AGGREGATE RESOURCES INVENTORY LENNOX AND ADDINGTON COUNTY

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PROBLEM

The Aggregate Resources Inventory Program of the Ontario Geological Survey is progressively assessing the aggregate resource base in Ontario to assist in managing the resources. The Survey required an office, field and laboratory study and fully documented report for Lennox and Addington County which is designed to I) provide the geological information required to document potential mineral aggregate resource areas, 2) form the basis for discussion on those areas best suited for possible extraction, and 3) assist decision makers in protecting the public wellbeing by ensuring that adequate resources are available for future use.

APPROACH

Available information on the known sand and gravel and bedrock sources were gathered from the Ministries of Natural Resources and Transportation. Licensed and abandoned pits and quarries (96 sites) were inspected in the field to confirm licence data and to describe the geological characteristics of exposed faces with notes, sketches, and photographs. Selected samples were taken for physical quality testing. Additional landforms and deposits were assessed in the field. Field and laboratory data were analysed to determine the quantity and quality of the sand and gravel and bedrock resource units. Each deposit was assigned a primary, secondary or tertiary level of significance and primary deposits were assigned a priority based on physical characteristics.

RESULTS

Lennox and Addington County contains limited resources of sand and gravel. There are 2 small Selected Sand and Gravel Resource Areas of primary significance, with a total resource potential of 4.0 million tonnes over an area of approximately 50 hectares. There are also selected sand and gravel resource areas of secondary and tertiary significance. These deposits, however, generally contain material suitable for use as fill or low specification uses or they are deposits which are limited in their economic development by location.

Potential resources of high quality aggregate do exist in the county within 4 Selected Bedrock Resource Areas. These resource areas consist of bedrock of the lower, middle and upper members of the Gull River Formation and the Bobcaygeon Formation where they are overlain by less than 8 m of overburden. The carbonate rocks of these formations are suited for production of a variety of aggregate products. An estimated 69,594 ha are potentially available for extraction, with a total possible resource of 33,196.4 million tonnes. In addition, hard and durable Precambrian bedrock is an alternate potential source of crushed stone in the northern portion of the county.