

**Title:** City of Chicago, Demonstration and Economic Analysis of Biodiesel in Fleet Vehicle and Marine Applications

**Author(s):** Mary Sigmon

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**Summary:**

This project determined the feasibility of locating a biorefinery in Chicago which would be designed to handle all possible feedstocks (including soybean oil, beef tallow, and yellow grease), demonstrated new potential markets for biodiesel, and addressed the possibility of lowering the cost of biodiesel through the use of less expensive feedstocks such as yellow grease. The high cost of soybean-derived biodiesel remains the overriding obstacle to its increased use, but this barrier can be removed if the less expensive yellow grease feedstock is used and processing technologies improve. As a result of this program, a biodiesel plant capable of utilizing recycled oil is being constructed in Chicago.

In addition, an economic evaluation was performed to quantify the yellow grease biodiesel market and to determine the optimum plant capacity for a biodiesel plant in Chicago. An effective demonstration with the City of Chicago police boat fleet encouraged biodiesel demand and a market survey was conducted which quantified potential demand in all Chicago public and private vehicle fleets to be from 55-350 million gallons per year. This project dovetails with another Chicago biodiesel project, a biodiesel demonstration of two Chicago transit authority buses. The University of Illinois at Chicago was charged with completing the field demand analysis and collecting the fuel and maintenance data for the vehicles and boats being tested. The City of Chicago is positioned to take advantage of the environmental and economic development amenities this fuel offers because of its large fleet infrastructure.

**Market Segment:** Fleets

**Accessibility:** Public

**Files Available:** *this report is not available at this time*