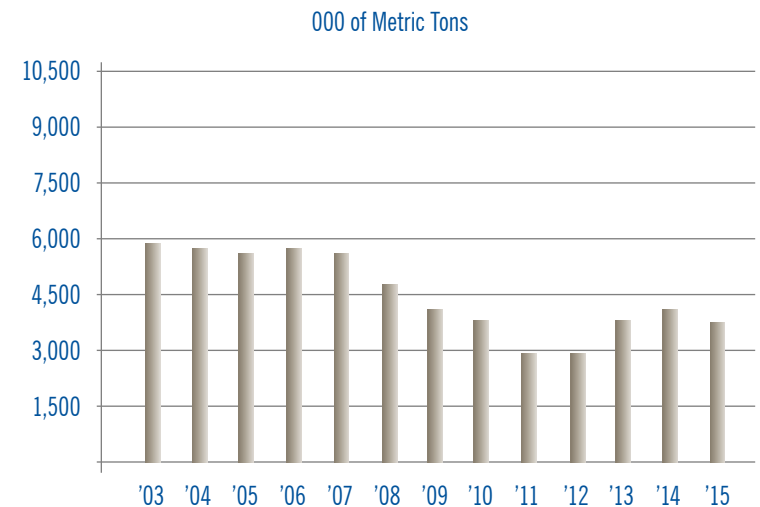




## Building the Foundation of Michigan's Economy

### MI Cement Production



Source: PCA

### Economic Data

- Clinker capacity: 3.5 million metric tons
- Cement production: 3.9 million metric tons
- Cement consumption: 2.0 million metric tons
- Cement employees: 395 in 2015 from 664 in 1997
- Cement & concrete-related employees: 9,449 with a payroll of \$585 million
- Cement contribution to state revenue: \$9.3 million
- Cement & concrete-related contribution to state revenue: \$788.4 million

think  
harder.  
concrete.

- Offices - 4
- Plants - 3
- Terminals - 6



America's Cement Manufacturers™

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Washington, DC 20036-4104  
202.408.9494 Fax 202.408.0877

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Skokie, Illinois 60077-1083  
847.966.6200 Fax 847.966.9781  
www.cement.org

## MICHIGAN CEMENT INDUSTRY

### PORTLAND CEMENT MANUFACTURING AND USE

Portland Cement Association (PCA) represents 93% of US cement manufacturing capacity with over 90 plants in 32 states and distribution facilities in every state in the continental U.S.

**Cement or concrete?** Concrete is basically a mixture of aggregates and paste. The aggregates are sand and gravel or crushed stone; the paste is water and cement. Portland cement is not a brand name, but the generic term for the type of cement used in virtually all concrete, just as stainless is a type of steel and sterling a type of silver.

Cement is manufactured by heating lime, silica, alumina, iron, and other materials at high temperature. The resulting substance is a marble-like ball called clinker that is ground, mixed with limestone and gypsum, and used to create concrete.

**The U.S. cement industry has long been committed to minimizing emissions, waste, energy consumption, and the use of virgin raw materials. For example, the cement industry began to address climate change in the mid-1990s—one of the first industries to do so.**

**Portland cement is an essential construction material and is uniquely positioned for the rebuilding of American infrastructure.**

- U.S. cement companies have annual shipments valued at approximately \$9 billion.
- Cement manufacturers in the U.S. employ over 14,300 workers with an annual payroll of nearly \$1 billion. When including related industries such as concrete, the number of employees grows to nearly 535,000 with a payroll of approximately \$25 billion.

**Concrete is a responsible choice for sustainable, durable development. It offers an economic way to build resilient communities and infrastructure.**

- Building owners, builders, architects, and designers have come to recognize that durable concrete public buildings, private homes, and businesses resist damage from natural disasters and reduce the impact entire communities have on our planet.
- A National Institute of Building Sciences Multi-Hazard Mitigation Council study reported that every dollar spent on reducing the potential impact of disasters saves society an average of \$4. With durable construction, the damage from major storms can be less severe, reducing the amount of energy and resources that the local community will have to spend on emergency response, reconstruction, repair, and recovery.
- The heating, cooling, and general operations of buildings and homes in the United States accounts for approximately 70 percent of national energy consumption each year and more than 40 percent of CO<sub>2</sub> emissions generated in the U.S.
- Studies by MIT have shown that homes with concrete walls can use 8 to 15 percent less energy than other homes.
- MIT research has also shown that pavements with greater stiffness produce a better fuel economy for the vehicles that travel on them. To achieve optimal fuel consumption figures, asphalt pavement would need to be about 60 percent thicker than concrete pavement. Concrete pavements not only cost less to build, but would in this case, use less virgin material

#### MICHIGAN • Senators Debbie Stabenow (D) and Gary Peters (D)

Company	Plant Location	House Members
LafargeHolcim	Alpena	Dan Benishek (R-1st)
St. Marys (VCNA)	Charlevoix	Dan Benishek (R-1st)
St. Marys (VCNA)‡	Detroit	John Conyers (D-13th)

‡ Grinding Only Facilities