FOOD SCRAP RECYCLING PROGRAM
Greenwich Public Schools
SY 2023-2024

The education sector can lead efforts to reduce waste in the Town of Greenwich, adopting sustainable practices and empowering students to be environmental stewards for the future. Each year American public schools generate an estimated 530,000 tons of wasted food, costing $1.7 billion annually. Greenwich Public Schools (GPS) is one of the largest generators of municipal solid waste in the Greenwich community, and wasted food composes a significant proportion of the district's waste stream. Food scrap recycling, in conjunction with prevention strategies, share tables and external donation, is a highly effective strategy to reduce trash tonnage and to mitigate the associated environmental and financial costs of wasted food.

A pilot of food scrap recycling, implemented at New Lebanon School from January to June 2023, achieved a diversion rate of 75% and eliminated 3,570 lbs of organic material from the waste stream. During the 2023-24 school year, GPS Facilities, PTAC Green Schools and Waste Free Greenwich worked collaboratively to expand the program to additional elementary schools - Hamilton Avenue, Julian Curtiss, Old Greenwich, Parkway and Riverside.

At the six participating schools, 23,350 lbs of food scraps and non-recyclable paper were diverted from incineration to anaerobic digestion, and diversion rates jumped from 45% to 74% on average with the addition of food scrap recycling to existing waste reduction efforts. Each day, students separated approximately 40 lbs of organic material in the cafeterias, an annual projection of 43,416 lbs at the participating schools. It is estimated that during the school year each student generates 22 lbs of food scraps that could composted. If the program is implemented district wide, nearly 186,000 lbs, or 93 tons, could be eliminated from the trash to higher use as energy and compost.

Connecticut's waste management system is at a critical point due to the closure of its largest incinerator and limited disposal capacity. The state is no longer self sufficient and will export 40% of waste to out-of-state landfills and incinerators. Tipping fees are anticipated to rise exponentially, impacting municipal budgets. Wasted food, which composes over 22% of municipal solid waste in Connecticut, has harmful impacts on natural resources, climate, public health and the economy. Reduction of wasted food through prevention, donation and diversion is a promising solution, one that can be successfully implemented across Greenwich Public Schools.

74%
of trash diverted with food scrap recycling

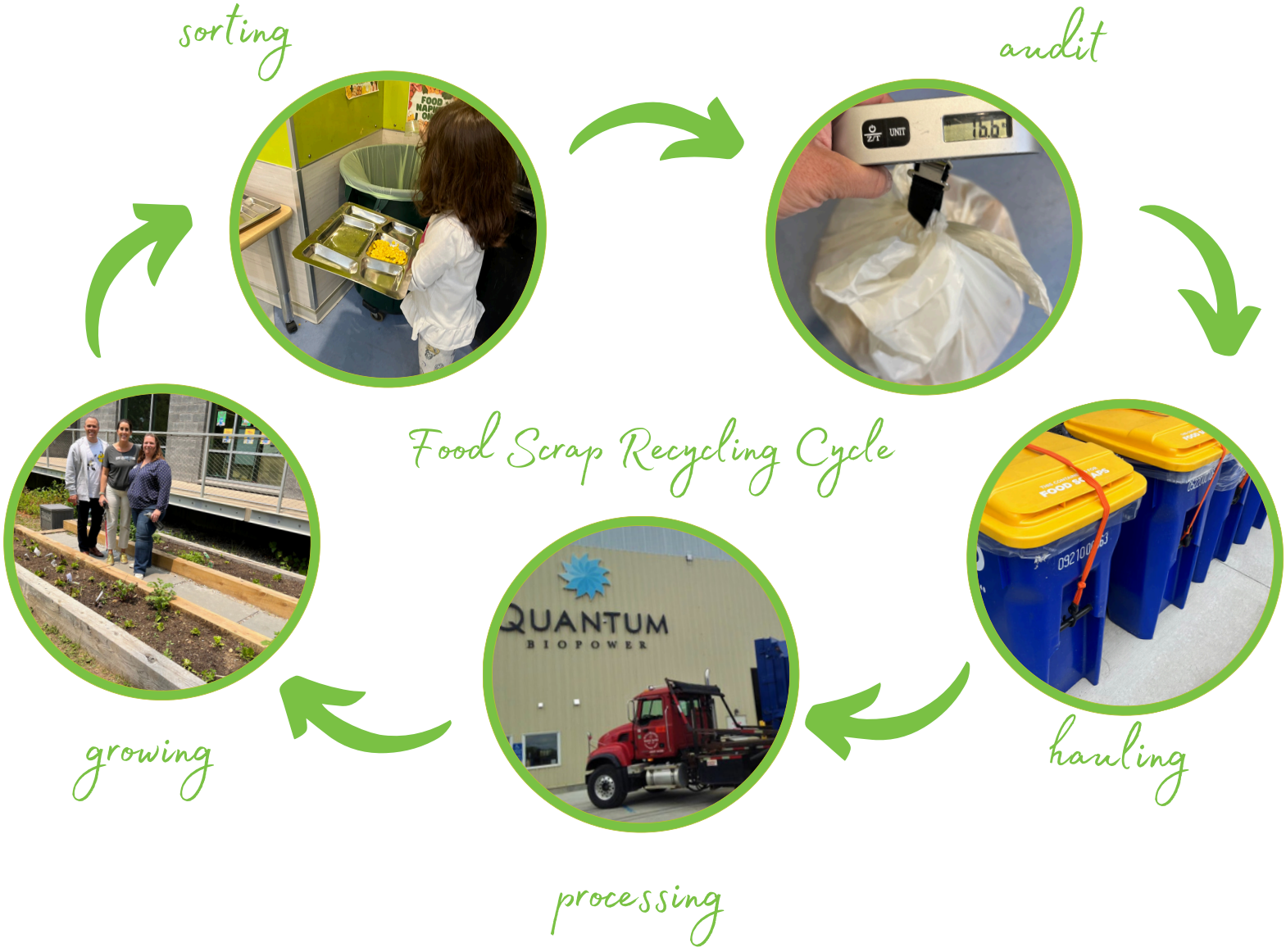
23,350 lbs
of organics diverted at 6 participating elementary schools

93 tons
projected annual diversion district-wide

PROCEDURES

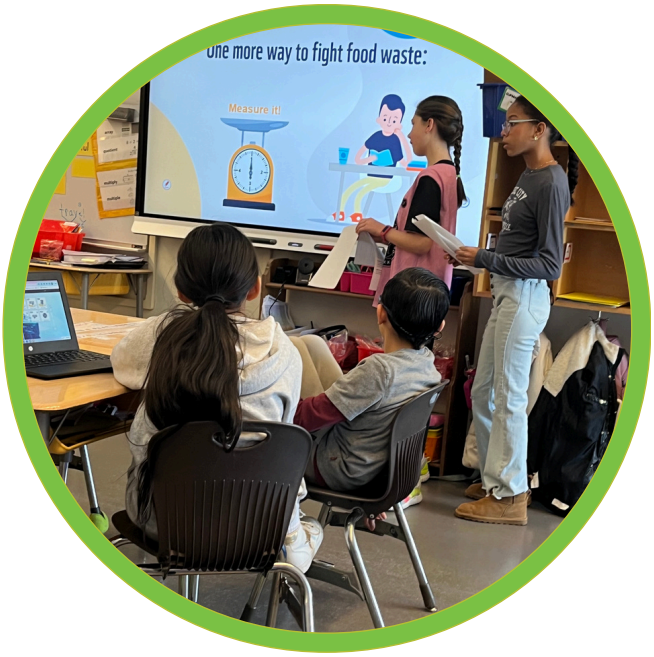
During lunch, students separated accepted organic waste into a designated green bin lined with a BPI-certified compostable bag. All food scraps, in addition to non-recyclable paper products like napkins and paper towels, were accepted in the system. However, the molded fiber cafeteria trays could not be composted, as they are not BPI-certified. Back of house food scraps generated in the kitchen were also not included in the program.

Custodial staff transported the collected scraps to outdoor toters provided by the hauler, Blue Earth Compost. These toters are designed with thick walls and are secured with bungee cords to deter animals and unauthorized usage. The hauler picked up and transported the material once weekly to Quantum Biopower, a licensed anaerobic digester in Southington, which creates both renewable energy from captured methane and nutrient-rich compost from the residual digestate. Schools can request compost for school gardens, bringing the process full circle.



EDUCATIONAL TRAINING

Community and parent volunteers, which were organized by PTAC Green Schools Committee and Waste Free Greenwich, trained the students in proper sorting, using videos, a compost challenge competition, worm encounter and video game, and monitored the sorting process in the cafeteria. Suggested classroom activities included games, media center readings, and student-led presentations. Waste audits were periodically conducted by volunteers to measure the tonnage collected, and Blue Earth tracked and reported tonnages collected. Some schools received finished compost for their school gardens, highlighting the connection between food scrap recycling in the cafeteria and growing produce on campus.



Fifth grade presentation at Hamilton Avenue

Worm encounter at Julian Curtiss

Compost used in the New Lebanon garden

Informational video at Parkway

LAUNCH SCHEDULE

Since it had previously piloted the program, New Lebanon students participated in food scrap recycling for the full school year. Riverside launched organics recycling in late October, as funds were donated by the class of 2023 to contract a hauler and purchase supplies. The program kicked off in earnest starting in February once funding was secured, and will continue and expand in the 2024-25 school year.

School	September	October	November	December	January	February	March	April	May	June
New Lebanon	1-Sep									
Riverside		25-Oct								
Hamilton Avenue						1-Feb				
Julian Curtiss						22-Feb				
Old Greenwich							21-Mar			
Parkway								25-Apr		

RECOMMENDATIONS

- Introduce organics recycling back of house: Considerable organic waste is generated in school kitchens and can be diverted through organics recycling.
- Reduce disposable plastics: The remaining waste is composed primarily of non-recyclable plastics, such as utensils, straws, snack bags, resealable bags and wrap, condiment packets and yogurt containers. These items are often a source of contamination in the organics recycling. By utilizing more sustainable alternatives like condiment pumps, recyclable portion cups and reusable metal utensils, contamination can be curbed and the waste stream further reduced.
- Implement food waste prevention strategies: Organics recycling is a helpful tool to learn which foods go uneaten by students and can guide schools to adopt strategies to reduce waste, including slicing fruit, scheduling recess before lunch, using the USDA's offer vs. serve provision and introducing salad bars.
- Examine current carting contracts: Organics recycling eliminates one of the heaviest components of the waste stream - food scraps, while stacking trays cuts trash volume. Cost savings can potentially be realized by reducing tonnage, volume and service frequency and adjusting the existing contract to reflect these reductions.