#### CALCIMA: Distance Matters: Why Distance Matters

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# Why Distance Matters

Construction materials that build California's roads, mass transit, single family homes and high-density smart growth—all depend on large quantities of construction aggregates (sand and gravel) transported to job sites by heavy-duty trucks. California's infrastructure projects have a carbon footprint. Reducing the distances these trucks travel is a key strategy in reducing greenhouse gases and reducing the state's carbon footprint. CALCIMA created DistanceMatters.org in support of reducing carbon emissions by thinking globally and acting locally.

#### Shorter material haul trips means...

CalTrans has prepared several estimates that demonstrate the benefits of using local material supplies. Based on CalTrans' work, if material haul trips can be reduced on average by 15 miles, then:

- Material haul miles would be reduced by 282 million miles per year.
- Diesel fuel consumption would be reduced by 44 million gallons.
- The diesel fuel saved not only reduces air pollutants, but also removes over 400,000 metric tons of greenhouse gases.

fact

In 2005, California imported enough cement, mostly from Asia, to produce enough concrete to construct five Hoover Dams.

source 👻

fact

The 335 metric tons of CO2 equivalent emissions produced from the average CalTrans road construction project that requires delivering construction materials 50 miles (on average) is equivalent to driving a Hummer H-1 more than nine times around the equator.

source 🔻



Cement imported to California from Asia—which accounts for 40 percent of the total cement used in this state—creates an estimated 25 percent more CO2 emissions, or greenhouse gases, than cement produced in California.

source 👻

The 1.3 million metric tons of CO2 from importing foreign cement accounts for about 10 percent of greenhouse emissions from all the international commercial jet travel in and out of California based on 2004 reporting, the most recent year for which data is available.

## What is a TON of Carbon?

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**MPORTANT LINKS** 



# A ton of carbon is released each time you:

- Travel 5,000 miles in an airplane
- Drive 2,500 miles in a mediumsized car
- Cut down and burn a tree that was about one foot in diameter and 40 feet tall

## **Carbon Calculator**



Click here to use UC Berkeley's Carbon Calculator, designed specifically for California households and businesses. It can be used to evaluate both direct and indirect emissions of greenhouse gases from a variety of sources including the transportation choices we make, how we consume energy at home and at work, and which goods and services we choose.

#### ■ Calculate your carbon footprint



If everyone in the United States switched to cold water for most loads, it would mean a savings of 47 million tons of CO2 emissions a year — which could help reduce global warming and its health effects, such as increased rates of asthma, heatstroke, and West Nile virus infection. (*Source*)

See more tips

source 🔻

#### **Benefits of Using Local Aggregate Resources**

#### Transporting from shorter distances is healthier for all of us.

Decreasing the distance aggregate is shipped by an average of 15 miles across the state, saving 44 million gallons of diesel fuel, would also reduce tail pipe emissions by 835.4 tons a year of pollutants regulated by the state Air Resources board that are linked to incidents of cancer, asthma and other serious health problems. (Sources: CalTrans analysis, based on the California Air Resources Board emission factors estimates and assuming an average 55 to 60 miles per hour speed and a reduction of 282 million miles of truck travel.)

#### Transporting from shorter distances protects the environment and reduces traffic.

CalTrans estimates a current average hauling distance of 50 miles. If the trip length can be reduced by even 15 miles, then diesel fuel consumption can be reduced by 44 million gallons annually, and truck emissions by 835 tons per year. Traffic congestion would be reduced. And an estimated \$705 million per year would be saved on material transportation costs.

#### Transporting from shorter distances saves money.

Most aggregates are transported by truck. The cost of trucking aggregates increases 15 cents per ton for every mile hauled. Given that even one mile of a six lane highway requires over 110,000 tons of aggregates, each mile of transport would add one-half million dollars to the base cost of the aggregates for such a project.

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