

Sand & Gravel in Ontario

GravelFacts.ca



 **OSSGA**
ONTARIO STONE, SAND
& GRAVEL ASSOCIATION

Why do we need Aggregate?



- **Because without it, everything stops.** Aggregate is stone, sand and gravel. It's in the buildings where we live and work, the roads and sidewalks we drive and walk on.
- It's used in water purification systems and it's what glass is made from.
- It's also in paint, chewing gum, lipstick, toothpaste, household cleaners and more.
- We all use aggregate every day, but we don't stop to think about where it comes from, and how aggregate affects the economy and the environment in which we live.
- Demand for high-quality aggregate is growing, and new sources will be needed.
- Mitigating climate change requires that we not ship aggregate long distances.
- It is critical we all **understand that everything starts with what's in the ground.**
- This introductory fact sheet introduces some of the factors to consider when thinking about aggregate in Ontario.

Economic Need

- By 2041 there will be 18.2 million people in Ontario. To support this growth, 3.84 billion tonnes of aggregate will be needed to build the roads, schools, hospitals, homes and other public buildings that we all use.
- Ontario's aggregate industry contributes an estimated \$1.6 billion of GDP to the provincial economy.
- The industry is essential to the \$38-billion construction industry - creating 357,000 jobs in Ontario.
- The production of aggregates directly employs 7,600 Ontarians, often in communities like yours.
- Aggregate contributes to local economies through job creation and through the funding of hundreds of community sponsorship programs across Ontario.

Scarce Resource

- Just like gold, sand and gravel are scarce resources that can only be found where nature put them.
- Not all aggregate is the same. Using low quality sand and gravel means that instead of a bridge lasting 100 years, it may need to be rebuilt in 30.
- The availability of high-quality close-to-market aggregate is being depleted. New close-to-market supply is not being licensed at a sustainable rate because of increasing government restrictions.
- It is vital we find a balance to meet Ontario's growing aggregate needs.



Although it is not always recognizable, sand and gravel is an essential part of almost everything we build in Ontario, providing resilience to concrete, asphalt, bricks, mortar and many other construction materials. Sand and gravel is also used as a base under structures to provide additional strength and/or drainage to keep structures stable.

When you total it all up, it requires over 250 tonnes – that's 12 truck loads – of sand and gravel to build one home in Ontario. Imagine the millions of tonnes used to build the public and commercial roads, highways, parks, churches, schools, offices and commercial buildings we all use!

- **13,000 tonnes (650 truck loads) of sand and gravel to build a small school**
- **91,200 tonnes (4,560 truck loads) of sand and gravel to build one kilometre of a subway track**
- **51,800 tonnes (2,590 truck loads) of sand and gravel to build one kilometre of 6-lane expressway**

Don't make gravel travel

New provincial policies may increase the distance that gravel trucks must drive between the pit or quarry and their job site.

While some may argue the benefits of 'Not In My Back Yard', there are very real environmental and economic consequences of making gravel travel.

IF EVERY TRUCK HAD TO DRIVE JUST AN EXTRA 75 km TO AND FROM ITS JOB SITE...

Nearly **1,000,000** tonnes of extra GHG emissions would be generated annually OR the equivalent of emissions from **225,000** cars per year. To deliver that same 745,454 loads per day, extra trucks

would be required because of the increased distance. The cost of hauling aggregate would more than double – significantly affecting the budgets of every municipality in the province. Not to mention the effect on climate change.

**EXTRA 75 KM EACH WAY =
ADDITIONAL 1,000,000 TONNES
OF GHG EMISSIONS
EACH YEAR**



An average truck uses 0.56 litres of diesel per kilometre which creates 0.0015 tonnes of CO² emissions. Ontario averages 164 million tonnes of aggregate per year or 4.6 million loads in a 35 tonne truck.

If every truck had to travel an extra 150 kilometres per load (to the job site and back), that would be 4.6 million loads x 150 km x 0.0015 tonnes = 1,062,720 metric tonnes of CO².

Sources: NRCan / Member trucking statistics / TOARC



Protecting the Environment

- The aggregate industry in Ontario is safe, clean and environmentally responsible.
- The water that is used in the processing of stone, sand and gravel is recycled in a closed loop and is used again and again.
- Aggregate extraction is a very clean and largely mechanical process. No chemicals are used in the processing of aggregate.
- If every truck carrying aggregate were to travel just one less km to its jobsite, we'd save 2.5 million litres of fossil fuel – or 7,000 tonnes of greenhouse gases a year, which contributes to global warming.
- Keeping aggregate supply close to home saves you money. Trucking gravel from long distances is expensive. Every extra kilometre is a cost.
- The aggregate industry is one of the most highly regulated in Ontario, governed by more than 25 pieces of legislation and hundreds of regulations.

FIND OUT MORE

Visit GravelFacts.ca to learn more about aggregate in Ontario and to download OSSGA's complete GravelFacts series:

- Blasting
- Dust
- Rehabilitation
- Water Taking
- Water Management

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Rehabilitation

- The aggregate industry in Ontario does a good job of returning the land to nature, agriculture and recreational uses. In 2016, more than 1030 hectares of land were rehabilitated.
- A recent study showed that more than 293 hectares of aquatic habitat, equal to 1,849 NHL hockey rinks, have been transformed from rehabilitated aggregate sites, helping to preserve biodiversity in communities like yours.
- Christie Pits, the Royal Botanical Gardens, Toronto Brick Works, golf courses, and other beautiful green spaces like these in your community were once sand or gravel pits, where aggregates came from.

