



• MINERAL • AGGREGATES • IN ONTARIO

Statistical Update

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Prepared by:



**THE ONTARIO AGGREGATE
RESOURCES CORPORATION**

MINERAL AGGREGATES IN ONTARIO

PRODUCTION STATISTICS & REVIEW

1998

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 1998, this basic non-renewable resource was supplied from 2,798 licensed aggregate sites on private land in designated parts of the Province and 3,160 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. An indenture signed in June of 1997 between the Aggregate Producers' Association of Ontario (APAO) and the MNR established the Aggregate Resources Trust and appointed The Ontario Aggregate Resources Corporation (TOARC) to act as trustee.

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 The rehabilitation of land for which a Licence or Permit has been revoked and for which final rehabilitation has not been completed;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 owned by the APAO as the single shareholder, but is directed by a multi-stakeholder board of directors. The seven-member Board is composed of APAO directors and representatives from environmental groups, municipalities and non-APAO member aggregate producers. TOARC is arms-length from APAO in terms of separate 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 developing systems for the efficient collection and disbursement of aggregate resource charges, the rehabilitation of abandoned pits & quarries through the MAAP program, the creation of an inventory of sites where licences have been revoked 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:
 - N Standards and policy development
 - N Technical approvals
 - N Ensuring compliance with standards
- Private industry clients assume responsibility and accountability for:
 - N Compliance reporting
 - N Financial management
 - N 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

The production of mineral aggregates in 1998 totaled approximately 146 million tonnes, up slightly from the previous year. Production from licensed operations remained unchanged from 1997 at 124 million tonnes. Production from wayside pits and from permitted sites on Crown Land both showed a modest increase over 1997.

Economic Outlook

The production of mineral aggregates tends to rise and fall with general economic cycles. For example, growth in the GDP is usually followed by an increase in aggregate production and the reverse is also true. However the movement between aggregate production and the GDP is not always the same order of magnitude nor follows immediately. A report prepared by Clayton Research Associates Limited (Clayton Research) in 1999 for the APAO suggested that “when forecasting future aggregate production, it is more important to focus on expected trends in construction spending” as a more accurate predictor of future activity. Within the general category of ‘construction spending’, if it is possible to isolate future trends in road construction, it is possible to make an even better predictive model of aggregate demand. Road construction accounts for less than 10% of total construction spending yet accounts for approximately 50% of aggregate used each year.

According to Clayton Research, construction spending is some function of population growth, employment levels, the interest rate environment, vacancy rates and the general ‘mood’ of government with respect to such things as housing policy and the need for fiscal restraints.

For the period 2000 – 2003, Clayton Research sees some positive indicators for increased construction spending in Ontario.

- Over 150,000 people are expected to be added each year to the province’s population base.
- On average, the economy is expected to grow by 3 to 3.5 percent per year, and employment by 2 to 2.5 percent. About 125,000 new jobs are expected to be created each year on average during this period.
- Interest rates are expected to remain relatively low over the projection period, which is favourable for continued buoyant housing demand, as well as business investment.
- Vacancy rates have been declining in both the commercial and industrial sectors.
- Some moderate increase in rental construction will help to keep total housing starts buoyant as ownership demand subsides somewhat from its recent strong levels.
- As government fiscal problems are brought more firmly under control, there is likely to be modest increases in spending on infrastructure.

The above factors combined should result in increased construction spending over the period and stimulate aggregate demand. Clayton Research suggests that aggregate demand could exceed 160 million tonnes per annum during the forecast period.

Setting aside the marginal swings in demand for aggregate based on economic activity, it is important to note that aggregate demand, even during the severest of economic downturns is very significant. In the early 1990's when employment growth was in negative territory and non-residential building starts were barely noticeable, the need for aggregate was maintained at a level of 130 million tonnes per annum. This inelastic portion of aggregate demand attests to its importance as a basic commodity for the maintenance and development of our infrastructure.

Table 1

AGGREGATE PRODUCTION IN ONTARIO 1986 - 1998
(rounded to nearest million tonnes)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Licences	128	149	154	154	135	107	101	105	113	109	114	124	124
Wayside Permits *	6	5	5	4	3	2	2	2	2	2	2	1	2
Aggregate Permits	19	18	24	25	11	14	13	12	10	9	9	8	9
Private Land Non-Designated (estimated)	12	13	14	14	12	12	12	12	11	10	11	11	11
ONTARIO TOTAL	165	185	197	197	161	135	128	131	136	130	136	144	146

o * Wayside Permit production is reported as the total tonnage of all permits issued, adjusted where actual tonnages for completed contracts are known

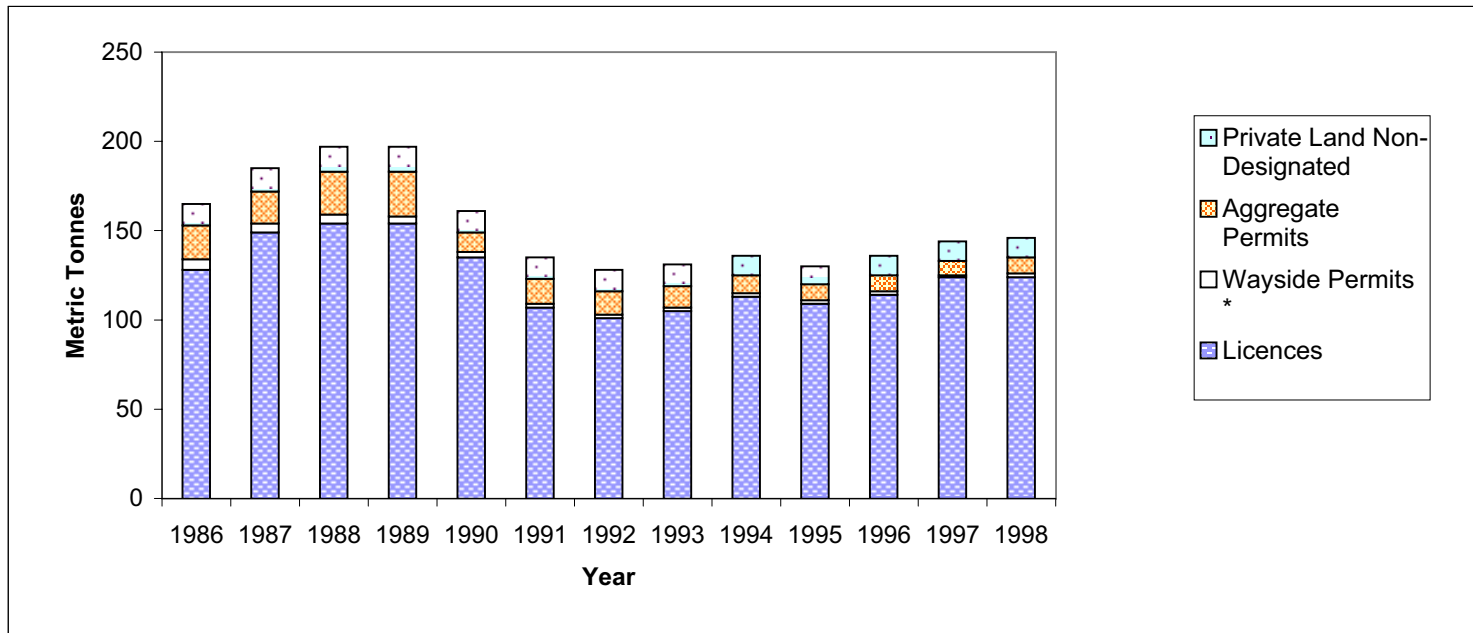


Table 2

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

Municipality	Licences	Wayside Permits	Total
Algoma D			
Sault Ste. Marie	552,949.64		552,949.64
Sub-Total	552,949.64	0.00	552,949.64
Brant			
Brantford	90,742.00		90,742.00
Brantford Tp	906,787.82		906,787.82
Burford	157,064.23		157,064.23
South Dumfries/Paris	390,924.00		390,924.00
Sub-Total	1,545,518.05	0.00	1,545,518.05
Bruce			
Albemarle Tp	42,001.36		42,001.36
Amabel Tp	186,660.65		186,660.65
Arran Tp	27,827.68		27,827.68
Eastnor Tp	37,048.84		37,048.84
Elderslie	85,256.42		85,256.42
Brant Tp/Bruce	100,751.50		100,751.50
Greenock Tp	108,769.72		108,769.72
Kincardine	1,768.00		1,768.00
Huron	80,062.53		80,062.53
Kinloss	123,232.19		123,232.19
Lindsay Tp	76,076.00		76,076.00
Mildmay-Carrick Tp	248,097.20		248,097.20
Saugeen	264,314.40		264,314.40
St. Edmunds Tp	35,871.16		35,871.16
Teeswater-Culross Tp	136,808.60		136,808.60
Sub-Total	1,554,546.25	0.00	1,554,546.25
Chatham-Kent			
Chatham-Kent	387,371.65		387,371.65
Sub-Total	387,371.65	0.00	387,371.65
Dufferin			
Amaranth	91,809.41		91,809.41
East Garafraxa	672,851.59		672,851.59
East Luther Grand Valley	56,859.22		56,859.22
Melancthon	178,717.50		178,717.50
Mono	371,080.25		371,080.25
Mulmur	466,319.28		466,319.28
Sub-Total	1,837,637.25	0.00	1,837,637.25
Durham			
Brock/Whitby	1,325,576.00		1,325,576.00
Clarington	2,986,784.12		2,986,784.12
Pickering/Oshawa/Scugog	350,881.91		350,881.91
Uxbridge	3,185,994.78		3,185,994.78
Sub-Total	7,849,236.81	0.00	7,849,236.81

Table 2

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

Municipality	Licences	Wayside Permits	Total
<i>Elgin</i>			
Central Elgin	286,992.06		286,992.06
Dutton-Dunwich/Bayham/Malahide	63,871.88		63,871.88
West Elgin	72,347.20		72,347.20
Sub-Total	423,211.14	0.00	423,211.14
<i>Essex</i>			
Amherstburg/Leamington	1,141,313.00		1,141,313.00
Gosfield South Tp	541,456.00		541,456.00
Mersea	186,933.27		186,933.27
Windsor/Pelee	96,934.02		96,934.02
Sub-Total	1,966,636.29	0.00	1,966,636.29
<i>Frontenac</i>			
Frontenac Islands Tp	33,176.19		33,176.19
Kingston	907,096.94		907,096.94
South Frontenac Tp	224,464.11		224,464.11
Sub-Total	1,164,737.24	0.00	1,164,737.24
<i>Grey</i>			
Artemesia Tp	160,917.08		160,917.08
Bentinck Tp	217,619.34	14,300.00	231,919.34
Blue Mountains	180,931.81		180,931.81
Derby Tp	57,213.00		57,213.00
Egremont Tp/Euphrasia Tp	153,471.10		153,471.10
Glennelg Tp	116,160.61		116,160.61
Holland Tp	110,871.62		110,871.62
Keppel Tp	252,199.23		252,199.23
Normanby Tp	73,658.89		73,658.89
Osprey Tp	123,087.38		123,087.38
Proton Tp	80,647.30		80,647.30
Sarawak Tp/St. Vincent Tp	79,553.50		79,553.50
Sullivan Tp	236,169.40		236,169.40
Sydenham Tp	215,232.10		215,232.10
Sub-Total	2,057,732.36	14,300.00	2,072,032.36
<i>Haldimand-Norfolk</i>			
Delhi Tp	15,924.03		15,924.03
Dunnville/Simcoe	225,830.46		225,830.46
Haldimand, Town of	1,266,916.00		1,266,916.00
Nanticoke	251,270.22		251,270.22
Sub-Total	1,759,940.71	0.00	1,759,940.71
<i>Halton</i>			
Burlington	2,271,033.60		2,271,033.60
Halton Hills	3,272,669.60		3,272,669.60
Milton	7,890,888.83		7,890,888.83
Sub-Total	13,434,592.03	0.00	13,434,592.03
<i>Hamilton-Wentworth</i>			
Ancaster/Stoney Creek	644,340.40		644,340.40
Flamborough	4,088,573.00		4,088,573.00
Sub-Total	4,732,913.40	0.00	4,732,913.40

Table 2

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

Municipality	Licences	Wayside Permits	Total
Hastings			
Belleville	348,030.38		348,030.38
Centre Hastings	53,123.84		53,123.84
Madoc Tp	685,834.93		685,834.93
Marmora & Lake Tp	32,349.40		32,349.40
Quinte West	498,635.83		498,635.83
Stirling-Rawdon Tp	9,928.00		9,928.00
Tweed	55,243.45		55,243.45
Tyendinaga Tp	260,350.79		260,350.79
Sub-Total	1,943,496.62	0.00	1,943,496.62
Huron			
Ashfield Tp	155,882.89		155,882.89
Colborne Tp	352,365.95		352,365.95
East Wawanosh Tp	137,991.21		137,991.21
Goderich Tp	318,398.73		318,398.73
Grey Tp	552,580.69		552,580.69
Hay Tp	11,230.00		11,230.00
Howick Tp	255,427.09		255,427.09
Hullett Tp	127,817.12		127,817.12
McKillop Tp	257,090.23		257,090.23
Morris Tp	60,775.78		60,775.78
Stanley Tp/Turnberry Tp	32,906.00		32,906.00
Tuckersmith Tp	121,615.04		121,615.04
Usborne Tp	86,275.28		86,275.28
West Wawanosh Tp	139,790.34		139,790.34
Sub-Total	2,610,146.35	0.00	2,610,146.35
Lambton			
Bosanquet	195,029.71		195,029.71
Enniskillen Tp	14,665.00		14,665.00
Plympton Tp	219,813.30		219,813.30
Warwick Tp	193,779.12		193,779.12
Sub-Total	623,287.13	0.00	623,287.13
Lanark			
Bathurst, Burgess, Sherbrooke Tp	54,072.88		54,072.88
Beckwith Tp	111,562.47		111,562.47
Drummond-North Elmsley Tp	98,111.66		98,111.66
Lanark Highlands Tp	945,271.28		945,271.28
Mississippi Mills	16,515.26		16,515.26
Montague Tp	114,565.36		114,565.36
Sub-Total	1,340,098.91	0.00	1,340,098.91
Leeds & Grenville			
Augusta Tp	98,173.53		98,173.53
Edwardsburgh Tp	700,525.26	744,890.00	1,445,415.26
Elizabethtown Tp	610,816.29		610,816.29
Front of Escott Tp/Front of Yonge	4,605.16		4,605.16
Front of Leeds & Lansdowne Tp	62,374.24		62,374.24
Merrickville-Wolford/Kitley Tp	142,226.39		142,226.39
North Grenville Tp	913,791.73	405,689.00	1,319,480.73
Rear of Leeds & Lansdowne Tp	365,053.76		365,053.76
Rear of Yonge & Escott Tp/Rideau Lakes Tp	194,283.56		194,283.56
Sub-Total	3,091,849.92	1,150,579.00	4,242,428.92

Table 2

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

Municipality	Licences	Wayside Permits	Total
Lennox & Addington			
Greater Napanee	317,967.56		317,967.56
Loyalist Tp	1,470,394.82		1,470,394.82
Stone Mills Tp	114,698.00		114,698.00
Sub-Total	1,903,060.38	0.00	1,903,060.38
Middlesex			
Adelaide Tp/Biddulph Tp	79,124.53		79,124.53
Caradoc Tp/East Williams Tp	33,819.42		33,819.42
London	2,884,012.96		2,884,012.96
McGillivray Tp	6,985.04		6,985.04
Middlesex Centre Tp	912,824.35		912,824.35
North Dorchester Tp	1,167,294.99		1,167,294.99
West Nissouri Tp	927,035.69		927,035.69
West Williams Tp	66,239.07		66,239.07
Sub-Total	6,077,336.05	0.00	6,077,336.05
Niagara			
Fort Erie/Niagara-on-the-Lake	690,833.89		690,833.89
Lincoln/Pelham	1,465,866.00		1,465,866.00
Niagara Falls	1,155,841.75		1,155,841.75
Port Colborne/Wainfleet	1,279,471.92		1,279,471.92
Sub-Total	4,592,013.56	0.00	4,592,013.56
Northumberland			
Alnwick Tp	17,360.29		17,360.29
Brighton Tp	589,061.83		589,061.83
Campbellford-Seymour	110,447.24		110,447.24
Cramahe Tp	1,664,577.40		1,664,577.40
Haldimand Tp	154,568.51		154,568.51
Hamilton Tp	250,327.97		250,327.97
Hope Tp	64,140.70	190,497.00	254,637.70
Percy Tp	116,533.96		116,533.96
Sub-Total	2,967,017.90	190,497.00	3,157,514.90
Ottawa-Carleton			
Cumberland Tp	426,992.31		426,992.31
Gloucester	1,917,177.30		1,917,177.30
Goulbourn Tp	440,412.62		440,412.62
Nepean	2,134,391.75		2,134,391.75
Osgoode Tp	333,586.04		333,586.04
Rideau Tp	2,387.00		2,387.00
West Carleton Tp	1,835,115.16		1,835,115.16
Sub-Total	7,090,062.18	0.00	7,090,062.18
Oxford			
Blandford-Blenheim Tp/Woodstock	158,211.52		158,211.52
East Zorra-Tavistock Tp/Ingersoll	70,475.18		70,475.18
Norwich Tp	47,004.00		47,004.00
South-West Oxford Tp	809,280.12		809,280.12
Zorra Tp	3,771,527.68		3,771,527.68
Sub-Total	4,856,498.50	0.00	4,856,498.50

Table 2

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

Municipality	Licences	Wayside Permits	Total
Peel			
Brampton/Mississauga	274,141.76		274,141.76
Caledon	3,898,691.70		3,898,691.70
Sub-Total	4,172,833.46	0.00	4,172,833.46
Perth			
North Perth	21,654.24		21,654.24
Perth East Tp	333,891.45		333,891.45
Perth South Tp	1,189,414.24		1,189,414.24
St. Mary's/West Perth Tp	187,392.84		187,392.84
Sub-Total	1,732,352.77	0.00	1,732,352.77
Peterborough			
Asphodel-Norwood Tp	175,640.25		175,640.25
Cavan-Millbrook-North Monaghan Tp	74,388.13		74,388.13
Douro-Dummer Tp	442,790.38		442,790.38
Galway-Cavendish-Harvey Tp	194,935.76		194,935.76
Havelock-Belmont-Methuen Tp	343,912.38		343,912.38
Otonabee-South Monaghan Tp	226,586.00		226,586.00
Smith-Ennismore Tp	348,521.73		348,521.73
Sub-Total	1,806,774.63	0.00	1,806,774.63
Prescott & Russell			
Alfred & Plantagenet Tp	173,006.86		173,006.86
Champlain Tp	309,631.84		309,631.84
Clarence-Rockland	214,267.52		214,267.52
East Hawkesbury Tp	45,982.88		45,982.88
Russell Tp	263,002.28		263,002.28
The Nation	136,698.87		136,698.87
Sub-Total	1,142,590.25	0.00	1,142,590.25
Prince Edward Co			
Prince Edward Co	2,007,390.55		2,007,390.55
Sub-Total	2,007,390.55	0.00	2,007,390.55
Renfrew			
Alice & Fraser Tp	307,870.54		307,870.54
Bagot-Blythfield-Brougham Tp/Bromley Tp	93,199.60		93,199.60
Horton Tp	346,792.72		346,792.72
McNab-Braeside Tp	213,234.76		213,234.76
Petawawa	198,709.87		198,709.87
Renfrew/Ross Tp	29,719.32		29,719.32
Stafford & Pembroke Tp	57,471.32		57,471.32
Westmeath Tp	71,131.19		71,131.19
Sub-Total	1,318,129.32	0.00	1,318,129.32

Table 2

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

Municipality	Licences	Wayside Permits	Total
Simcoe			
Adjala-Tosorontio Tp	746,817.53		746,817.53
Bradford-West Gwillimbury/Barrie/Collingwood	13,100.43		13,100.43
Clearview Tp	1,173,218.12		1,173,218.12
Essa Tp	182,091.83		182,091.83
Innisfil	111,391.07		111,391.07
Midland	268,133.72		268,133.72
New Tecumseh	93,373.67		93,373.67
Oro-Medonte Tp/Orillia	2,266,539.08		2,266,539.08
Ramara Tp	1,666,826.44		1,666,826.44
Severn Tp	1,047,273.27		1,047,273.27
Springwater Tp	1,052,480.59		1,052,480.59
Tay Tp	141,134.17		141,134.17
Tiny Tp/Wasaga Beach	191,771.37		191,771.37
Sub-Total	8,954,151.29	0.00	8,954,151.29
Stormont, Dundas & Glengarry			
North Dundas Tp	576,236.09		576,236.09
North Glengarry Tp	97,378.76		97,378.76
North Stormont Tp	360,751.69		360,751.69
South Dundas Tp	276,758.05		276,758.05
South Glengarry Tp	273,706.96		273,706.96
South Stormont Tp	851,622.16		851,622.16
Sub-Total	2,436,453.71	0.00	2,436,453.71
Sudbury			
Nickel Centre	988,137.62		988,137.62
Onaping Falls	756,491.99		756,491.99
Rayside-Balfour	15,332.00		15,332.00
Sudbury	298,721.41		298,721.41
Valley East	158,416.46		158,416.46
Walden	56,133.34		56,133.34
Sub-Total	2,273,232.82	0.00	2,273,232.82
Sudbury District			
Sudbury D	233,362.43		233,362.43
Sub-Total	233,362.43	0.00	233,362.43
Victoria			
Bexley Tp/Bobcaygeon/Dalton Tp	6,901.36		6,901.36
Carden Tp	1,236,872.80		1,236,872.80
Eldon Tp	190,125.02		190,125.02
Emily Tp	403,902.97		403,902.97
Fenelon Tp	176,380.04		176,380.04
Laxton, Digby, & Longford Tp	56,983.86		56,983.86
Manvers Tp	3,665,686.76		3,665,686.76
Mariposa Tp/Ops Tp	444,725.39		444,725.39
Somerville Tp	337,966.10		337,966.10
Verulam Tp	52,246.04		52,246.04
Sub-Total	6,571,790.34	0.00	6,571,790.34

Table 2

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

Municipality	Licences	Wayside Permits	Total
Waterloo			
Cambridge/Kitchener	800,494.93		800,494.93
North Dumfries Tp	2,507,810.25		2,507,810.25
Wellesley Tp	1,016,830.92		1,016,830.92
Wilmot Tp	655,078.07		655,078.07
Woolwich Tp	838,114.01		838,114.01
Sub-Total	5,818,328.18	0.00	5,818,328.18
Wellington			
Arthur Tp	95,036.88		95,036.88
Eramosa Tp	129,982.51		129,982.51
Erin Tp	1,152,010.97		1,152,010.97
Guelph Tp	270,628.78		270,628.78
Mapleton Tp	40,891.98		40,891.98
Maryborough Tp	46,610.56		46,610.56
Minto Tp	331,118.46		331,118.46
Pilkington Tp	631,590.35		631,590.35
Puslinch Tp	3,774,538.27	247,053.00	4,021,591.27
West Garafraxa Tp	111,653.37		111,653.37
West Luther Tp	27,541.25		27,541.25
Sub-Total	6,611,603.38	247,053.00	6,858,656.38
York			
East Gwillimbury	383,822.08		383,822.08
Georgina/King Tp	74,999.69		74,999.69
Markham/Richmond Hill/Vaughan	245,302.87		245,302.87
Whitchurch-Stouffville	1,533,973.00		1,533,973.00
Total	2,238,097.64	0.00	2,238,097.64
GRAND TOTAL	123,678,981.09	1,602,429.00	125,281,410.09

Note: Some Wayside Contracts may not have been completed at the time of this report and hence do not show up in Table 2

Table 3

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

Municipality	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algoma, District of	0.8	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.6
Brant Co.	2.6	1.9	1.4	1.1	1.3	1.6	1.7	2.1	1.5
Bruce Co.	2.4	2.5	2.0	2.0	1.8	1.5	1.2	1.3	1.6
Chatham-Kent, R. M. of	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.5	0.4
Dufferin Co.	1.7	1.6	1.1	1.3	1.6	1.4	1.5	1.5	1.8
Durham, R. M. of	8.1	5.8	5.7	6.6	7.1	7.2	7.6	8.7	7.8
Elgin Co.	0.7	0.6	0.5	0.6	0.5	0.4	0.5	0.7	0.4
Essex Co.	2.7	2.5	2.7	2.8	2.7	2.4	2.2	2.7	2.0
Frontenac, Management Board	2.0	1.6	1.6	1.4	1.5	1.2	1.6	1.5	1.2
Grey Co.	3.2	2.7	2.6	2.4	2.7	2.4	2.0	2.1	2.1
Haldimand-Norfolk, R. M. of	2.5	1.7	1.7	1.8	1.9	1.9	1.7	2.1	1.8
Halton, R. M. of	12.0	7.5	7.0	9.2	9.7	10.7	12.3	14.4	13.4
Hamilton-Wentworth, R. M. of	5.1	3.7	3.6	3.4	3.9	4.0	4.0	5.2	4.7
Hastings Co.	1.6	1.4	1.6	1.5	1.2	1.4	1.6	2.0	1.9
Huron Co.	2.9	3.1	2.9	2.1	2.9	2.8	2.8	2.4	2.6
Lambton Co.	0.7	0.5	0.5	0.4	0.6	0.6	0.4	0.5	0.6
Lanark Co.	1.2	1.1	1.2	0.9	1.1	1.3	1.2	1.2	1.3
Leeds & Grenville Co.'s	2.5	2.1	2.0	2.0	2.4	2.3	2.0	2.1	4.2
Lennox & Addington Co.	ND	ND	1.4	1.9	1.7	2.0	1.8	1.7	1.9
Middlesex Co.	6.9	4.5	4.4	5.0	4.9	4.5	4.5	5.3	6.1
Niagara, R. M. of	6.1	4.0	3.3	3.5	4.1	3.6	4.7	4.9	4.6
Northumberland Co.	4.5	3.1	3.3	3.0	3.0	2.6	3.0	3.2	3.2
Ottawa-Carleton, R. M. of	9.4	8.6	8.7	9.2	9.3	8.4	6.1	6.7	7.1
Oxford Co.	5.3	4.0	4.5	4.9	4.6	5.0	4.6	5.3	4.9
Peel, R. M. of	4.4	3.3	2.7	2.9	3.1	3.7	3.8	4.3	4.2
Perth Co.	2.1	1.6	1.3	1.4	1.7	1.6	1.9	1.7	1.7
Peterborough Co.	2.7	2.5	2.4	2.6	2.2	1.8	1.8	1.8	1.8
Prescott & Russell Co.'s	1.7	1.4	1.5	1.7	1.9	1.3	1.2	1.4	1.1
Prince Edward Co.	2.2	1.8	1.7	1.5	1.9	2.2	1.8	2.1	2.0
Renfrew Co.	ND	ND	ND	ND	1.1	1.3	1.5	1.2	1.3
Simcoe Co.	11.0	8.1	8.0	6.9	6.2	6.8	7.4	7.6	9.0
Stormont, Dundas & Glengarry Co.'s	2.6	2.5	2.4	2.6	2.6	2.3	2.1	2.4	2.4
Sudbury, District of	0.7	0.4	0.5	0.5	0.5	0.3	0.3	0.2	0.2
Sudbury, R. M. of	2.9	2.9	2.7	2.2	2.9	2.9	2.7	2.5	2.3
Victoria Co.	6.7	5.6	4.7	5.1	5.4	4.9	6.0	6.5	6.6
Waterloo, R. M. of	5.6	5.1	4.1	4.7	5.8	5.8	5.8	5.6	5.8
Wellington Co.	6.5	5.6	4.9	5.5	5.6	4.9	6.0	6.4	6.9
York, R. M. of	3.3	2.6	1.6	1.4	1.9	2.2	2.0	2.6	2.2
TOTAL	137.7	108.8	103.0	106.8	114.3	112.2	114.3	125.0	125.2

ND: Not Designated under the Aggregate Resources Act

Table 4

**LICENCE PRODUCTION IN 1998
THE TOP TEN PRODUCING MUNICIPALITIES**

Municipality	County/Region	1998 Production	Production				
			1997	1996	1995	1994	1993
1 Town of Milton	Halton Region	7.9	9.6	8.6	5.6	3.6	3.8
2 Town of Flamborough	Hamilton-Wentworth	4.1	4.2	3.2	3.3	3.1	2.7
3 Town of Caledon	Peel Region	3.9	4.0	3.5	3.6	3.0	2.8
4 Puslinch Township	Wellington County	3.8	3.5	3.2	2.0	2.7	2.4
5 Zorra Township	Oxford County	3.8	3.8	3.3	3.6	3.1	3.1
6 Township of Manvers	Victoria County	3.7	3.7	3.6	2.8	3.1	2.9
7 Town of Halton Hills	Halton Region	3.3	3.2	2.4	3.9	5.6	4.5
8 Township of Uxbridge	Durham	3.2	3.1	3.3	3.1	2.9	2.6
9 Clarington	Durham	3.0	3.9	3.1	3.0	2.9	2.8
10 City of London	Middlesex	2.9	2.4	2.0	1.8	1.8	1.9
Total		39.6	41.4	36.2	32.7	31.8	29.5

Note: Municipalities ranked in order of their licenced production for 1998

Table 5

**NUMBER AND TYPE OF AGGREGATE LICENCES
AS OF DECEMBER 31, 1998**

District	No. of Licences	Category		Type of Operation		
		Class A	Class B	Pit	Quarry	Pit & Quarry
Aurora (GTA)	184	155	29	167	17	0
Aylmer	329	231	98	313	10	6
Bancroft	36	12	24	18	13	5
Guelph (Cambridge)	476	378	98	442	31	3
Kemptville	523	259	264	386	116	21
Midhurst	478	341	137	441	34	3
Pembroke	120	51	69	108	6	6
Peterborough (Tweed)	514	269	245	414	86	14
Sault Ste. Marie	38	25	13	33	1	4
Sudbury	100	75	25	87	4	9
TOTAL	2798	1796	1002	2409	318	71

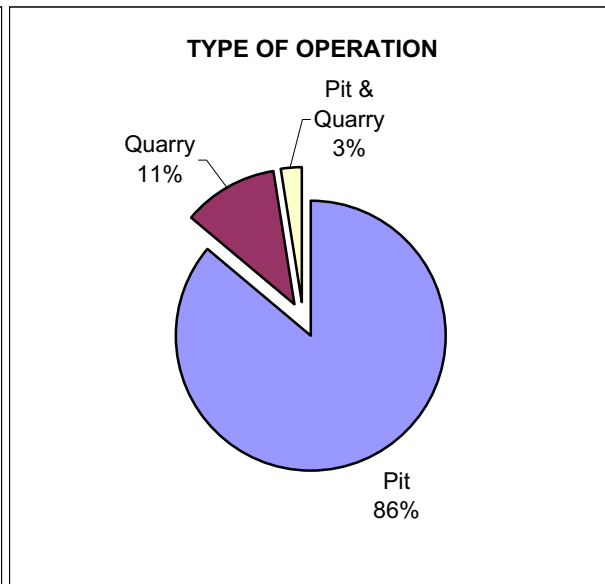
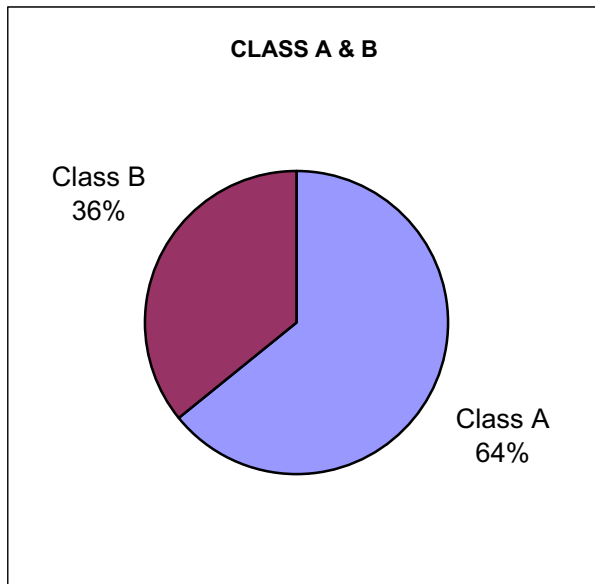
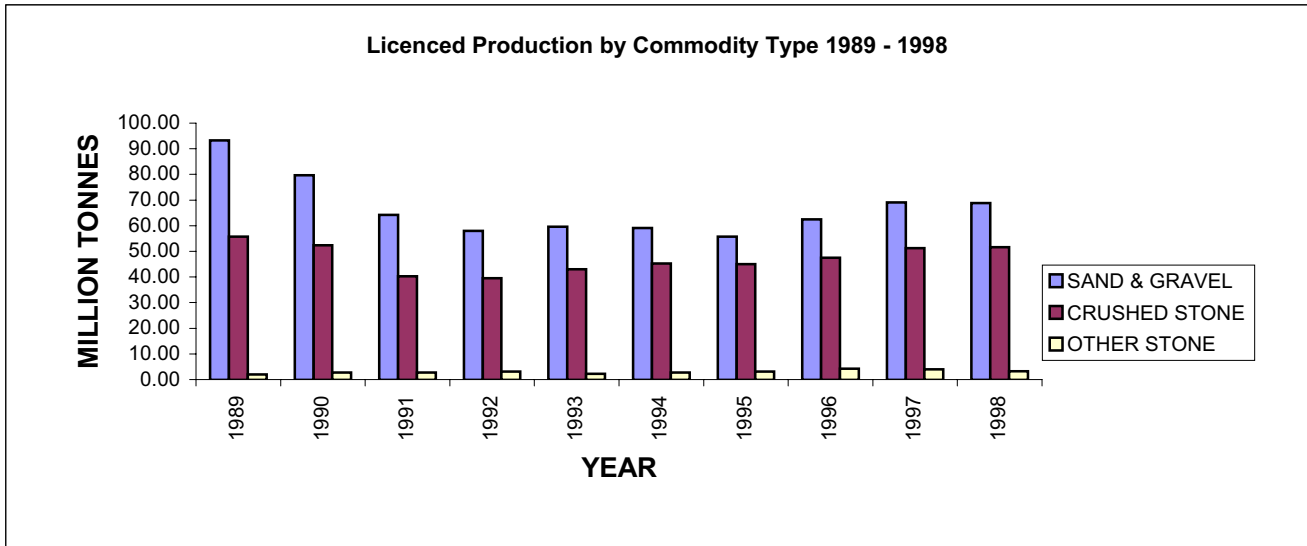


Table 6

**1998 LICENCED AGGREGATE PRODUCTION
BY COMMODITY TYPE
(Reported by MNR District)**

District	Total	Sand & Gravel	Crushed Stone	Clay/ Shale	Other Stone
Aurora (GTA)	27,694,760	13,229,996	13,379,429	1,081,031	4,304
Aylmer	14,665,997	10,483,383	4,173,901	8,713	0
Bancroft	1,785,611	115,629	1,657,778	0	12,203
Guelph (Cambridge)	29,128,019	17,948,048	11,104,552	73,571	1,848
Kemptville	15,101,055	4,039,111	10,373,765	102,490	585,689
Midhurst	14,347,208	10,559,478	3,667,223	24,138	96,369
Pembroke	1,318,129	1,179,326	137,771	0	1,033
Peterborough (Tweed)	16,578,657	8,588,867	6,805,885	45,114	1,138,791
Sault Ste. Marie	552,950	525,315	6,189	0	21,446
Sudbury	2,506,595	2,166,550	336,284	3,761	0
TOTAL	123,678,981	68,835,703	51,642,778	1,338,817	1,861,683

Note: Totals may not equal due to rounding
Other Stone includes building stone, industrial stone, dimensional stone



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

	Sand & Gravel	Crushed Stone	Other
1989	93.23	55.76	1.95
1990	79.62	52.42	2.74
1991	64.24	40.26	2.78
1992	57.99	39.52	3.15
1993	59.62	43.04	2.19
1994	59.07	45.28	2.76
1995	55.7	45.01	3.09
1996	62.52	47.48	4.27
1997	69.05	51.23	4.01
1998	68.84	51.64	3.20

Table 7

**1998 AGGREGATE PERMIT PRODUCTION
BY COMMODITY TYPE
(Reported by MNR District)**

Region/District	Total Production	Sand & Gravel	Crushed Stone	Clay/Shale	Other Stone
NORTHEAST					
Chapleau	115,491.43	115,242.79	-	-	248.64
Cochrane	467,319.44	320,812.68	145,614.00	-	892.76
Hearst	794,878.47	445,312.65	347,747.98	-	1,817.84
Kirkland Lake	265,038.44	265,038.44	-	-	-
North Bay	515,366.39	500,814.47	11,380.00	-	3,171.92
Sault Ste. Marie	679,606.32	304,702.32	-	374,904.00	-
Sudbury	193,278.22	176,660.40	11,486.82	957.44	4,173.56
Timmins	151,161.80	98,971.14	-	52,190.66	-
Wawa	793,471.98	756,971.98	-	36,500.00	-
Sub-Total	3,975,612.49	2,984,526.87	516,228.80	464,552.10	10,304.72
NORTHWEST					
Dryden	762,550.74	524,151.52	238,127.25	-	271.97
Fort Francis	369,948.53	363,886.53	-	-	6,062.00
Kenora	290,088.09	266,745.85	7,398.00	-	15,944.24
Nipigon	1,476,125.58	1,465,210.64	9,768.20	363.20	783.54
Red Lake	280,278.29	279,072.29	-	599.00	607.00
Sioux Lookout	344,182.54	341,271.34	2,000.00	-	911.20
Thunder Bay	329,791.58	325,275.08	-	-	4,516.50
Sub-Total	3,852,965.35	3,565,613.25	257,293.45	962.20	29,096.45
SOUTHCENTRAL					
Algonquin Park	56,099.00	56,099.00	-	-	-
Aurora (GTA)	0.00	-	-	-	-
Aylmer	613.13	613.13	-	-	-
Bancroft	278,627.22	123,556.34	153,454.00	1.00	1,615.88
Guelph (Cambridge)	400.00	400.00	-	-	-
Kemptville	490,897.06	301,716.17	189,180.89	-	-
Midhurst	8,367.00	8,367.00	-	-	-
Parry Sound	210,073.10	90,499.60	116,520.00	-	3,053.50
Pembroke	51,197.86	51,197.86	-	-	-
Peterborough (Tweed)	0.00	-	-	-	-
Sub-Total	1,096,274.37	632,449.10	459,154.89	1.00	4,669.38
TOTAL	8,924,852.21	7,182,589.22	1,232,677.14	465,515.30	44,070.55

Table 8

**1998 AGGREGATE PERMIT PRODUCTION
BY COMMODITY TYPE
(Reported by CPCA* Geographic Areas)**

Area	Total	Sand & Gravel	Crushed Stone	Clay/ Shale	Other Stone
Southwest (1)	613.13	613.13	0.00	0.00	0.00
Peninsula (2)	400.00	400.00	0.00	0.00	0.00
West Central (3)	8,367.00	8,367.00	0.00	0.00	0.00
GTA (4)	0.00	0.00	0.00	0.00	0.00
East Central (5)	349,382.34	94,465.96	253,234.00	1.00	1,681.38
East (6)	543,638.88	354,457.99	189,180.89	0.00	0.00
Northeast (7)	2,746,709.66	2,150,288.04	532,968.80	957.44	62,495.38
Northwest (8)	5,275,741.20	4,573,997.10	257,293.45	412,366.20	32,084.45
TOTAL	8,924,852.21	7,182,589.22	1,232,677.14	413,324.64	96,261.21

Note: Totals may not equal due to rounding

Other Stone includes building stone, industrial stone, dimensional stone

*CPCA - Canadian Portland Cement Association

**1998 AGGREGATE LICENCE PRODUCTION
BY COMMODITY TYPE
(Reported by CPCA* Geographic Areas)**

Area	Total	Sand & Gravel	Crushed Stone	Clay/ Shale	Other Stone
Southwest (1)	18,668,127.27	13,773,866.09	4,846,250.00	46,162.94	1,848.24
Peninsula (2)	12,639,098.33	2,360,220.23	10,264,060.50	14,817.60	0.00
West Central (3)	26,833,998.71	22,856,822.49	3,835,366.38	45,440.85	96,368.99
GTA (4)	27,694,759.94	13,229,996.19	13,379,429.00	1,081,030.80	4,303.95
East Central (5)	15,296,470.04	8,418,358.44	6,852,272.69	6,492.60	19,346.31
East (6)	19,486,981.91	5,504,575.29	12,122,926.19	141,111.24	1,718,369.19
Northeast (7)	2,506,595.25	2,166,549.83	336,284.27	3,761.15	0.00
Northwest (8)	552,949.64	525,314.64	6,189.00	0.00	21,446.00
TOTAL	123,678,981.09	68,835,703.20	51,642,778.03	1,338,817.18	1,861,682.68

Note: Totals may not equal due to rounding

Other Stone includes building stone, industrial stone, dimensional stone

*CPCA - Canadian Portland Cement Association

Table 9

**REHABILITATION OF
LICENCED AGGREGATE SITES IN 1998
(Reported by MNR District)**

District	Total No. of Licences	Total Licenced Area	Original Disturbed Area	New Disturbed Area	New Rehab. Area	Total Disturbed Area
Aurora (GTA)	184	9,610.04	3,602.22	145.44	47.50	3,700.16
Aylmer	329	8,737.49	3,228.57	151.44	152.00	3,228.01
Bancroft	36	1,453.12	216.27	18.60	1.00	233.87
Guelph (Cambridge)	476	16,521.22	4,133.74	217.97	140.38	4,211.33
Kemptville	523	14,390.38	3,679.62	126.11	71.41	3,734.32
Midhurst	478	13,515.16	338.10	171.15	96.86	412.39
Pembroke	120	3,159.52	355.54	31.87	0.50	386.91
Peterborough (Tweed)	514	13,732.59	3,174.12	125.43	75.53	3,224.02
Sault Ste. Marie	38	1,102.38	217.06	3.34	1.20	219.20
Sudbury	100	7,210.01	752.57	29.54	10.80	771.31
TOTAL	2798	89,431.91	19,697.81	1,020.89	597.18	20,121.52

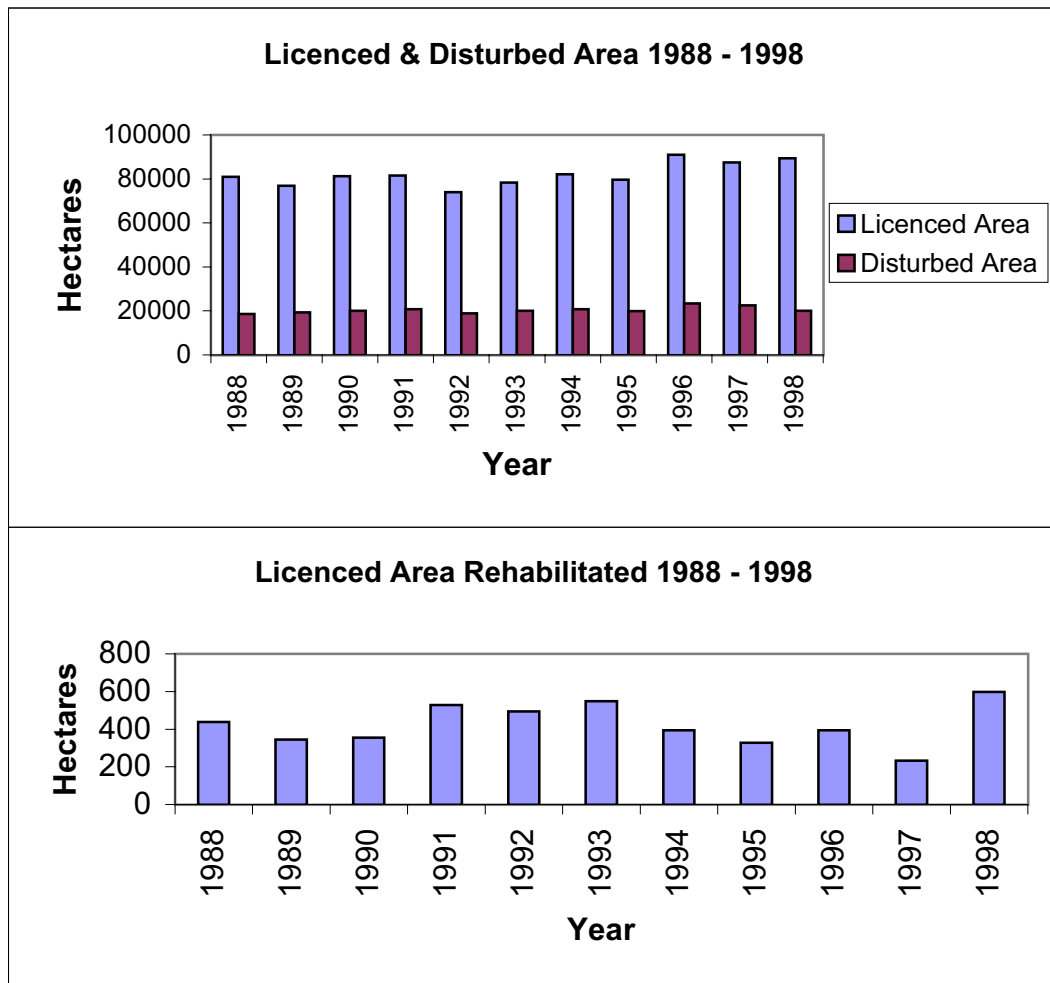


Table 10

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

Region/District	Total Hectarage	Total No. of Permits	Pit	Quarry	Pit & Quarry	Underwater
NORTHEAST						
Chapleau	464.19	191	191	0	0	0
Cochrane	2,215.27	111	99	7	5	0
Hearst	16,069.81	157	140	16	1	0
Kirkland Lake	392.23	98	97	1	0	0
North Bay	11,504.89	218	204	12	2	0
Sault Ste. Marie	551.28	123	121	1	1	0
Sudbury	3,515.45	196	174	16	6	0
Timmins	1,361.82	160	156	4	0	0
Wawa	1,868.41	295	294	1	0	0
Sub-Total	37,943.35	1,549	1,476	58	15	0
NORTHWEST						
Dryden	975.86	164	161	3	0	0
Fort Francis	1,633.97	257	253	2	2	0
Kenora	1,581.70	204	188	15	1	0
Nipigon	3,501.86	375	359	12	4	0
Red Lake	525.14	85	85	0	0	0
Sioux Lookout	740.19	70	70	0	0	0
Thunder Bay	1,119.02	163	152	11	0	0
Sub-Total	10,077.74	1,318	1,268	43	7	0
SOUTHCENTRAL						
Algonquin Park	13.62	24	24	0	0	0
Aurora (GTA)	0.00	0	0	0	0	0
Aylmer	0.10	1	0	0	0	1
Bancroft	519.28	92	86	6	0	0
Guelph (Cambridge)	657.10	3	1	0	0	2
Kemptville	274.58	7	4	2	0	1
Midhurst	9.09	2	1	0	0	1
Parry Sound	453.17	120	96	13	1	10
Pembroke	99.51	44	43	1	0	0
Peterborough (Tweed)	0.00	0	0	0	0	0
Sub-Total	2,026.45	293	255	22	1	15
TOTAL	50,047.54	3,160	2,999	123	23	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.

Gravel

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.

Pit

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-excitation 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	Nottawasaga
Albemarle	Flamborough East	Osprey
Albion	Flamborough West	Pelham
Amabel	Grantham	Reach
Ancaster	Grimsby North	Saltfleet
Artemesia	Holland	Stamford
Barton	Keppel	St. Edmunds
Beverly	Lindsay	St. Vincent
Caledon	London	Sydenham
Chinguacousy	Louth	Thorold
Clinton	Melancthon	Toronto Gore
Collingwood	Mono	Trafalgar
Derby	Mulmur	Westminster
Eastnor	Nassagaweya	West Nissouri
Erin	Nelson	Whitby
Esquesing	Niagara	Whitchurch

MARCH 3, 1972

Brock	Lobo	Pickering
East Whitby	Markham	Toronto
Gloucester	Nepean	Vaughan
Hallowell	Osgoode	

MAY 9, 1972

Brantford	Pittsburgh	South Dumfries
Guelph	Puslinch	Waterloo
Kingston	North Dumfries	

AUGUST 15, 1973

Anderdon	Dereham	Humberstone
Bertie	Dunn	Huntley
Blenheim	Eramosa	King
Brighton	Fitzroy	Malden
Clarke	Gosfield South	Manvers
Colchester North	Gosfield North	March
Colchester South	Haldimand	Mersea
Cramahe	Hamilton	Murray
Crowland	Harwich	Nichol
Darlington	Hope	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

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

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

APRIL 6, 1976

Great LaCloche Island
Little LaCloche Island

AUGUST 27, 1976

Avenge
Bosanquet
Carden

Korah
Parke
Prince

Rankin
St. Mary's
Tarentorus

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

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

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

JULY 1, 1984

Storrington

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

APRIL 1, 1992

Adolphustown	Howe Island	Somerville
Amherst Island	Laxton	South Fredericksburgh
Bedford	Longford	Town of Napanee
Camden East	Loughborough	Villages of Bath and
Dalton	North Fredericksburgh	Newburgh
Digby	Portland	Wolfe Island
Ernestown	Richmond	

SEPTEMBER 1, 1993

Admaston		Towns of Arnprior and
Alice and Fraser	McNab	Renfrew
Bagot and Blithfield	Pembroke	Villages of Beachburg,
Bromley	Petawawa	Braeside, Cobden and
City of Pembroke	Ross	Petawawa
Horton	Stafford	Westmeath

JANUARY 1, 1998

Anderson	Gaudette	Ley
Appleby	Gough	Loughrin
Archibald	Hagar	Macdonald
Aweres	Hallam	May
Awrey	Harrow	McKinnon
Baldwin	Harty	Meredith and Aberdeen
Burwash	Haviland	Additional
Cartier	Hawley	Merritt
Cascaden	Hendrie	Mongowin
Casimir	Henry	Nairn
Chesley Additional	Herrick	Pennefather
Cleland	Hess	Ratter
Cosby	Hilton	Secord
Curtin	Hodgins	Servos
Delamere	Hoskin	Shakespeare
Dennis	Hyman	Shields
Deroche	Jarvis	St. Joseph
Duncan	Jennings	Street
Dunnet	Jocelyn	Tarbutt and Tarbutt
Eden	Johnson	Additional
Fenwick	Kars	Tilley
Fisher	Kehoe	Tilton
Foster	Laird	Tupper
Foy	Laura	VanKoughnet

DECEMBER 4, 1999

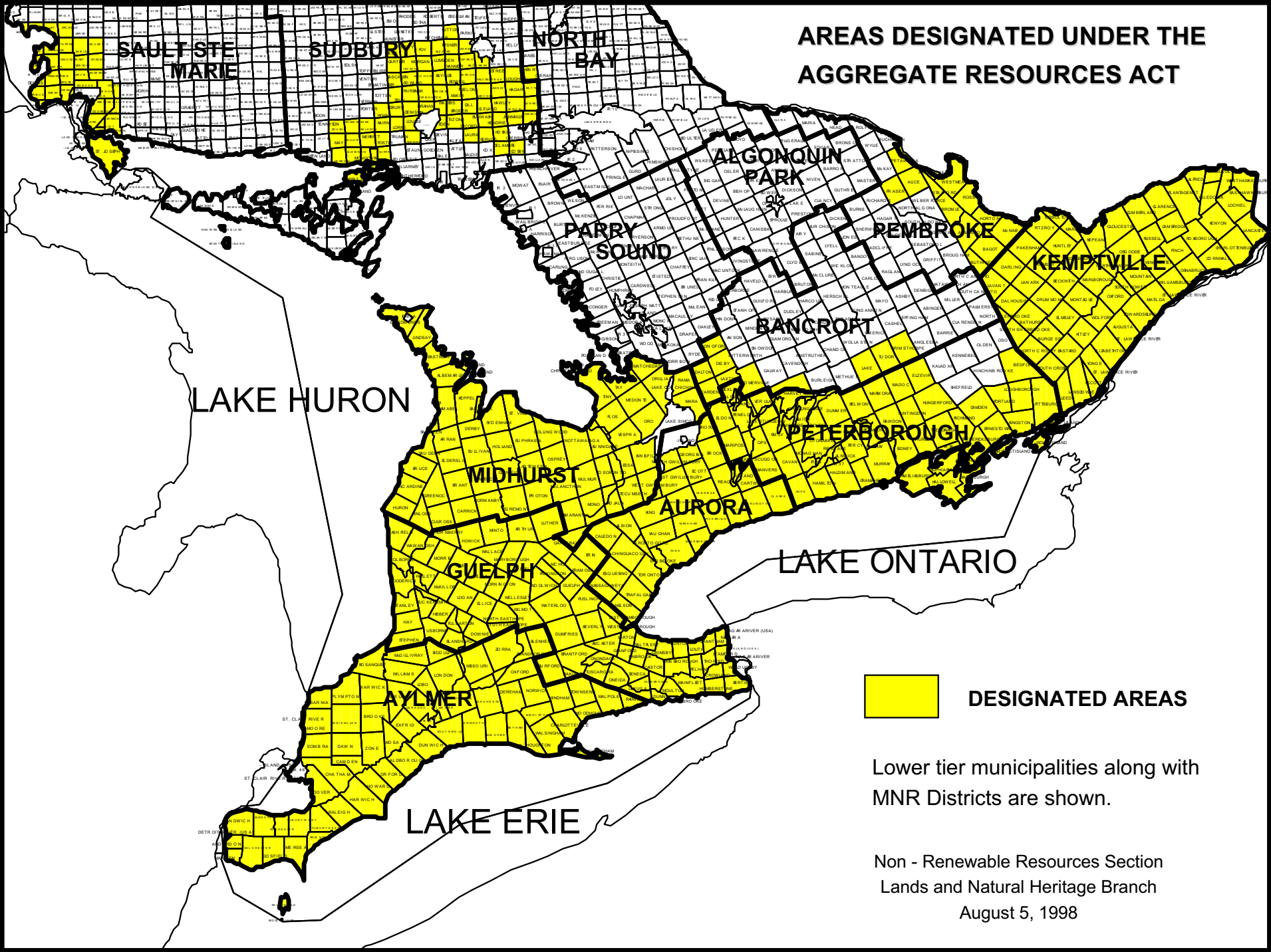
Village of Hilton Beach

CANADIAN PORTLAND CEMENT ASSOCIATION GEOGRAPHIC AREAS



Area 1 Southwest	Area 2 Peninsula	Area 3 West Central	Area 4 GTA	Area 5 East Central	Area 6 East	Area 7 Northeast	Area 8 Northwest
Essex	Niagara	Bruce	Metro Toronto	Kawartha Lakes	Prescott & Russell	Nipissing	Algoma
Chatham-Kent	Brant	Grey	Peel	Peterborough	Leeds & Grenville	Parry Sound	Thunder Bay
Lambton	Haldimand	Simcoe	York	Haliburton	Stormont, Dundas, & Glengarry	TIMISKAMING	Kenora
Elgin	Norfolk	Dufferin	Durham	Northumberland	Frontenac	Cochrane	Rainy River
Middlesex	Hamilton	Wellington	Halton	Hastings	Greater Ottawa	Sudbury District	
Huron		Waterloo		Prince Edward	Lanark	Greater Sudbury	
Perth				Muskoka	Renfrew	Manitoulin	
Oxford					Lennox & Addington		

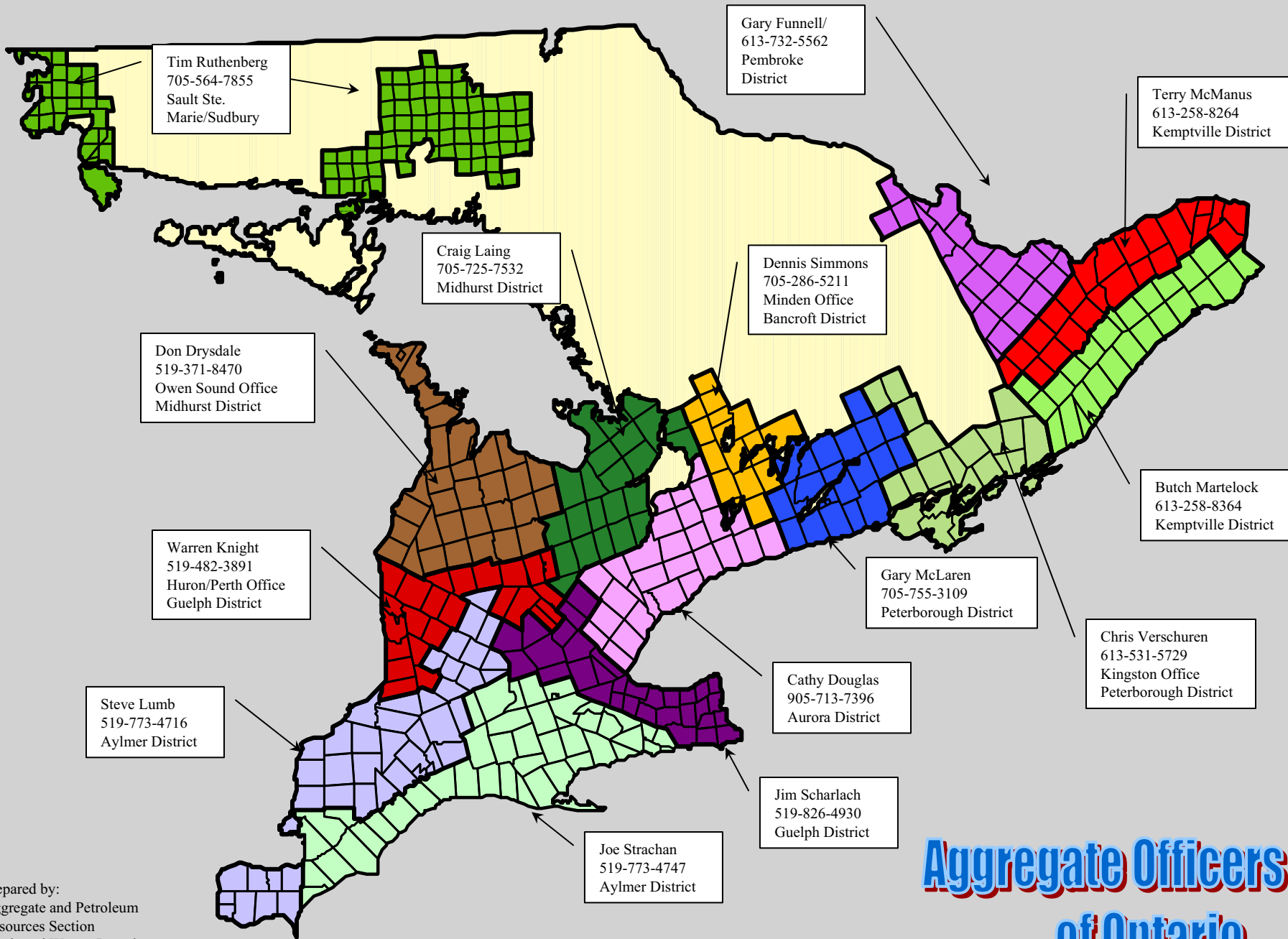
AREAS DESIGNATED UNDER THE AGGREGATE RESOURCES ACT



 **DESIGNATED AREAS**

Lower tier municipalities along with
MNR Districts are shown.

Non - Renewable Resources Section
Lands and Natural Heritage Branch
August 5, 1998



Aggregate Officers of Ontario

Prepared by:
Aggregate and Petroleum
Resources Section
Lands and Waters Branch
July 31, 2001