

Important Note: This activity was developed for the original Green Lunchroom Challenge program, a voluntary pledge program for K-12 schools to improve the sustainability of their food service



operations. The project was coordinated by the [Illinois Sustainable Technology Center Technical Assistance Program](#) with funding from US EPA Region 5.

The following page(s) represent the content of this activity as it appeared on the original project web site, complete with available points and instructions for submitting documentation. **The project is no longer funded and as of June 2018 schools may no longer submit activity documentation to earn points and recognition as described.** The activity is presented for your information to guide your organization's sustainability efforts.

If your school or district implements the suggested activity and wishes to share its experiences, please email [Joy Scrogum](#). Your story may be incorporated into a blog post on this web site, the main ISTC site, or shared on social media to foster networking and inspiration among peer institutions.

I ILLINOIS

Illinois Sustainable Technology Center
PRAIRIE RESEARCH INSTITUTE

Divert or create biodiesel from waste cooking oil

Activity Category: Menu Planning and Food Preparation

Activity: Divert or create biodiesel from waste cooking oil

Rationale: After you have practiced source reduction, and diverted any unused edible food to humans or animals for consumption, the next preferable activity on the US EPA Food Recovery Hierarchy is divert food waste for industrial uses. This includes converting used cooking oil to biodiesel fuel. According to the US EPA, "Biodiesel significantly reduces greenhouse gases, sulfur dioxide in air emissions, and asthma-causing soot. Along with creating less pollution, biodiesel is simple to use, biodegradable and nontoxic."








Diverting waste cooking oil from your school or district for biodiesel production can reduce waste hauling costs. Further, if the resulting biodiesel is used in your district's school buses and/or grounds keeping equipment, fuel cost savings may also be realized. **SAFETY WARNING: Please ensure that students must wear goggles and an apron. Also dispose of excess by allowing it to evaporate in a fume hood.**

Activity Description: Use waste cooking oil from your school or district's food service operations to create biodiesel preferably for use in school buses or other school or district owned vehicles. Biodiesel production may take place on-site and be achieved by school or district personnel; it may be, but is not required to be, part of a class or club activity and older (high school) students may be involved in the process. See the "Resources" section below for information on schools that produced their own biodiesel in this fashion. Alternatively, your school or district may work with a relevant program at a local college or university, or a biodiesel production plant to convert used cooking oil from food service operations to biodiesel. Production must take place during after your organization signed up for the Challenge.



























Earn Challenge Points (150 points): Submit a report on the production of biodiesel from your food service cooking oil, including:

-  Where the fuel is made and who is involved

-  If students are involved, and how many
-  The number of gallons of waste cooking oil diverted
-  The number of gallons of fuel produced
-  Whether the biodiesel is used in school or school district vehicles (if not, what is the fate of the biodiesel?)
-  If the fuel is used for school or district vehicles or equipment, what is the estimated fuel cost savings?

Your report should be in Word or PDF format and 2-4 pages in length and should be emailed to Joy Scrogum at jscrogum@illinois.edu.

Resources:

-  [US EPA Food Recovery Hierarchy: Industrial Uses](#)
-  [Biodiesel Basics](#)
-  [Biodiesel: School Buses](#)
-  [National Biodiesel Board Member Plants Map](#)
-  [Innovation at Shepard High School: Building a solar-powered biodiesel system](#)
-  [Fuel for thought: Bus to become traveling exhibit](#)
-  [Illinois Laws and Incentives for Biodiesel](#)
-  [Missouri High School Students Get Hands-On Training With Biodiesel](#)
-  [Feasibility Report: Small Scale Biodiesel Production](#)
-  [Biodiesel-Using Renewable Resources](#)
-  [Collaborative Biodiesel Tutorial](#)
-  [Illinois Green Fleets](#)
-  [Students Power Remote-Controlled Cars With Biodiesel](#)

Follow Us



[Green Lunchroom Challenge](#)

[About](#) | [Activities](#) | [UI Web Privacy Notice](#)





Illinois Sustainable Technology Center

PRAIRIE RESEARCH INSTITUTE

© 2018 University of Illinois Board of Trustees