MOODY'S MEGA MATH CHALLENGE:
Waste Not, Want Not: Putting Recyclables in Their Place

Extraordinary problem-solving and creativity earned five high school students top honors in the 2013 Moody's Mega Math (M3) Challenge, a math modeling contest organized by the Society for Industrial and Applied Mathematics (SIAM) and sponsored by The Moody's Foundation.

The Internet-based contest spotlights the relevancy and power of mathematics in solving real-world issues and motivates students to consider further education and careers in math. Participating teams have 14 hours to study the issue in question, collect data, and devise models before uploading their solutions online in the form of a report with recommendations. The problem is completely unknown to teams until they download it on the morning of their Challenge day.

Teams of high school juniors and seniors--5,809 across 29 states-- spent a day in early March devising methods to manage recyclable waste. They were given a problem statement that asked them to use mathematical modeling to quantify the plastic waste filling our nation's landfills, choose and justify recycling methods for U.S. cities to implement based on their demographics, and recommend guidelines for nationwide recycling standards.

A team of twelfth-graders from Wayzata High School in Plymouth, Minnesota developed the winning mathematical model for the country's ---and world's---growing plastic pollution and recycling crisis.   The team members will share a $20,000 scholarship prize.

Below you will find the Champion team's paper from the 2013 Moody's Mega Math Challenge with only minor revisions.

Complete information about the M³ Challenge is available at http://m3challenge.siam.org.