

# **MINERAL AGGREGATES IN ONTARIO**

# **PRODUCTION STATISTICS**

2002

Prepared by

The Ontario Aggregate Resources Corporation

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# MINERAL AGGREGATES IN ONTARIO

# Overview

Mineral aggregate is an indispensable commodity to the infrastructure of our modern 'built environment'. High quality aggregate is a key ingredient in the production of ready-mixed concrete, manufactured concrete products of all types (block, brick, precast, etc.), asphalt pavements and sub-surface fill which is so important in providing drainage and load bearing base for structures. Aggregates literally provide the basis for a \$30 billion construction industry that employs over 270,000 people in Ontario. The aggregate industry employs an estimated 7,000 people directly and some 34,000 people indirectly in services such as transportation and equipment.

In 2002, this basic non-renewable resource was supplied from 2,776 licensed aggregate sites on private land in designated parts of the Province and 3,215 permitted sites on Crown land. It is estimated that over 50% of all aggregate produced in the Province is sold to public authorities for the construction and maintenance of the public infrastructure such as roads, bridges, etc.

# Management of Ontario's Mineral Aggregate Resources

At the Provincial level, the management of Ontario's aggregate resources is the responsibility of the Ministry of Natural Resources (MNR). In 1997, in an effort to better focus resources on the delivery of core programs, the MNR took steps to build a partnership with private industry to manage certain administrative functions. Accordingly, subsections 6.1 (1) and 6.1 (3) of the *Aggregate Resources Act*, R.S.O. 1990, Chap. A.8, as amended (the "Act"), gave the Minister the power to create the Aggregate Resources Trust (the "Trust") and appoint a trustee to look after its affairs. TOARC was incorporated in 1997 to act as trustee of the Aggregate Resources Trust, a trust created under the authority of the Aggregate Resources Act and pursuant to a trust indenture between the Corporation and the Minister of Natural Resources for the Province of Ontario.

The Trust Purposes include:

- 1. The rehabilitation of land for which a Licence or Permit has been revoked and for which final rehabilitation has not been completed;
- 2. The rehabilitation of abandoned pits and quarries, including surveys and studies respecting their location and condition;
- 3. Research on aggregate resources management, including rehabilitation;
- 4. Payments to the Crown in right of Ontario and to regional municipalities, counties and local municipalities in accordance with regulations made pursuant to the Act;
- 5. The management of the Abandoned Pits and Quarries Rehabilitation Fund;
- 6. Such other purposes as may be provided for by or pursuant to Paragraph 6.1(2) 5 of the Act.

In August of 1999, Addendum 1 to the Original Trust Indenture was signed to expand the Trust Purposes to include:

- (a) The education and training of persons engaged in or interested in the management of the aggregate resources of Ontario, the operation of pits or quarries, or the rehabilitation of land from which aggregate has been excavated;
- (b) The gathering, publishing and dissemination of information relating to the management of the aggregate resources of Ontario, the control and regulation of aggregate operations and the rehabilitation of land from which aggregate has been excavated.

TOARC is governed by a multi-stakeholder board of directors. The seven-member Board is composed of directors from the Aggregate Producer's Association of Ontario (APAO), representatives from environmental groups, municipalities and non-APAO member aggregate producers. TOARC maintains its own office facilities and management staff. TOARC as the ARA trustee is responsible to the Minister of Natural Resources to fulfill the Trust purposes as outlined in Bill 52. The MNR maintains a presence on the Board with an ex officio representative.

Since its inception in 1997, TOARC has focused upon the efficient collection and disbursement of aggregate resource charges, the auditing of production reports, the rehabilitation of abandoned pits and quarries through the MAAP program, the creation of an inventory of sites where licences have been revoked, as well as their rehabilitation, and the general management of the Trust assets.

# **Role of the Ministry of Natural Resources**

While the MNR has developed certain external partnerships for the delivery of portions of their Aggregate Resources Program, their mission remains:

- To protect the provincial interest in aggregate resources and develop, maintain and enforce appropriate technical standards.
- To provide leadership in the development of partnerships with key stakeholders for the effective management of aggregate resources to benefit the people of Ontario.

With the guidance of the mission statements, a number of program objectives have been created which drive MNR's daily business practices. These program objectives include:

- Promote exploration and ensure availability through the conservation and orderly development of aggregate resources.
- Ensure that aggregate resources are developed with a high standard of environmental protection and public safety.

- Upgrade and maintain current information databases essential for sound technical and scientific decisions.
- Ensure fair revenue from the production of Crown resources.
- Ensure industry compliance with technical standards.
- Train staff and external clients in skills and knowledge essential for the effective delivery of the Aggregate Resources Program.

The continued business approach for the Aggregate Resources Program is based on the following principles:

- The core business of the program is:
  - ° Standards and policy development
  - <sup>°</sup> Technical approvals
  - <sup>°</sup> Ensuring compliance with standards
- Private industry clients assume responsibility and accountability for:
  - ° Compliance reporting
  - ° Financial management
  - ° Operations

Regional technical committees have been established that provide continuous feedback and solutions to technical issues in the delivery of the Aggregate Resources Program. The Non-Renewable Resources Section provides coordination and leadership to these committees.

The delegation of authority policy approved in July of 1998 continues. The objective of this policy is to delegate Ministerial authority to the level that provides the best efficiencies and customer service. Standing committees with the industry continue to encourage ongoing communication and customer service.

Core program staff responsible for the standards and policy development, program design and program coordination, evaluation and monitoring are part of the Non Renewable Resources Section, Lands and Natural Heritage Branch, Natural Resource Management Division. The districts that have either Aggregate Resources Officers or Aggregate Technicians deliver this program. The specialists and technicians, who are designated inspectors, are the core staff responsible for the acceptance of applications and are leads when dealing with compliance. These inspectors often have responsibility beyond the administrative boundaries of their districts. Also, at the district level, reporting to the Compliance Supervisor, Conservation Officers take an active role in enforcement actions under the Aggregate Resources Act.

In 1997, certain responsibilities with respect to the issuing and administration of permits and wayside permits were delegated to the Ontario Ministry of Transportation (MTO), specific to MTO contracts and needs.

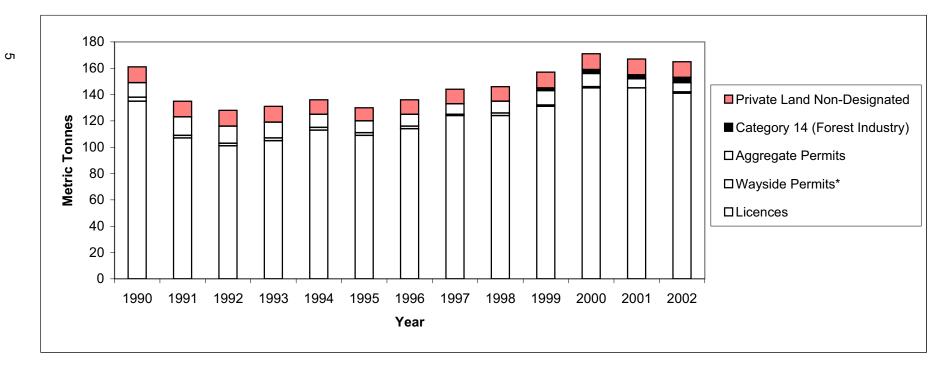
# **Aggregate Production**

Production of mineral aggregates in 2002 totaled approximately 165 million tonnes, down 1.2% from the previous year. Production from licensed operations was down 3.6 million tonnes compared to 2001, a drop of 2.5%. Wayside permit production tripled but on very small tonnages (.2 million in 2001 to .6 million in 2002). Production from aggregate permits on Crown Land decreased marginally from 2001 (7.4 million to 7.1 million tonnes).

### AGGREGATE PRODUCTION IN ONTARIO - 1990 - 2002 (rounded to nearest million tonnes)

|                               | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Licences                      | 135  | 107  | 101  | 105  | 113  | 109  | 114  | 124  | 124  | 131  | 145  | 145  | 141  |
| Wayside Permits*              | 3    | 2    | 2    | 2    | 2    | 2    | 2    | 1    | 2    | 1    | 1    | 0    | 1    |
| Aggregate Permits             | 11   | 14   | 13   | 12   | 10   | 9    | 9    | 8    | 9    | 11   | 10   | 7    | 7    |
| Category 14 (Forest Industry) | -    | -    | -    | -    | -    | -    | -    | -    | -    | 2    | 3    | 3    | 4    |
| Private Land Non-Designated   | 12   | 12   | 12   | 12   | 11   | 10   | 11   | 11   | 11   | 12   | 12   | 12   | 12   |
| (estimated)                   |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ONTARIO TOTAL                 | 161  | 135  | 128  | 131  | 136  | 130  | 136  | 144  | 146  | 157  | 171  | 167  | 165  |

\*Wayside Permit production is reported as the 'total applied for' tonnage of all permits issued, adjusted where actual tonnages for completed contracts are known. \*Actual production for 2001 Wayside Permits was just over .2 million tonnes.



### LICENCE AND WAYSIDE PERMIT PRODUCTION BY LOWER TIER MUNICIPALITY

|                                           | c ronnes)     | Wayside   |               |
|-------------------------------------------|---------------|-----------|---------------|
| Municipality                              | Licences      | Permits   | Total         |
|                                           |               |           |               |
| Algoma District                           |               |           |               |
| Algoma District, Unorganized              | 33,694.32     |           | 33,694.32     |
| Hilton Tp                                 | 27,471.70     |           | 27,471.70     |
| Jocelyn Tp                                | 36,475.71     |           | 36,475.71     |
| Johnson Tp/Tarbutt & Tarbutt Add'l Tp     | 40,443.60     |           | 40,443.60     |
| Laird Tp/St. Joseph Tp                    | 26,753.38     |           | 26,753.38     |
| Macdonald, Meredith & Aberdeen Add'l Tp   | 4,665.34      |           | 4,665.34      |
| Sault Ste. Marie, City of                 | 658,639.29    |           | 658,639.29    |
| Sub-Total                                 | 828,143.34    | 0.00      | 828,143.34    |
| Brant                                     |               |           |               |
| Brant, County of/Brantford, City of       | 1,807,057.29  |           | 1,807,057.29  |
| Sub-Total                                 | 1,807,057.29  | 0.00      | 1,807,057.29  |
|                                           |               |           |               |
| Bruce                                     | 405 047 04    |           | 405 047 04    |
| Arran-Elderslie, Municipality of          | 135,347.84    |           | 135,347.84    |
| Brockton, Municipality of                 | 142,742.16    |           | 142,742.16    |
| Huron-Kinloss Tp                          | 210,533.10    |           | 210,533.10    |
| Kincardine, Municipality of               | 49,805.05     |           | 49,805.05     |
| Northern Bruce Peninsula, Municipality of | 246,439.54    |           | 246,439.54    |
| Saugeen Shores, Town of                   | 304,136.74    | 35,000.00 | 339,136.74    |
| South Bruce, Municipality of              | 393,703.22    |           | 393,703.22    |
| South Bruce Peninsula, Town of            | 197,648.94    |           | 197,648.94    |
| Sub-Total                                 | 1,680,356.59  | 35,000.00 | 1,715,356.59  |
| Chatham-Kent                              |               |           |               |
| Chatham-Kent, Municipality of             | 505,204.15    |           | 505,204.15    |
| Sub-Total                                 | 505,204.15    | 0.00      | 505,204.15    |
| Dufferin                                  |               |           |               |
| Amaranth Tp/East Luther Grand Valley Tp   | 357,916.57    |           | 357,916.57    |
| East Garafraxa Tp                         | 942,458.48    |           | 942,458.48    |
| Melancthon Tp                             | 239,361.56    |           | 239,361.56    |
| Mono Tp                                   | 411,638.18    |           | 411,638.18    |
| -                                         | 391,377.46    |           | 391,377.46    |
| Mulmur Tp<br>Sub-Total                    | 2,342,752.25  | 0.00      | 2,342,752.25  |
|                                           | 2,072,102.20  | 0.00      | 2,042,702.20  |
| Durham                                    |               |           |               |
| Brock Tp                                  | 1,405,900.95  |           | 1,405,900.95  |
| Clarington, Municipality of               | 4,661,002.36  |           | 4,661,002.36  |
| Oshawa, City of/Scugog Tp/Whitby, Town of | 231,139.24    |           | 231,139.24    |
| Uxbridge Tp                               | 4,740,955.06  |           | 4,740,955.06  |
| Sub-Total                                 | 11,038,997.61 | 0.00      | 11,038,997.61 |
| Elgin                                     |               |           |               |
| Bayham, Municipality of/Malahide Tp       | 38,753.96     |           | 38,753.96     |
| Central Elgin, Municipality of            | 343,448.29    |           | 343,448.29    |
| West Elgin, Municipality of               | 103,202.60    |           | 103,202.60    |
| Sub-Total                                 | 485,404.85    | 0.00      | 485,404.85    |
|                                           | ,             | 0.00      | ,             |

### LICENCE AND WAYSIDE PERMIT PRODUCTION BY LOWER TIER MUNICIPALITY

| (Reported in Metric To                                    | nnes)                    |                    |                          |
|-----------------------------------------------------------|--------------------------|--------------------|--------------------------|
| Municipality                                              | Licences                 | Wayside<br>Permits | Total                    |
| Essex                                                     |                          |                    |                          |
| Amherstburg, Town of/Leamington, Municipality of/Pelee Tp | 1,496,731.33             |                    | 1,496,731.33             |
| Kingsville, Town of                                       | 377,315.58               |                    | 377,315.58               |
| Sub-Total                                                 | 1,874,046.91             | 0.00               | 1,874,046.91             |
| Frontenac                                                 |                          |                    |                          |
| Frontenac Islands Tp                                      | 31,776.46                |                    | 31,776.46                |
| Kingston, City of                                         | 1,180,843.46             |                    | 1,180,843.46             |
| South Frontenac Tp                                        | 423,219.36               |                    | 423,219.36               |
| Sub-Total                                                 | 1,635,839.28             | 0.00               | 1,635,839.28             |
| Greater Sudbury                                           |                          |                    |                          |
| Greater Sudbury, City of                                  | 2,277,094.18             |                    | 2,277,094.18             |
| Sub-Total                                                 | 2,277,094.18             | 0.00               | 2,277,094.18             |
|                                                           |                          |                    |                          |
| Grey                                                      | 202 450 00               |                    | 202.450.00               |
| Chatsworth Tp                                             | 362,156.99               |                    | 362,156.99               |
| Georgian Bluffs, Tp                                       | 596,334.42               |                    | 596,334.42               |
| Grey Highlands, Municipality of                           | 486,173.21               |                    | 486,173.21               |
| Meaford, Municipality of                                  | 265,507.56<br>253,078.02 |                    | 265,507.56<br>253,078.02 |
| Southgate Tp<br>The Blue Mountains, Town of               | 233,078.02               |                    | 223,362.63               |
| West Grey, Municipality of                                | 341,840.39               | 99,680.00          | 441,520.39               |
| Sub-Total                                                 | 2,528,453.22             | 99,680.00          | 2,628,133.22             |
|                                                           | 2,020,400.22             | 00,000.00          | 2,020,100.22             |
| Haldimand                                                 |                          |                    |                          |
| Haldimand, County of                                      | 1,944,181.19             | 0.00               | 1,944,181.19             |
| Sub-Total                                                 | 1,944,181.19             | 0.00               | 1,944,181.19             |
| Halton                                                    |                          |                    |                          |
| Burlington, City of/Halton Hills, Town of                 | 6,273,404.54             |                    | 6,273,404.54             |
| Milton, Town of                                           | 5,871,513.08             |                    | 5,871,513.08             |
| Sub-Total                                                 | 12,144,917.62            | 0.00               | 12,144,917.62            |
| Hamilton                                                  |                          |                    |                          |
| Hamilton, City of                                         | 5,411,479.23             | 124,600.00         | 5,536,079.23             |
| Sub-Total                                                 | 5,411,479.23             | 124,600.00         | 5,536,079.23             |
| Hastings                                                  |                          |                    |                          |
| Belleville, City of                                       | 460,789.36               |                    | 460,789.36               |
| Centre Hastings, Municipality of                          | 79,702.82                |                    | 79,702.82                |
| Madoc Tp                                                  | 639,661.19               |                    | 639,661.19               |
| Marmora & Lake, Municipality of                           | 5,600.80                 |                    | 5,600.80                 |
| Quinte West, City of                                      | 630,464.16               |                    | 630,464.16               |
| Tyendinaga Tp                                             | 179,561.22               |                    | 179,561.22               |
| Tweed, Municipality of                                    | 79,706.08                |                    | 79,706.08                |
| Sub-Total                                                 | 2,075,485.63             | 0.00               | 2,075,485.63             |

# LICENCE AND WAYSIDE PERMIT PRODUCTION BY LOWER TIER MUNICIPALITY

| (Reported in Metric                                     | Tonnes)      |         |              |
|---------------------------------------------------------|--------------|---------|--------------|
| Municipality                                            | 1 :          | Wayside | Tatal        |
| Municipality                                            | Licences     | Permits | Total        |
| Huron                                                   |              |         |              |
| Ashfield-Colborne-Wawanosh Tp                           | 740,111.58   |         | 740,111.58   |
| Bluewater, Municipality of/South Huron, Municipality of | 51,830.20    |         | 51,830.20    |
| Central Huron, Municipality of                          | 673,397.30   |         | 673,397.30   |
| Howick Tp                                               | 193,009.21   |         | 193,009.21   |
| Huron East, Municipality of                             | 829,231.48   |         | 829,231.48   |
| Morris-Turnberry, Municipality of                       | 189,785.69   |         | 189,785.69   |
| North Huron Tp                                          | 58,490.07    |         | 58,490.07    |
| Sub-Total                                               | 2,735,855.53 | 0.00    | 2,735,855.53 |
| Kawartha Lakes                                          |              |         |              |
| Kawartha Lakes, City of                                 | 6,425,046.64 |         | 6,425,046.64 |
| Sub-Total                                               | 6,425,046.64 | 0.00    | 6,425,046.64 |
| oub-rotal                                               | 0,720,070.07 | 0.00    | 0,720,070.07 |
| Lambton                                                 |              |         |              |
| Enniskillen Tp/Plympton-Wyoming, Town of                | 182,752.91   |         | 182,752.91   |
| Lambton Shores, Municipality of                         | 186,066.69   |         | 186,066.69   |
| Warwick Tp                                              | 348,565.78   |         | 348,565.78   |
| Sub-Total                                               | 717,385.38   | 0.00    | 717,385.38   |
|                                                         |              |         |              |
| Lanark                                                  |              |         |              |
| Beckwith Tp                                             | 74,650.19    |         | 74,650.19    |
| Drummond-North Elmsley Tp                               | 113,990.96   |         | 113,990.96   |
| Lanark Highlands Tp                                     | 1,375,468.74 |         | 1,375,468.74 |
| Mississippi Mills, Town of                              | 191,996.97   |         | 191,996.97   |
| Montague Tp                                             | 162,096.90   |         | 162,096.90   |
| Tay Valley Tp                                           | 37,070.84    |         | 37,070.84    |
| Sub-Total                                               | 1,955,274.60 | 0.00    | 1,955,274.60 |
| Leeds & Grenville                                       |              |         |              |
| Athens Tp/Front of Yonge Tp                             | 194,136.98   |         | 194,136.98   |
| Augusta Tp                                              | 126,639.64   |         | 126,639.64   |
| Edwardsburgh-Cardinal Tp                                | 165,869.66   |         | 165,869.66   |
| Elizabethtown-Kitley Tp                                 | 537,279.94   |         | 537,279.94   |
| Leeds and the Thousand Islands Tp                       | 430,916.85   |         | 430,916.85   |
| Merrickville-Wolford, Village of                        | 20,316.72    |         | 20,316.72    |
| North Grenville Tp                                      | 399,439.79   |         | 399,439.79   |
| Rideau Lakes Tp                                         | 78,863.09    |         | 78,863.09    |
| Sub-Total                                               | 1,953,462.67 | 0.00    | 1,953,462.67 |
|                                                         |              |         |              |
| Lennox & Addington                                      |              |         | <b>.</b>     |
| Greater Napanee, Town of                                | 241,340.15   |         | 241,340.15   |
| Loyalist Tp/Stone Mills Tp                              | 1,441,870.55 |         | 1,441,870.55 |
| Sub-Total                                               | 1,683,210.70 | 0.00    | 1,683,210.70 |

# LICENCE AND WAYSIDE PERMIT PRODUCTION BY LOWER TIER MUNICIPALITY

| (Reported in Metric T                                                   | onnes)                       |         |                              |
|-------------------------------------------------------------------------|------------------------------|---------|------------------------------|
|                                                                         |                              | Wayside |                              |
| Municipality                                                            | Licences                     | Permits | Total                        |
| Middleson                                                               |                              |         |                              |
| Middlesex                                                               | 44 700 00                    |         | 44 700 00                    |
| Adelaide Metcalfe Tp/Lucan Biddulph Tp                                  | 41,703.99                    |         | 41,703.99                    |
| London, City of                                                         | 2,100,543.32                 |         | 2,100,543.32                 |
| Middlesex Centre Tp                                                     | 895,106.69                   |         | 895,106.69                   |
| North Middlesex, Municipality of                                        | 114,241.07                   |         | 114,241.07                   |
| Strathroy-Caradoc Tp                                                    | 33,229.70                    |         | 33,229.70                    |
| Thames Centre, Municipality of Sub-Total                                | 2,235,957.98<br>5,420,782.75 | 0.00    | 2,235,957.98<br>5,420,782.75 |
| Sub-rotai                                                               | 5,420,762.75                 | 0.00    | 5,420,762.75                 |
| Niagara                                                                 |                              |         |                              |
| -                                                                       |                              |         |                              |
| Fort Erie, Town of/Pelham, Town of/Port Colborne, City of/              | 2 109 275 10                 |         | 2 109 275 10                 |
| Wainfleet Tp                                                            | 2,198,375.19<br>1,427,414.81 |         | 2,198,375.19<br>1,427,414.81 |
| Lincoln, Town of/Niagara-on-the-Lake, Town of<br>Niagara Falls, City of | 1,268,892.04                 |         | 1,268,892.04                 |
| Sub-Total                                                               | 4,894,682.04                 | 0.00    | 4,894,682.04                 |
| Sub-rotal                                                               | 4,094,002.04                 | 0.00    | 4,094,002.04                 |
| Norfolk                                                                 |                              |         |                              |
| Norfolk, County of                                                      | 369,408.01                   |         | 369,408.01                   |
| Sub-Total                                                               | 369,408.01                   | 0.00    | 369,408.01                   |
| Sub-Total                                                               | 309,400.01                   | 0.00    | 509,400.01                   |
| Northumberland                                                          |                              |         |                              |
| Alnwick-Haldimand Tp                                                    | 349,125.06                   |         | 349,125.06                   |
| Brighton, Municipality of                                               | 263,473.68                   |         | 263,473.68                   |
|                                                                         | 1,874,366.96                 |         | 1,874,366.96                 |
| Cramahe Tp                                                              |                              |         |                              |
| Hamilton Tp<br>Dert Hang Municipality of                                | 280,165.22                   |         | 280,165.22                   |
| Port Hope, Municipality of                                              | 42,463.07                    |         | 42,463.07                    |
| Trent Hills, Municipality of                                            | 171,769.18                   | 0.00    | 171,769.18                   |
| Sub-Total                                                               | 2,981,363.17                 | 0.00    | 2,981,363.17                 |
| Ottawa                                                                  |                              |         |                              |
| Ottawa, City of                                                         | 10,729,635.36                |         | 10,729,635.36                |
| Sub-Total                                                               | 10,729,635.36                | 0.00    | 10,729,635.36                |
| Sub-Total                                                               | 10,729,035.30                | 0.00    | 10,729,035.30                |
| Oxford                                                                  |                              |         |                              |
| Blandford-Blenheim Tp                                                   | 414,137.94                   |         | 414,137.94                   |
| East Zorra-Tavistock Tp/Norwich Tp/Woodstock, City of                   | 115,870.81                   |         | 115,870.81                   |
| South-West Oxford Tp                                                    | 751,036.63                   |         | 751,036.63                   |
| Zorra Tp                                                                | 3,429,588.97                 |         | 3,429,588.97                 |
| Sub-Total                                                               | 4,710,634.35                 | 0.00    | 4,710,634.35                 |
| 505-100                                                                 | 4,710,004.00                 | 0.00    | 4,710,004.00                 |
| Peel                                                                    |                              |         |                              |
| Brampton, City of/Caledon, Town of/Mississauga, City of                 | 4,251,954.06                 |         | 4,251,954.06                 |
| Sub-Total                                                               | 4,251,954.06                 | 0.00    | 4,251,954.06                 |
| Sub-Total                                                               | 4,231,934.00                 | 0.00    | 4,231,934.00                 |
| Perth                                                                   |                              |         |                              |
| North Perth, Town of/St. Marys, Separated Town of                       | 161,196.62                   |         | 161,196.62                   |
| Perth East Tp                                                           | 315,603.30                   |         | 315,603.30                   |
| Perth East 1p                                                           | 1,426,261.74                 |         | 1,426,261.74                 |
| West Perth Tp                                                           | 199,346.50                   |         | 199,346.50                   |
| Sub-Total                                                               | 2,102,408.16                 | 0.00    | 2,102,408.16                 |
| Jubriolai                                                               | 2,102,400.10                 | 0.00    | 2,102,400.10                 |

# LICENCE AND WAYSIDE PERMIT PRODUCTION BY LOWER TIER MUNICIPALITY

| (Reported in Metric <sup>-</sup>                          | Fonnes)                 |                    |               |
|-----------------------------------------------------------|-------------------------|--------------------|---------------|
| Municipality                                              | Licences                | Wayside<br>Permits | Total         |
| inanoipanty                                               | Liochood                | i erinte           | lotai         |
| Peterborough                                              |                         |                    |               |
| Asphodel-Norwood Tp                                       | 528,446.64              | 375,000.00         | 903,446.64    |
| Cavan-Millbrook-North Monaghan Tp                         | 223,820.67              |                    | 223,820.67    |
| Douro-Dummer Tp                                           | 746,926.95              |                    | 746,926.95    |
| Galway-Cavendish-Harvey Tp                                | 245,584.49              |                    | 245,584.49    |
| Havelock-Belmont-Methuen Tp                               | 110,380.10              |                    | 110,380.10    |
| Otonabee-South Monaghan Tp                                | 313,275.82              |                    | 313,275.82    |
| Smith-Ennismore-Lakefield Tp                              | 650,593.16              |                    | 650,593.16    |
| Sub-Total                                                 | 2,819,027.83            | 375,000.00         | 3,194,027.83  |
| Dranadt & Duanall                                         |                         |                    |               |
| Prescott & Russell                                        | 000 400 40              |                    | 000 400 40    |
| Alfred & Plantagenet Tp                                   | 226,488.42              |                    | 226,488.42    |
| Champlain Tp                                              | 280,217.44              |                    | 280,217.44    |
| Clarence-Rockland, City of                                | 353,178.20              |                    | 353,178.20    |
| East Hawkesbury Tp                                        | 64,776.52               |                    | 64,776.52     |
| Russell Tp                                                | 227,926.63              |                    | 227,926.63    |
| The Nation, Municipality of                               | 168,439.19              |                    | 168,439.19    |
| Sub-Total                                                 | 1,321,026.40            | 0.00               | 1,321,026.40  |
| Prince Edward Co                                          |                         |                    |               |
| Prince Edward, County of                                  | 2,082,506.88            |                    | 2,082,506.88  |
| Sub-Total                                                 | 2,082,506.88            | 0.00               | 2,082,506.88  |
| Renfrew                                                   |                         |                    |               |
| Admaston-Bromley Tp/Greater Madawaska Tp/                 |                         |                    |               |
| Renfrew, Town of                                          | 154,606.53              |                    | 154,606.53    |
| Horton Tp                                                 | 367,411.45              |                    | 367,411.45    |
| -                                                         | 307,133.20              |                    | 307,133.20    |
| Laurentian Valley Tp                                      |                         |                    |               |
| McNab-Braeside Tp                                         | 667,646.25              |                    | 667,646.25    |
| Petawawa, Town of                                         | 206,654.25              |                    | 206,654.25    |
| Whitewater Region Tp                                      | 97,032.23               | 0.00               | 97,032.23     |
| Sub-Total                                                 | 1,800,483.91            | 0.00               | 1,800,483.91  |
| Simcoe                                                    |                         |                    |               |
| Adjala-Tosorontio Tp/Barrie, City of/Collingwood, Town of | 844,411.88              |                    | 844,411.88    |
| Bradford West Gwillimbury, Town of/Midland, Town of/      | ,                       |                    | ,             |
| Wasaga Beach, Town of                                     | 436,394.84              |                    | 436,394.84    |
| Clearview Tp                                              | 1,278,811.75            |                    | 1,278,811.75  |
| Essa Tp                                                   | 51,238.37               |                    | 51,238.37     |
| Innisfil, Town of                                         | 64,304.31               |                    | 64,304.31     |
| New Tecumseth, Town of                                    | 24,399.51               |                    | 24,399.51     |
| Oro-Medonte Tp                                            | 2,714,622.34            |                    | 2,714,622.34  |
| Ramara Tp                                                 | 2,474,934.08            |                    | 2,474,934.08  |
| Severn Tp                                                 | 1,786,986.80            |                    | 1,786,986.80  |
| -                                                         | 1,352,619.48            |                    | 1,352,619.48  |
| Springwater Tp                                            | 96,461.87               |                    |               |
| Tay Tp<br>Tipy Tp                                         | 96,461.87<br>229,205.37 |                    | 96,461.87     |
| Tiny Tp<br>Sub Total                                      |                         | 0.00               | 229,205.37    |
| Sub-Total                                                 | 11,354,390.60           | 0.00               | 11,354,390.60 |

# LICENCE AND WAYSIDE PERMIT PRODUCTION BY LOWER TIER MUNICIPALITY

| (Reported in Metric                                      | Tonnes)        | M/         |                |
|----------------------------------------------------------|----------------|------------|----------------|
| Manual a la califaci                                     | 1              | Wayside    | Tatal          |
| Municipality                                             | Licences       | Permits    | Total          |
| Stormont, Dundas & Glengarry                             |                |            |                |
| North Dundas Tp                                          | 520,471.00     |            | 520,471.00     |
| North Glengarry Tp                                       | 178,784.30     |            | 178,784.30     |
| North Stormont Tp                                        | 669,287.66     |            | 669,287.66     |
| South Dundas Tp                                          | 199,214.45     |            | 199,214.45     |
| South Glengarry Tp                                       | 298,937.99     |            | 298,937.99     |
| South Stormont Tp                                        | 723,439.39     |            | 723,439.39     |
| Sub-Total                                                | 2,590,134.79   | 0.00       | 2,590,134.79   |
|                                                          | _,             |            | _,,,           |
| Sudbury District                                         |                |            |                |
| Baldwin Tp/ St. Charles, Municipality of                 | 28,278.00      |            | 28,278.00      |
| French River, Municipality of/Nairn & Hyman Tp           | 44,925.82      |            | 44,925.82      |
| Markstay-Warren, Municipality of                         | 80,253.41      |            | 80,253.41      |
| Sables Spanish Rivers Tp/Espanola, Town of               | 61,174.24      |            | 61,174.24      |
| Sudbury District, Unorganized                            | 358,458.83     |            | 358,458.83     |
| Sub-Total                                                | 573,090.30     | 0.00       | 573,090.30     |
|                                                          |                |            |                |
| Waterloo                                                 |                |            |                |
| Cambridge, City of/Kitchener, City of                    | 1,426,491.32   |            | 1,426,491.32   |
| North Dumfries Tp                                        | 3,336,657.95   |            | 3,336,657.95   |
| Wellesley Tp                                             | 1,440,948.82   |            | 1,440,948.82   |
| Wilmot Tp                                                | 1,011,651.12   |            | 1,011,651.12   |
| Woolwich Tp                                              | 593,436.98     |            | 593,436.98     |
| Sub-Total                                                | 7,809,186.19   | 0.00       | 7,809,186.19   |
|                                                          |                |            |                |
| Wellington                                               |                |            |                |
| Centre Wellington Tp                                     | 1,106,995.45   |            | 1,106,995.45   |
| Erin, Town of                                            | 1,720,546.91   |            | 1,720,546.91   |
| Guelph-Eramosa Tp                                        | 129,256.00     |            | 129,256.00     |
| Mapleton Tp                                              | 83,939.88      |            | 83,939.88      |
| Minto, Town of                                           | 414,571.93     |            | 414,571.93     |
| Puslinch Tp                                              | 5,286,800.52   |            | 5,286,800.52   |
| Wellington North Tp                                      | 167,720.97     |            | 167,720.97     |
| Sub-Total                                                | 8,909,831.66   | 0.00       | 8,909,831.66   |
| Vork                                                     |                |            |                |
| York                                                     |                |            | 004 004 45     |
| East Gwillimbury, Town of                                | 284,604.45     |            | 284,604.45     |
| Georgina, Town of                                        | 48,793.94      |            | 48,793.94      |
| King Tp/Vaughan, City of/Whitchurch-Stouffville, Town of | 2,072,499.04   | 0.00       | 2,072,499.04   |
| Sub-Total                                                | 2,405,897.43   | 0.00       | 2,405,897.43   |
| GRAND TOTAL                                              | 141,176,092.75 | 634,280.00 | 141,810,372.75 |
|                                                          | 111,110,002.10 | 001,200.00 | 11,010,012.10  |

### LICENCE AND WAYSIDE PRODUCTION BY UPPER TIER MUNICIPALITY (Million Tonnes)

| Municipality                       | 1994  | 1995       | 1996  | 1997       | 1998       | 1999       | 2000       | 2001       | 2002       |
|------------------------------------|-------|------------|-------|------------|------------|------------|------------|------------|------------|
| Algoma, District of                | 0.5   | 0.5        | 0.6   | 0.6        | 0.6        | 0.8        | 0.8        | 0.6        | 0.8        |
| Brant Co.                          | 1.3   | 1.6        | 1.7   | 0.0<br>2.1 | 0.0<br>1.5 | 0.8<br>1.5 | 0.8<br>2.1 | 2.0        | 0.0<br>1.8 |
| Bruce Co.                          | 1.3   | 1.5        | 1.7   | 1.3        | 1.5        | 1.5        | 2.1<br>1.7 | 2.0<br>1.6 | 1.0        |
|                                    |       |            | 0.4   | 0.5        | 0.4        |            | 0.5        | 0.3        |            |
| Chatham-Kent, R. M. of             | 0.5   | 0.5        |       |            |            | 0.5        |            |            | 0.5        |
| Dufferin Co.                       | 1.6   | 1.4        | 1.5   | 1.5        | 1.8        | 2.1        | 2.6        | 2.4        | 2.3        |
| Durham, R. M. of                   | 7.1   | 7.2        | 7.6   | 8.7        | 7.8        | 9.2        | 10.2       | 11.4       | 11.0       |
| Elgin Co.                          | 0.5   | 0.4        | 0.5   | 0.7        | 0.4        | 0.6        | 0.7        | 0.6        | 0.5        |
| Essex Co.                          | 2.7   | 2.4        | 2.2   | 2.7        | 2.0        | 1.9        | 2.0        | 2.2        | 1.9        |
| Frontenac, Management Board        | 1.5   | 1.2        | 1.6   | 1.5        | 1.2        | 1.3        | 1.4        | 1.3        | 1.6        |
| Greater Sudbury, City of           | 2.9   | 2.9        | 2.7   | 2.5        | 2.3        | 2.9        | 2.3        | 1.8        | 2.3        |
| Grey Co.                           | 2.7   | 2.4        | 2.0   | 2.1        | 2.1        | 2.8        | 2.5        | 2.6        | 2.6        |
| Haldimand Co.                      |       |            |       |            |            |            |            | 1.5        | 1.9        |
| Haldimand-Norfolk, R. M. of        | 1.9   | 1.9        | 1.7   | 2.1        | 1.8        | 2.0        | 2.0        |            |            |
| Halton, R. M. of                   | 9.7   | 10.7       | 12.3  | 14.4       | 13.4       | 13.8       | 15.5       | 15.8       | 12.1       |
| Hamilton, City of                  | 3.9   | 4.0        | 4.0   | 5.2        | 4.7        | 4.6        | 6.3        | 6.0        | 5.5        |
| Hastings Co.                       | 1.2   | 1.4        | 1.6   | 2.0        | 1.9        | 2.2        | 2.0        | 2.0        | 2.1        |
| Huron Co.                          | 2.9   | 2.8        | 2.8   | 2.4        | 2.6        | 2.8        | 2.7        | 3.0        | 2.7        |
| Kawartha Lakes, City of            |       |            |       |            |            |            |            | 6.4        | 6.4        |
| Lambton Co.                        | 0.6   | 0.6        | 0.4   | 0.5        | 0.6        | 0.6        | 0.5        | 0.5        | 0.7        |
| Lanark Co.                         | 1.1   | 1.3        | 1.2   | 1.2        | 1.3        | 1.5        | 1.6        | 1.7        | 2.0        |
| Leeds & Grenville Co.'s            | 2.4   | 2.3        | 2.0   | 2.1        | 4.2        | 2.2        | 3.0        | 2.3        | 2.0        |
| Lennox & Addington Co.             | 1.7   | 2.0        | 1.8   | 1.7        | 1.9        | 1.7        | 1.8        | 1.8        | 1.7        |
| Middlesex Co.                      | 4.9   | 4.5        | 4.5   | 5.3        | 6.1        | 5.6        | 6.4        | 6.0        | 5.4        |
| Niagara, R. M. of                  | 4.1   | 3.6        | 4.7   | 4.9        | 4.6        | 4.3        | 4.6        | 4.6        | 4.9        |
| Norfolk Co.                        |       |            |       |            |            |            |            | 0.4        | 0.4        |
| Northumberland Co.                 | 3.0   | 2.6        | 3.0   | 3.2        | 3.2        | 3.6        | 3.2        | 3.1        | 3.0        |
| Ottawa, City of                    | 9.3   | 8.4        | 6.1   | 6.7        | 7.1        | 8.1        | 10.7       | 10.1       | 10.7       |
| Oxford Co.                         | 4.6   | 5.0        | 4.6   | 5.3        | 4.9        | 5.1        | 5.4        | 4.9        | 4.8        |
| Peel, R. M. of                     | 3.1   | 3.7        | 3.8   | 4.3        | 4.2        | 4.5        | 5.2        | 5.2        | 4.3        |
| Perth Co.                          | 1.7   | 1.6        | 1.9   | 1.7        | 1.7        | 1.6        | 2.1        | 2.0        | 2.1        |
| Peterborough Co.                   | 2.2   | 1.8        | 1.8   | 1.8        | 1.8        | 1.8        | 2.2        | 2.4        | 3.2        |
| Prescott & Russell Co.'s           | 1.9   | 1.3        | 1.2   | 1.4        | 1.1        | 1.2        | 1.4        | 1.4        | 1.3        |
| Prince Edward Co.                  | 1.9   | 2.2        | 1.8   | 2.1        | 2.0        | 2.0        | 2.1        | 2.0        | 2.1        |
| Renfrew Co.                        | 1.1   | 1.3        | 1.5   | 1.2        | 1.3        | 1.5        | 1.5        | 1.2        | 1.8        |
| Simcoe Co.                         | 6.2   | 6.8        | 7.4   | 7.6        | 9.0        | 9.0        | 9.3        | 10.6       | 11.4       |
| Stormont, Dundas & Glengarry Co.'s | 2.6   | 2.3        | 2.1   | 2.4        | 2.4        | 2.8        | 3.0        | 2.7        | 2.6        |
| Sudbury, District of               | 0.5   | 0.3        | 0.3   | 0.2        | 0.2        | 0.4        | 0.5        | 1.0        | 0.6        |
| Victoria Co.                       | 5.4   | 4.9        | 6.0   | 6.5        | 6.6        | 6.0        | 7.1        |            |            |
| Waterloo, R. M. of                 | 5.8   | 4.9<br>5.8 | 5.8   | 5.6        | 5.8        | 7.3        | 7.1        | 8.2        | 7.8        |
|                                    |       |            |       |            |            |            |            |            |            |
| Wellington Co.                     | 5.6   | 4.9        | 6.0   | 6.4        | 6.9        | 7.5        | 8.4        | 8.9        | 8.9        |
| York, R. M. of                     | 1.9   | 2.2        | 2.0   | 2.6        | 2.2        | 2.7        | 3.0        | 2.4        | 2.4        |
| TOTAL                              | 114.3 | 112.2      | 114.3 | 125.0      | 125.2      | 131.5      | 146.0      | 144.9      | 141.8      |

Note: As of January 1, 2001 Victoria County is now known as The City of Kawartha Lakes. As of January 1, 2001 Haldimand-Norfolk has been split into two different counties; Haldimand County and Norfolk County.

### LICENCE PRODUCTION IN 2002 THE TOP TEN PRODUCING MUNICIPALITIES (Rounded to nearest million tonnes)

|    |                                                    |                        | 2002       |      | Pro  | oductio | on   |      |
|----|----------------------------------------------------|------------------------|------------|------|------|---------|------|------|
|    | Municipality                                       | County/Region          | Production | 2001 | 2000 | 1999    | 1998 | 1997 |
|    |                                                    |                        |            |      |      |         |      |      |
| 1  | City of Ottawa <sup>(1)</sup>                      | City of Ottawa         | 10.7       | 10.1 | 10.6 | 8.1     | 7.1  | 6.7  |
| 2  | City of Kawartha Lakes <sup>(2)</sup>              | City of Kawartha Lakes | 6.4        | 6.4  | 7.1  | 6.0     | 6.6  | 6.5  |
| 3  | City of Burlington/<br>Town of Halton Hills        | Halton                 | 6.3        | 7.0  | 6.5  | 6.1     | 5.5  | 4.7  |
| 4  | Town of Milton                                     | Halton                 | 5.9        | 8.8  | 9.0  | 7.7     | 7.9  | 9.6  |
| 5  | City of Hamilton <sup>(3)</sup>                    | City of Hamilton       | 5.4        | 6.0  | 6.3  | 4.6     | 4.7  | 5.2  |
| 6  | Puslinch Township                                  | Wellington County      | 5.3        | 5.5  | 4.1  | 3.9     | 3.8  | 3.5  |
| 7  | Township of Uxbridge                               | Durham                 | 4.7        | 5.0  | 4.1  | 3.4     | 3.2  | 3.1  |
| 8  | Municipality of Clarington                         | Durham                 | 4.7        | 4.7  | 4.3  | 3.8     | 3.0  | 3.9  |
| 9  | Cities of Brampton/Mississauga/<br>Town of Caledon | Peel                   | 4.3        | 5.2  | 5.2  | 4.5     | 4.2  | 4.3  |
| 10 | Zorra Township                                     | Oxford                 | 3.4        | 3.5  | 3.8  | 4.1     | 3.8  | 3.8  |
|    | Total                                              |                        | 57.1       | 62.2 | 61.0 | 52.2    | 49.8 | 51.3 |

Note: Municipalities are ranked in order of their licenced production for 2002

Production statistics for 1997 - 2000 include tonnage of the pre-amalgamated cites and townships of :

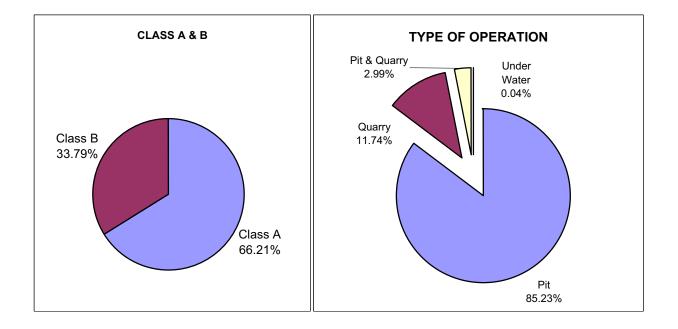
<sup>(1)</sup> Cities of Ottawa, Gloucester and Neapean, Townships of Cumberland, Goulborn, Osgoode, Rideau and West Carleton

(2) Townships of Bexley, Laxton, Digby & Longford, Bobcaygeon, Carden/Dalton, Eldon, Emily, Fenelon, Manvers, Mariposa, Somerville

<sup>(3)</sup> Cities of Hamilton and Stoney Creek, Towns of Ancaster, Dundas and Glanbrook

|                      | No. of   | Cate    | Category Type of Operation |  |       |        |              |            |
|----------------------|----------|---------|----------------------------|--|-------|--------|--------------|------------|
| District             | Licences | Class A | Class B                    |  | Pit   | Quarry | Pit & Quarry | Underwater |
|                      |          |         |                            |  |       |        |              |            |
| Aurora (GTA)         | 175      | 151     | 24                         |  | 159   | 16     | 0            | 0          |
| Aylmer               | 310      | 231     | 79                         |  | 293   | 11     | 6            | 0          |
| Bancroft             | 42       | 17      | 25                         |  | 23    | 14     | 5            | 0          |
| Guelph (Cambridge)   | 464      | 377     | 87                         |  | 429   | 32     | 3            | 0          |
| Kemptville           | 506      | 270     | 236                        |  | 367   | 117    | 21           | 1          |
| Midhurst             | 463      | 339     | 124                        |  | 421   | 38     | 4            | 0          |
| Pembroke             | 111      | 56      | 55                         |  | 98    | 7      | 6            | 0          |
| Peterborough (Tweed) | 496      | 269     | 227                        |  | 397   | 84     | 15           | 0          |
| Sault Ste. Marie     | 69       | 31      | 38                         |  | 63    | 1      | 5            | 0          |
| Sudbury              | 140      | 97      | 43                         |  | 116   | 6      | 18           | 0          |
| TOTAL                | 2,776    | 1,838   | 938                        |  | 2,366 | 326    | 83           | 1          |

# NUMBER AND TYPE OF AGGREGATE LICENCES

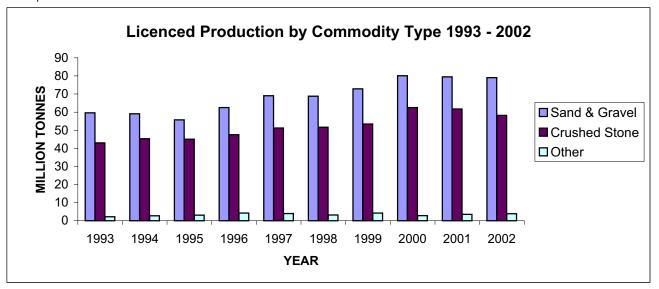


### 2002 LICENCED AGGREGATE PRODUCTION BY COMMODITY TYPE (Reported by MNR District)

|                    |                | Sand &        | Crushed       | Clay/        | Other        |
|--------------------|----------------|---------------|---------------|--------------|--------------|
| District           | Total          | Gravel        | Stone         | Shale        | Stone        |
| Aurora (GTA)       | 29,841,766.72  | 14,820,163.97 | 13,208,989.26 | 1,276,508.58 | 536,104.91   |
| Aylmer             | 14,082,866.40  | 10,315,487.97 | 3,757,527.86  | 1,720.57     | 8,130.00     |
| Bancroft           | 2,294,702.29   | 115,826.69    | 2,134,217.23  | 7,584.24     | 37,074.13    |
| Guelph (Cambridge) | 35,831,121.17  | 23,169,403.43 | 12,526,462.53 | 131,683.37   | 3,571.84     |
| Kemptville         | 18,465,824.82  | 5,888,725.89  | 11,617,941.25 | 107,727.62   | 851,430.06   |
| Midhurst           | 17,689,512.78  | 11,989,243.95 | 5,413,397.96  | 109,312.70   | 177,558.17   |
| Pembroke           | 1,884,192.91   | 1,262,495.49  | 210,039.05    | 0.00         | 411,658.37   |
| Peterborough       | 17,407,777.84  | 8,446,785.48  | 8,905,719.79  | 40,654.73    | 14,617.84    |
| Sault Ste. Marie   | 828,143.34     | 777,740.11    | 32,923.86     | 0.00         | 17,479.37    |
| Sudbury            | 2,850,184.48   | 2,305,399.76  | 387,166.66    | 64,641.92    | 92,976.14    |
| TOTAL              | 141,176,092.75 | 79,091,272.74 | 58,194,385.45 | 1,739,833.73 | 2,150,600.83 |

Note: Totals may not equal due to rounding

Other Stone includes building stone, industrial stone, dimensional stone Reported in metric tonnes



### Yearly Production for Aggregate Licences (in Million Tonnes)

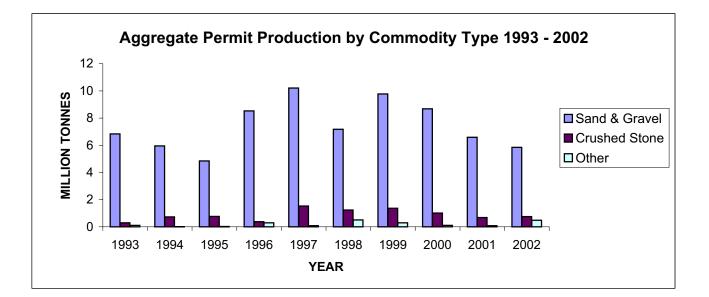
|      | Total  | Sand & Gravel | Crushed Stone | Other |
|------|--------|---------------|---------------|-------|
| 1993 | 104.85 | 59.62         | 43.04         | 2.19  |
| 1994 | 107.11 | 59.07         | 45.28         | 2.76  |
| 1995 | 103.80 | 55.70         | 45.01         | 3.09  |
| 1996 | 114.27 | 62.52         | 47.48         | 4.27  |
| 1997 | 124.29 | 69.05         | 51.23         | 4.01  |
| 1998 | 123.68 | 68.84         | 51.64         | 3.20  |
| 1999 | 130.53 | 72.87         | 53.40         | 4.26  |
| 2000 | 145.49 | 80.07         | 62.57         | 2.85  |
| 2001 | 144.76 | 79.46         | 61.76         | 3.54  |
| 2002 | 141.17 | 79.09         | 58.19         | 3.89  |

### 2002 AGGREGATE PERMIT PRODUCTION BY COMMODITY TYPE (Reported by MNR District)

|                      | Total        | Sand &                   | Crushed    |            | Other      |
|----------------------|--------------|--------------------------|------------|------------|------------|
| Region/District      | Production   | Gravel                   | Stone      | Clay/Shale | Stone      |
| NORTHEAST            |              |                          |            |            |            |
| Chapleau             | 130,881.05   | 130,881.05               | -          | -          | -          |
| Cochrane             | 665,035.93   | 526,949.61               | 127,689.32 | -          | 10,397.00  |
| Hearst               | 250,088.00   | 243,482.00               | 6,606.00   | -          | -          |
| Kirkland Lake        | 218,564.84   | 218,433.84               | 131.00     | -          | -          |
| North Bay            | 362,777.69   | 351,595.44               | 10,626.00  | -          | 556.25     |
| Sault Ste. Marie     | 145,691.90   | 142,881.66               | -          | 2,600.00   | 210.24     |
| Sudbury              | 340,474.29   | 227,216.50               | 107,118.42 | _,         | 6,139.37   |
| Timmins              | 333,959.85   | 244,626.34               | -          | -          | 89,333.51  |
| Wawa                 | 691,883.71   | 536,763.71               | 59,593.00  | 95,527.00  | -          |
| Sub-Total            | 3,139,357.26 | 2,622,830.15             | 311,763.74 | 98,127.00  | 106,636.37 |
| NORTHWEST            |              |                          |            |            |            |
|                      | 617 242 42   | 120 764 04               |            |            | 106 570 20 |
| Dryden               | 617,343.42   | 430,764.04<br>569,342.10 | -          | -          | 186,579.38 |
| Fort Frances         | 615,169.18   | ,                        | 622.88     | -          | 45,204.20  |
| Kenora               | 155,897.18   | 143,697.67               | -          | -          | 12,199.51  |
| Nipigon              | 619,441.38   | 556,670.90               | 59,110.00  | 1,600.00   | 2,060.48   |
| Red Lake             | 221,034.44   | 218,819.24               | 1,107.00   | -          | 1,108.20   |
| Sioux Lookout        | 349,949.91   | 349,503.83               | -          | -          | 446.08     |
| Thunder Bay          | 370,156.85   | 370,141.54               | -          | -          | 15.31      |
| Sub-Total            | 2,948,992.36 | 2,638,939.32             | 60,839.88  | 1,600.00   | 247,613.16 |
| SOUTHCENTRAL         |              |                          |            |            |            |
| Algonguin Park       | 83,695.00    | 83,695.00                | -          | -          | -          |
| Aurora (GTA)         | -            | -                        | -          | -          | -          |
| Aylmer               | 821.01       | 821.01                   | -          | -          | -          |
| Bancroft             | 199,849.38   | 56,885.78                | 120,101.90 | 265.20     | 22,596.50  |
| Guelph (Cambridge)   | -            | -                        | ,<br>-     | -          | -          |
| Kemptville           | 101,285.81   | 101,285.81               | -          | -          | -          |
| Midhurst             | 4,668.00     | 4,668.00                 | -          | -          | -          |
| Parry Sound          | 473,148.54   | 236,845.91               | 235,414.18 | -          | 888.45     |
| Pembroke             | 104,866.00   | 104,866.00               | -          | -          | -          |
| Peterborough (Tweed) | 25,370.00    | -                        | 25,370.00  | -          | -          |
| Sub-Total            | 993,703.74   | 589,067.51               | 380,886.08 | 265.20     | 23,484.95  |
|                      |              |                          |            |            |            |
| TOTAL                | 7,082,053.36 | 5,850,836.98             | 753,489.70 | 99,992.20  | 377,734.48 |

Note: Amounts shown are in metric tonnes

### 2002 LICENCED AGGREGATE PERMIT PRODUCTION BY COMMODITY TYPE (Reported by MNR District)



### Yearly Production for Aggregate Permits (in Million Tonnes)

|      | Total | Sand & Gravel | Crushed Stone | Other |
|------|-------|---------------|---------------|-------|
| 1993 | 7.24  | 6.83          | 0.30          | 0.11  |
| 1994 | 6.69  | 5.95          | 0.73          | 0.01  |
| 1995 | 5.63  | 4.85          | 0.76          | 0.02  |
| 1996 | 9.21  | 8.53          | 0.38          | 0.30  |
| 1997 | 11.82 | 10.21         | 1.53          | 0.08  |
| 1998 | 8.92  | 7.18          | 1.23          | 0.51  |
| 1999 | 11.44 | 9.78          | 1.37          | 0.29  |
| 2000 | 9.80  | 8.68          | 1.01          | 0.11  |
| 2001 | 7.35  | 6.59          | 0.68          | 0.08  |
| 2002 | 7.08  | 5.85          | 0.75          | 0.48  |

### 2002 AGGREGATE PERMIT PRODUCTION BY COMMODITY TYPE (Reported by CPCA\* Geographic Areas)

|                  |           | Sand &    | Crushed | Clay/  | Other   |
|------------------|-----------|-----------|---------|--------|---------|
| Area             | Total     | Gravel    | Stone   | Shale  | Stone   |
| Southwest (1)    | 821       | 821       | 0       | 0      | 0       |
| Peninsula (2)    | 0         | 0         | 0       | 0      | 0       |
| West Central (3) | 4,668     | 4,668     | 0       | 0      | 0       |
| GTA (4)          | 0         | 0         | 0       | 0      | 0       |
| East Central (5) | 225,219   | 56,886    | 145,472 | 265    | 22,597  |
| East (6)         | 206,152   | 206,152   | 0       | 0      | 0       |
| Northeast (7)    | 3,004,317 | 2,406,607 | 487,585 | 2,600  | 107,525 |
| Northwest (8)    | 3,640,876 | 3,175,703 | 120,433 | 97,127 | 247,613 |
| TOTAL            | 7,082,053 | 5,850,837 | 753,490 | 99,992 | 377,734 |

Note: Totals may not equal due to rounding

Other Stone includes building stone, industrial stone, dimensional stone Amounts shown are in metric tonnes

\*CPCA - Canadian Portland Cement Association

### 2002 AGGREGATE LICENCE PRODUCTION BY COMMODITY TYPE (Reported by CPCA\* Geographic Areas)

|                  |             | Sand &     | Crushed    | Clay/     | Other     |
|------------------|-------------|------------|------------|-----------|-----------|
| Area             | Total       | Gravel     | Stone      | Shale     | Stone     |
| Southwest (1)    | 18,551,722  | 13,924,131 | 4,538,398  | 80,383    | 8,810     |
| Peninsula (2)    | 14,426,808  | 2,628,194  | 11,745,592 | 53,021    | 0         |
| West Central (3) | 34,624,971  | 28,921,810 | 5,413,398  | 109,313   | 180,450   |
| GTA (4)          | 29,841,767  | 14,820,164 | 13,208,989 | 1,276,509 | 536,105   |
| East Central (5) | 16,383,430  | 8,113,338  | 8,191,070  | 37,673    | 41,349    |
| East (6)         | 23,669,068  | 7,600,496  | 14,676,847 | 118,294   | 1,273,431 |
| Northeast (7)    | 2,850,184   | 2,305,400  | 387,167    | 64,642    | 92,976    |
| Northwest (8)    | 828,143     | 777,740    | 32,924     | 0         | 17,479    |
| TOTAL            | 141,176,093 | 79,091,273 | 58,194,385 | 1,739,834 | 2,150,601 |

Note: Totals may not equal due to rounding

Other Stone includes building stone, industrial stone, dimensional stone Amounts shown are in metric tonnes

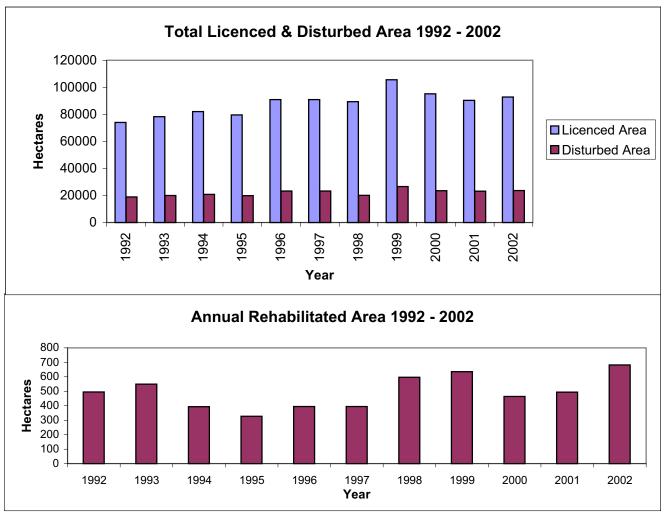
\*CPCA - Canadian Portland Cement Association

### REHABILITATION OF LICENCED AGGREGATE SITES IN 2002 (Reported by MNR District)

|                      | Total<br>No. of | Total<br>Licenced | Original<br>Disturbed | New<br>Disturbed | New<br>Rehab. | Total<br>Disturbed |
|----------------------|-----------------|-------------------|-----------------------|------------------|---------------|--------------------|
| District             | Licences        | Area              | Area                  | Area             | Area          | Area               |
| Aurora (GTA)         | 175             | 9,414.74          | 3,693.40              | 126.64           | 146.88        | 3,673.16           |
| Aylmer               | 311             | 8,360.20          | 3,069.73              | 102.50           | 105.40        | 3,066.83           |
| Bancroft             | 36              | 1,597.06          | 291.77                | 8.12             | 2.20          | 297.69             |
| Guelph (Cambridge)   | 463             | 16,547.33         | 4,489.75              | 180.29           | 151.92        | 4,518.12           |
| Kemptville           | 506             | 14,138.45         | 3,883.42              | 161.55           | 73.36         | 3,971.61           |
| Midhurst             | 463             | 13,263.24         | 3,321.39              | 158.50           | 108.77        | 3,371.12           |
| Pembroke             | 110             | 3,282.57          | 420.23                | 41.43            | 6.53          | 455.13             |
| Peterborough (Tweed) | 503             | 13,286.81         | 3,332.23              | 124.82           | 61.72         | 3,395.33           |
| Sault Ste. Marie     | 69              | 2,939.66          | 326.62                | 6.59             | 5.54          | 327.67             |
| Sudbury              | 140             | 10,018.88         | 784.58                | 35.93            | 19.05         | 801.46             |
| TOTAL                | 2,776           | 92,848.94         | 23,613.12             | 946.37           | 681.37        | 23,878.12          |

#### Note: Areas shown are in hectares

These statistics are compiled from information supplied by licencees and are not independently checked for accuracy.



# NUMBER AND TYPE OF AGGREGATE PERMITS (Reported by MNR District)

|                      | Total     | Total No.  |       |         | Pit &  |            |
|----------------------|-----------|------------|-------|---------|--------|------------|
| Region/District      | Hectarage | of Permits | Pit   | Quarry  | Quarry | Underwater |
| NORTHEAST            |           |            |       |         |        |            |
| Chapleau             | 717.47    | 194        | 194   | 0       | 0      | 0          |
| Cochrane             | 2,560.24  | 117        | 105   | 7       | 5      | 0          |
| Hearst               | 2,987.16  | 161        | 144   | ,<br>16 | 1      | 0          |
| Kirkland Lake        | 1,696.64  | 157        | 151   | 4       | 2      | 0          |
| North Bay            | 2,199.76  | 205        | 185   | 15      | 5      | 0          |
| Sault Ste. Marie     | 753.01    | 112        | 109   | 2       | 1      | 0          |
| Sudbury              | 4,019.35  | 182        | 155   | 17      | 10     | 0          |
| Timmins              | 4,019.35  | 162        | 155   | 7       | 10     | 0          |
|                      | ,         |            |       |         |        | -          |
| Wawa                 | 2,100.81  | 255        | 251   | 2       | 2      | 0          |
| Sub-Total            | 18,732.06 | 1,546      | 1,449 | 70      | 27     | 0          |
| NORTHWEST            |           |            |       |         |        |            |
| Dryden               | 1,891.83  | 226        | 215   | 7       | 4      | 0          |
| Fort Frances         | 2,084.55  | 275        | 264   | 5       | 6      | 0          |
| Kenora               | 2,619.92  | 191        | 163   | 22      | 6      | 0          |
| Nipigon              | 3,236.33  | 321        | 306   | 14      | 1      | 0          |
| Red Lake             | 1,243.21  | 113        | 112   | 1       | 0      | 0          |
| Sioux Lookout        | 1,222.95  | 79         | 79    | 0       | 0      | 0          |
| Thunder Bay          | 1,833.08  | 197        | 184   | 11      | 2      | 0          |
| Sub-Total            | 14,131.87 | 1,402      | 1,323 | 60      | 19     | 0          |
|                      |           |            | ,     |         |        |            |
| SOUTHCENTRAL         |           |            |       |         |        |            |
| Algonquin Park       | 21.72     | 32         | 32    | 0       | 0      | 0          |
| Aurora (GTA)         | 0.00      | 0          | 0     | 0       | 0      | 0          |
| Aylmer               | 0.10      | 1          | 0     | 0       | 0      | 1          |
| Bancroft             | 871.21    | 79         | 69    | 10      | 0      | 0          |
| Guelph (Cambridge)   | 620.50    | 2          | 0     | 0       | 0      | 2          |
| Kemptville           | 7.00      | 2          | 1     | 0       | 0      | 1          |
| Midhurst             | 1.00      | 1          | 0     | 0       | 0      | 1          |
| Parry Sound          | 640.17    | 105        | 79    | 13      | 3      | 10         |
| Pembroke             | 119.60    | 44         | 43    | 1       | 0      | 0          |
| Peterborough (Tweed) | 5.00      | 1          | 0     | 0       | 1      | 0          |
| Sub-Total            | 2,286.30  | 267        | 224   | 24      | 4      | 15         |
| TOTAL                |           | 2.045      | 2.000 | 454     | F.0    | 45         |
| TOTAL                | 35,150.23 | 3,215      | 2,996 | 154     | 50     | 15         |

#### APPENDIX A

#### **GLOSSARY OF TERMS**

For actual definitions, please refer to the Aggregate Resources Act.

#### Active Licence

A licence that has been issued, being transferred, or under suspension at the end of the calendar year.

#### Aggregate

Includes sand, gravel, limestone, dolostone, crushed stone, rock other than metallic ores, and other prescribed material.

#### Aggregate Permit

A permit for a pit or quarry issued under the Aggregate Resources Act allowing for the excavation of aggregate that is the property of the Crown, on land where the surface rights are the property of the Crown, or from land under water. There are three types of aggregate permits, they are commercial, public authority and personal.

#### ALPS

The Aggregate Licence and Permit System (ALPS) is an automated data base that facilitates the management of mineral aggregate production and related information, for individual licences, aggregate permits and wayside permits across the province.

#### **Building Dimension**

A slab or block of rock, flagstone if foliated and dimension stone if massive, generally rectangular, and cut to specified measurements for ornamental surfacing in buildings or other construction applications.

#### Clay/Shale

Clay is a fine-grained, natural, earthy material composed primarily of hydrous aluminum silicates. It is plastic when moist and hardens when dried. Shale is fine-grained sedimentary laminated rock predominantly composed of clay grade and other fine minerals.

#### Class A Licence

A licence under the Aggregate Resources Act to allow excavation of more than 20,000 tonnes of aggregate annually from a pit or quarry within parts of Ontario that have been designated under the Aggregate Resources Act.

#### Class B Licence

A licence under the Aggregate Resources Act to allow excavation of 20,000 tonnes or less of aggregate annually from a pit or quarry within parts of Ontario that have been designated under the Aggregate Resources Act.

#### Crown Land

Ownership of land which is vested in the Crown or owned by the Province of Ontario.

#### Crushed Stone

Rock or stone mechanically crushed to specified sizes and grading.

#### **Designated Area**

An area of the Province identified by regulation under the Aggregate Resources Act where a person requires a licence for the excavation of aggregate from private land.

#### Disturbed Area

An area within a site that has been, or is being excavated to operate a pit or quarry, and has not been rehabilitated.

#### <u>Gravel</u>

Small stones and pebbles or a mixture of sand and small stones. More specifically, fragments of rock worn by the action of air and water, larger and coarser than sand. MTO specifications define gravel as unconsolidated granular material greater than 4.75mm.

#### Housing Starts

The number of housing units started where construction has advanced to 100 per cent of footings. In case of multiple dwellings, a "start" implies the commencement of individual structures.

#### Inactive Licence

A licence that has been revoked or surrendered prior to the end of the calendar year.

#### Licence

A licence for a pit or quarry issued under the Aggregate Resources Act allowing for the extraction of aggregate in designated areas.

#### Licensed Area

A specific area for which a licence has been issued for the extraction of mineral aggregates under the Aggregate Resources Act.

#### <u>Pit</u>

Land or land under water from which unconsolidated aggregate is being or has been excavated, and has not been rehabilitated.

#### Private Land

Land owned by an individual or corporation, as opposed to land which is owned by the Crown.

#### Progressive Rehabilitation

As per the requirements of the Aggregate Resources Act, sequential rehabilitation completed within reasonable time over disturbed land from which aggregate has been extracted. The rehabilitation is carried out according to the Act, the regulations, the site plan, and the conditions of the licence or permit during the period that aggregate is being extracted.

#### Pits & Quarries Control Act

An Act to manage and regulate mineral aggregate extraction in Ontario. The Act had been automatically repealed and replaced by the Aggregate Resources Act as of January 1, 1990.

#### Quarry

Land or land under water from which consolidated rock is or has been excavated and the site has not been rehabilitated.

#### Rehabilitation

To treat the land from which aggregate has been excavated to a pre-excavation condition or use, or to a condition compatible with adjacent land.

#### Royalty

A payment made to the Crown in recognition of the extraction of aggregates owned by the Crown. Under the Aggregate Resources Act, the royalty is set at a minimum of 25 cents per tonne. The Minister may set a higher rate or may allow exemption.

### Sand

Any hard granular rock material finer than gravel and coarser than dust. MTO specifications define sand as granular material ranging in size from .075mm to 4.75 mm.

#### Wayside Permit

A permit issued to a public authority or a person who has a contract with a public authority for a temporary road project or an urgent project for which no alternative source of aggregate is available under licence or permit. A wayside permit expires 18 months from the date of issue or upon completion of the project, whichever comes first.

#### **APPENDIX B**

#### HISTORICAL DESIGNATION OF PRIVATE LAND UNDER THE PITS AND QUARRIES CONTROL ACT AND THE AGGREGATE RESOURCES ACT (by Geographic Twp)

#### Designations under the Pits and Quarries Control Act (1971-1989)

### **DECEMBER 19, 1971**

| Adjala       | Euphrasia        |
|--------------|------------------|
| Albemarle    | Flamborough East |
| Albion       | Flamborough West |
| Amabel       | Grantham         |
| Ancaster     | Grimsby North    |
| Artemesia    | Holland          |
| Barton       | Keppel           |
| Beverly      | Lindsay          |
| Caledon      | London           |
| Chinguacousy | Louth            |
| Clinton      | Melancthon       |
| Collingwood  | Mono             |
| Derby        | Mulmur           |
| Eastnor      | Nassagaweya      |
| Erin         | Nelson           |
| Esquesing    | Niagara          |
|              |                  |

#### **MARCH 3, 1972**

Brock East Whitby Gloucester Hallowell

#### MAY 9, 1972

Brantford Guelph Kingston

#### AUGUST 15, 1973

Anderdon Bertie Blenheim Brighton Clarke Colchester North Colchester South Cramahe Crowland Darlington Lobo Markham Nepean Osgoode

Pittsburgh Puslinch North Dumfries

Dereham Dunn Eramosa Fitzroy Gosfield South Gosfield North Haldimand Hamilton Harwich Hope Nottawasaga Osprey Pelham Reach Saltfleet Stamford St. Edmunds St. Vincent Sydenham Thorold Toronto Gore Trafalgar Westminster West Nissouri Whitby Whitchurch

Pickering Toronto Vaughan

South Dumfries Waterloo

Humberstone Huntley King Malden Marvers March Mersea Murray Nichol North Cayuga North Gower North Oxford Oneida Orillia Oro Pilkington Raleigh Romney Sidney Sunnidale Thurlow Tilbury East Tyendinaga Uxbridge Vespra Walpole Wellesley West Oxford Willoughby Wilmot Woodhouse Woolwich Yarmouth

### **FEBRUARY 15, 1974**

Delaware North Dorchester

#### MAY 17, 1974

Pelee

#### MAY 1, 1975

Alnwick Amaranth Arran Arthur Asphodel Balfour Bayham Belmont Bexley Biddulph Binbrook Blandford Blanshard Blezard Bowell Broder Burford Caistor Camden Capreol Cartwright Cavan Charlotteville Chatham Creighton Cumberland Denison Dieppe Dill Douro Dover Dowling Drury

Dryden Dummer East York East Garafraxa East Nissouri East Luther East Gwillimbury East Oxford East Zorra Eldon Emily Ennismore Essa Etobicoke Fairbank Falconbridge Fenelon Flos Gainsborough Garson Georgina Glanford Glenelg Goulburn Graham Hanmer Harvey Houghton Howard Hutton Innisfil Levack Lorne

Louise Lumsden MacLennan Maidstone Malahide Mara Mariposa Marlborough Maryborough Matchedash McKim Medonte Middleton Minto Morgan Moulton Neelon Norman North Monaghan North Walsingham North Norwich North Gwillimbury North York Oakland Onondaga Ops Orford Otonabee Peel Percy Proton Rainham Rama

Rawden Rayside Rochester Sandwich, East Sandwich, West Scarborough Scott Scugog Seneca Seymour Sherbrooke Smith Snider South Walsingham

#### APRIL 6, 1976

Great LaCloche Island Little LaCloche Island

#### AUGUST 27, 1976

Avenge Bosanquet Carden

#### **JANUARY 1, 1981**

Adelaide Aldborough All of the County of Perth All of the County of Huron All of the County of Lanark Ameliasburgh Athol Bentinck Brant Brooke Bruce Carrick City of Belleville Culross Dawn Dunwich E. Williams Egremont Elderslie Elzevir and Grimsthorpe

#### JULY 1, 1984

Storrington

South Cayuga South Dorchester South Grimsby South Norwich South Monaghan Sullivan Tay Tecumseh Thorah Tilbury, North Tilbury, West Tiny Torbolton Tosorontio

Korah Parke Prince

Enniskillen Euphemia Exfrid Greenock Hillier Hungerford Huntingdon Huron Kincardine Kinloss Madoc Marmora and Lake McGillivray Moore Mosa Normanby North Marysburgh Plympton Sarnia Saugeen

Townsend Trill Tuscarora Verulam Wainfleet Waters West Luther West Garafraxa West Gwillimbury West Zorra Windham Wisner York Zone

Rankin St. Mary's Tarentorus

Separated Town of Trenton Sombra Sophiasburgh South Marysburgh Southwold Town of Deseronto Tudor United Counties of Prescott and Russell United Counties of Stormont, Dundas & Glengarry United Counties of Leeds and Grenville Villages of Deloro, Frankford, Madoc, Marmora, Stirling and Tweed W. Williams Walford Warwich Wyoming

#### Designations under the Aggregate Resources Act (Jan. 1, 1990)

#### APRIL 1, 1992

Adolphustown Amherst Island Bedford Camden East Dalton Digby Ernestown

Admaston

Bromley

Horton

Alice and Fraser

City of Pembroke

Bagot and Blithfield

**SEPTEMBER 1, 1993** 

Howe Island Laxton Longford Loughborough North Fredericksburgh Portland Richmond

McNab

Ross

Pembroke

Petawawa

Stafford

Gaudette

Gough

Harrow

Harty

Hagar Hallam Somerville South Fredericksburgh Town of Napanee Villages of Bath and Newburgh Wolfe Island

#### Towns of Arnprior and Renfrew Villages of Beachburg, Braeside, Cobden and Petawawa Westmeath

Ley Loughrin Macdonald May McKinnon Meredith and Aberdeen Additional Merritt Mongowin Nairn Pennefather Ratter Secord Servos Shakespeare Shields St. Joseph Street Tarbutt and Tarbutt Additional Tilley Tilton Tupper VanKoughnet

#### **JANUARY 1, 1998**

| Anderson           |
|--------------------|
| Appleby            |
| Archibald          |
| Aweres             |
| Awrey              |
| Baldwin            |
| Burwash            |
| Cartier            |
| Cascaden           |
| Casimir            |
| Chesley Additional |
| Cleland            |
| Cosby              |
| Curtin             |
| Delamere           |
| Dennis             |
| Deroche            |
| Duncan             |
| Dunnet             |
| Eden               |
| Fenwick            |
| Fisher             |
| Foster             |
| Foy                |
|                    |

#### Haviland Hawley Hendrie Henry Herrick Hess Hilton Hodgins Hoskin Hyman Jarvis Jennings Jocelyn Johnson Kars Kehoe Laird Laura

#### **DECEMBER 4, 1999**

Village of Hilton Beach

Please refer to the Revised Regulations of Ontario for accuracy.

