

# The Walden Environmental Engineering Award



Earn \$3500 towards your college education!

## Student Applicant Criteria

To apply for this award, a student must be in good standing to graduate in June of 2019, anticipate successful completion of at least one engineering course at Oyster Bay High School, and be interested in pursuing engineering as a career.

## Application Process

- May 3 Interested applicants must submit proposals to Mrs. Ostroff
- May 20 Three finalists will be selected to interview and present their Feasibility Study to the Walden award selection committee.
- May 30 Presentation of the 2019 Walden Environmental Engineers

## The Problem

Recently the Town of Oyster Bay and two other Towns on Long Island changed their curbside recycling rules, prohibiting the collection of many formerly recyclable waste streams including glass (see attached TOB notice mailed to residents). Towns claim there is no longer a market for certain recyclable wastes due largely to China's National Sword program restrictions, which have severely limited China's imports of recycling streams from the United States. When Towns stop picking up formerly recyclable waste streams, it will increase disposal of these wastes in landfills, which many believe is not a long-term sustainable solution. Much research has been done on uses of recyclable materials yet cost effective means and methods to complete the cycle remain elusive.



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## The Challenge

Walden's challenge to OBHS Seniors is to research potential methods and markets for waste glass streams that will reduce landfill disposal of glass. Based on your research and engineering evaluation, identify a combination of methods and techniques which might allow such a system to come to market. Note it might take some form of private or governmental support for any new uses to take hold. You are challenged to write a Feasibility Report and include both an engineering and market evaluation.

## Guidelines

- Research and detail 2-3 uses and potential US markets for the waste glass streams that could be implemented.
- Identify information from research sources (including solid waste publications and reports), interviews of governmental employees and elected officials, and environmental agencies (USEPA or NYSDEC).
- Evaluate your options and select the one that appears to be most viable in terms of practicality, ease of implementation, and economic feasibility.
- Prepare a final summary report (2-3 type written pages) with supporting documentation (figures, tables and photos) entitled "Report on Findings". In the report describe the problem, outline your research, and discuss your evaluation of costs and market viability.

## Additional Information

The government has helped to develop and foster new products and markets like electric vehicles and solar panels, by implementing changes in the law, subsidies, tax credits or direct purchases. The US Postal Service, for example, purchased a fleet of electronic vehicles and the government provides tax credits for those who purchase electronic vehicles. Consider how actions like this influence the consumer market or incentivize companies to manufacture specific products. Consider this and how it might apply to glass recycling.

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## NEW Recycling Guidelines

for Town of Oyster Bay Residents

[www.OysterBayTown.com/Recycling](http://www.OysterBayTown.com/Recycling)

BEGINS  
JANUARY 2<sup>ND</sup>

## SEPARATE

**Plastic and Metals**  
*Inside the Bin.*



**Clean Paper and Cardboard**  
*Tied up, brown bagged, or in a box.*



## THROW OUT

### Glass and Pizza Boxes

*These items contaminate recyclables.  
Please dispose with your regular trash.*



## ✓ You CAN Recycle:

Clean Paper & Cardboard

Empty Plastic Bottles & Jugs

Empty Aluminum & Steel Cans

## ✗ You CAN'T Recycle:

Coated Paper Containers

Other Plastics & Styrofoam

All Glass & Food

Plastic Chairs & Toys