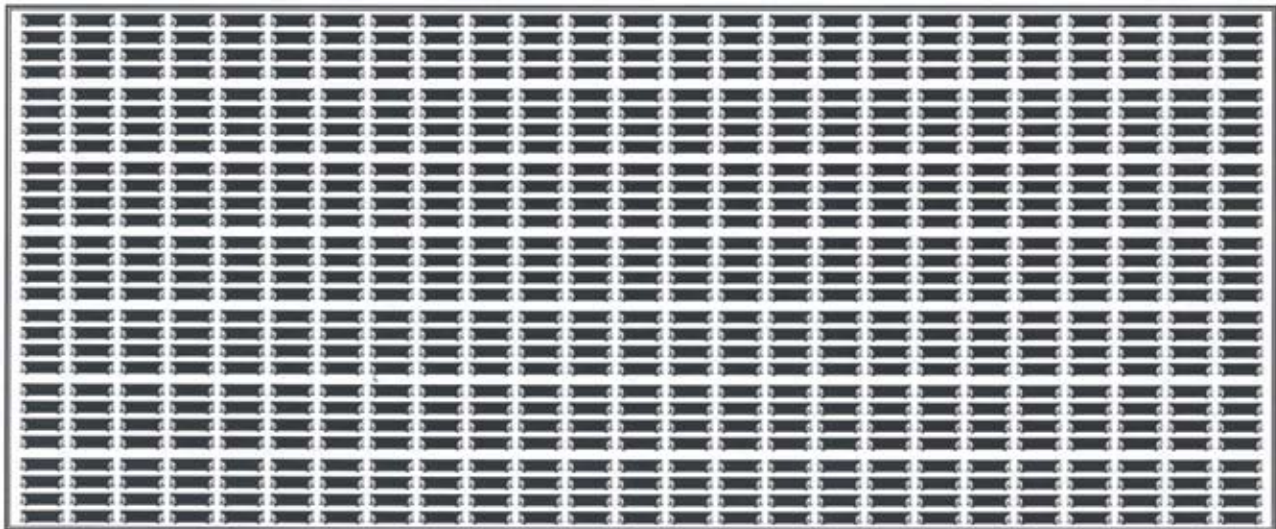




2007 Position Papers

**ENVIRONMENTAL BENEFITS OF
 GREAT LAKES WATERBORNE COMMERCE**

1 Laker = 7 100-Car Unit Trains



 = **100 TONS PER RAILROAD CAR**



1 Laker = 2,800 Trucks



Photo: Rod Burdick



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ENVIRONMENTAL BENEFITS OF GREAT LAKES WATERBORNE COMMERCE

Vessels use less fuel and generate fewer emissions in the movement of cargo than do the land-based modes of transportation. Federal and State policies should promote increased reliance on waterborne commerce as a way of improving and protecting the Environment.

Each and every mode of transportation has environmental impacts, but the effects can be minimized when waterborne commerce is employed. A study funded by the Great Lakes maritime community in the United States and Canada dramatically illustrates how Great Lakes shipping benefits the environment. Titled *Great Lakes and St. Lawrence River Commerce: Safety, Energy and Environmental Implications of Modal Shifts*, it analyzes 11 commodity flows and assesses the environmental impacts should these movements switch to rail and/or truck.

The results clearly indicate the superiority of the marine mode. The 11 trade routes total nearly 25 million tons of cargo in a typical year. Were these cargos to switch from vessel to rail, **trains would burn an additional 14 million gallons of fuel and generate another 4,321 tons of emissions.** In the three commodities where truck transportation is feasible, **moving just one million tons of cargo by truck instead of ship would increase fuel consumption by 3.4 million gallons and emissions by 570 tons.**

Take, for example, iron ore from Lake Superior ports to receiving docks in Lorain, Ohio. At the time of the study, the annual ore float to Lorain was approximately 8 million tons.¹ The ships involved consumed 9.6 million gallons of fuel in the delivery of these cargos. However, were the move switched to rail, **trains would burn more than 14 million gallons of fuel, an increase in fuel consumption of nearly 50 percent.** The emissions from locomotives would be more than double that of vessels.

The study also looks at the safety factors involved. **A vessel-to-rail shift for the 11 cargo flows would statistically result in 36 rail-crossing accidents, 14**

derailments, and one train collision. The commodities that trucks might carry (cement, for one) statistically would produce 141 truck/car accidents on the roads and highways — one quarter of which would have the potential for fatalities or serious injuries. In comparison, accidents involving commercial and recreational vessels are few and far between.

Waterborne commerce on the Great Lakes has an additional environmental advantage: the infrastructure is already in place; it only needs to be dredged to project dimensions, whereas the nation faces astronomical costs to expand its highways and rail lines. It is estimated that one mile of new highway costs \$32 million and, beside the financial burden, a major new thoroughfare would pave over hundreds of thousands of acres of land at a time when urban sprawl is already threatening our remaining green spaces.

Government planners often are hard-pressed to fund all the nation's transportation needs. One criterion for determining which projects receive approval should be the mode of transportation that accomplishes the task in the most environmentally sound manner. Waterborne commerce offers many environmental advantages, and these benefits should be factored into the final decision.

¹ At the time the study was performed, about 6 million of the 8 million tons delivered to Lorain, Ohio, were reloaded into smaller vessels for delivery to the end user in nearby Cleveland, Ohio. The iron ore transfer facility in Lorain has since been moved to Cleveland's lakefront.