawn and all documentation will be returned.

All registered mail shall be deemed to be made on the fifth day after the day of mailing. In provincial government designated bilingual areas, notification in both a French and English local newspaper is required.