

School Recycling Grant Final Report

City of New Bedford

July 29, 2022

In June 2018, the City of New Bedford was awarded a grant by the Massachusetts Department of Environmental Protection (MassDEP) to implement a program to reduce the use of Styrofoam trays in the New Bedford Public Schools (NBPS). The overall result is that the number of Styrofoam trays purchased for the school district was reduced by 99%.

Summary

This project was a collaboration between the City of New Bedford and the NBPS. With the awarded grant funds, the City purchased six dishwashers for three elementary schools - Gomes Elementary School, Carney Academy, and Hayden McFadden Elementary School. NBPS funded an additional four dishwashers to ensure all the dishwashers at the three schools were functional. NBPS staff coordinated with an outside plumber and electrician to install the dishwashers. They also purchased approximately 4,000 reusable trays to ensure the schools had an ample supply. Staff from the Greater New Bedford Regional Refuse Management District (GNBRRMD) gave educational presentations to approximately 2,000 students throughout the several years of the project.

The NBPS found they saved money after the first year using the reusable trays.

The challenges we encountered were the following:

- **Disconnect and installation** – There was difficulty getting the specifications correct for each unit and the installation location. In addition, we found that scheduling the tradespeople in sync to disconnect and re-connect was a challenge.
- **Presentations** – Due to the pandemic, it was difficult to do all the presentations we had planned. Fortunately, we were able to squeeze in presentations at two schools at the end of the 2021-22 school year.
- **Solid waste tonnages** – We were unable to identify a decrease in solid waste tonnage throughout the years of project. This is likely due to the pandemic with irregular student attendance over the past few years as well as changes in procedures that may have caused more solid waste. Please see the section with the solid waste tonnages below for more detail.

Please see detailed information about the budget, project staffing, list of school presentations, number of Styrofoam trays purchased, and solid waste tonnages in the sections below.

Final Budget for Project

Purchase	Through School Recycling Grant	Recycling Dividends Program Funds	In-Kind/RDP	TOTAL
6 dishwashers purchased from Hobart off the MA state contract	\$95,000	\$23,550		\$118,550
Dishwashers disconnect and installation, completed by contracted plumber and electrician			\$25,000*	\$25,000*
4,000 reusable trays			\$8,000	\$8,000
TOTAL	\$95,000	\$23,550	\$33,000	\$151,550

** Please note the installation cost was for 10 dishwashers, as opposed to the 6 purchased under the grant. The Food Services Director was unable to separate out the costs.*

Project Staff

The main staff that implemented the project included:

Rob Shaheen	Food Services Director, NBPS	Started as the Assistant Food Services Director in 2019 and moved to the position of Food Services Director a few months later. Rob coordinated the purchase and installation of the dishwashers and is committed to moving the school district away from Styrofoam trays.
Nancy Carvalho	Food Services Director, NBPS	Retired in 2019. Nancy helped with the grant application and developing the scope of work for the project.
Marissa Perez-Dormitzer	Waste Reduction Manager, GNBRRMD	Marissa worked with Nancy on the grant application and scope of work, and with Rob on coordinating the grant.
Meg Hebert	Waste Reduction Coordinator, GNBRRMD	Meg coordinated the scheduling of presentations with school staff and conducted the presentations.

Administrative staff within NBPS, City of New Bedford, and GNBRRMD also assisted with this project.

List of School Presentations

Congdon Elementary School, 6/7/22, 4th and 5th graders, about 110 students and 6 teachers

Jacobs Elementary School, 5/31/22, 3rd graders, 59 students and 3 teachers

Campbell Elementary School, 2/28/20, 3rd graders, about 40 students and 3 adults

Renaissance Community Innovation School, 2/27/20, 3rd graders, about 30 students and 2 teachers

Winslow Elementary School, 2/25/20, 3rd graders, 50 students, 2 adults

Rodman Elementary School, 2/14/20, 3rd graders, 46 students and 2 teachers

Hayden-McFadden Elementary School, 2/11/20, 3rd graders, about 100 students and about 7 adults

Swift Elementary, 2/7/20, 27 students and 2 adults

Pacheco Elementary School, 2/5/20, about 70 students and 6 adults

Hathaway Elementary School, 1/30/20, 3rd graders & special needs students, about 70 students and 5 adults

Carney Academy, 1/23/20, 3rd graders, about 100 students and 6 adults

Lincoln Elementary School, 1/15/20, 3rd graders, about 100 students and 7 adults

Parker Elementary School, 1/14/20, 4th graders, 35 students and 2 teachers

Gomes School, 1/10/20, 3rd and 4th graders, about 168 students and about 8 adults

DeValles Elementary School, 1/9/20, 4th and 5th graders, 70 students and about 5 adults

Pulaski Elementary School, 1/9/20, 3rd and 4th graders, 195 students and about 10 adults

Jacobs Elementary School, 1/8/20, 3rd graders, 62 students and 3 teachers

Brooks Elementary School, 1/7/20, 3rd and 4th graders, 92 students and 6 teachers

Taylor Elementary School, 1/7/20, 4th graders, 37 students and 2 teachers

Ashley Elementary School, 1/7/20, 4th graders, 53 students and 6 teachers

Hayden-McFadden Elementary School, 5/14/19, 4th graders, about 100 students

Carney Academy, 4/23/19, 3rd, 4th, & 5th graders, by UMass Dartmouth students & District staff, about 300 students

Gomes School, 4/23/19, 3rd graders, by UMass Dartmouth students and District staff, about 90 students

Styrofoam Meal Trays Purchased

1,627,980 Styrofoam lunch trays were purchased in the 2018-19 school year at a cost of \$48,839.40.

1,240,000 Styrofoam lunch trays were purchased in the 2019-20 school year at a cost of \$32,785.60.

263,000 Styrofoam lunch trays were purchased in the 2020-21 school year at a cost of \$ 10,153.32

16,250 Styrofoam lunch trays were purchased in the 2021-22 school year at a cost of \$ \$4,679.35.

The number of Styrofoam lunch trays purchased decreased by 99% over the course of the project. NBPS reduced their cost for the Styrofoam trays by 90% or \$44,160.05 over the course of the project.

Solid Waste Tonnage

Solid waste tonnage was measured in a few different ways throughout the project.

Gomes Elementary School has a trash compactor that is weighed separately at the Crapo Hill Landfill, the disposal site. We have the following solid waste weights for Gomes:

2019-2020: 55.99 tons

2020-2021: 47.74 tons

2021-2022: 73.65 tons

It is difficult to discern trends since the only year when the students fully attended school was in 2021-22. Though, looking at compactor loads from August 2019 through March 2020 (last load was 3/2/20, school closed on 3/16/20), the average load weight was 7.30 tons. This would represent pre-pandemic waste tonnage. In the 2021-22 school year, the average load weight was 7.37 tons. This allows for some comparison of the weights. Though, there are many reasons the solid waste didn't decrease. Various practices have changed since before the pandemic including the use of more cleaning supplies, use of masks, and universal free meals may have added to the waste.

As part of the NBPS' contract for solid waste collection, ABC Disposal conducts quarterly weeklong surveys where they collect the school trash separate from the other municipal waste. This includes schools that have dumpsters; it doesn't include larger schools with their own trash compactors. The truck is weighed, and staff note how many days in a week the dumpster is emptied and its fullness (quarter, half, full). The following are the solid waste weights from the quarterly surveys, summarized by school year.

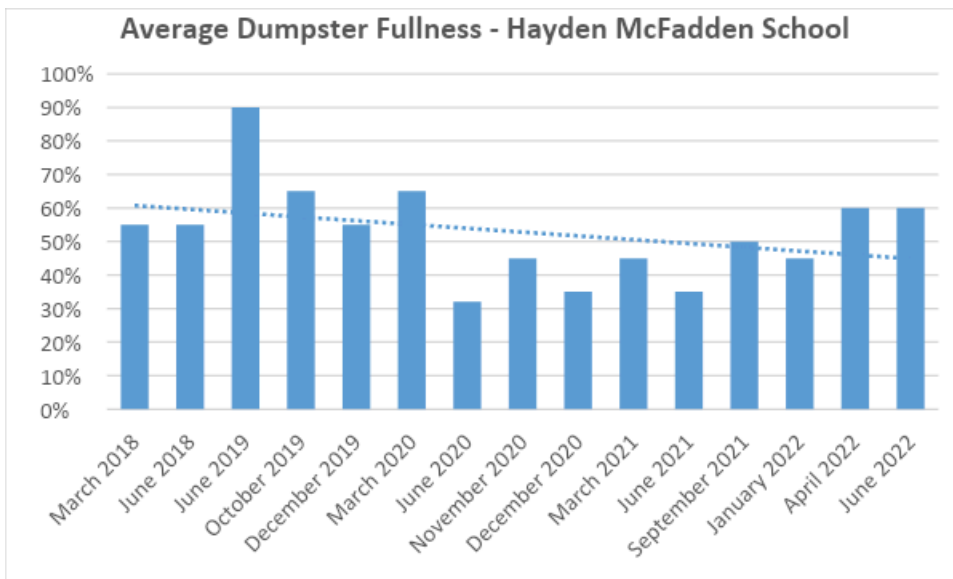
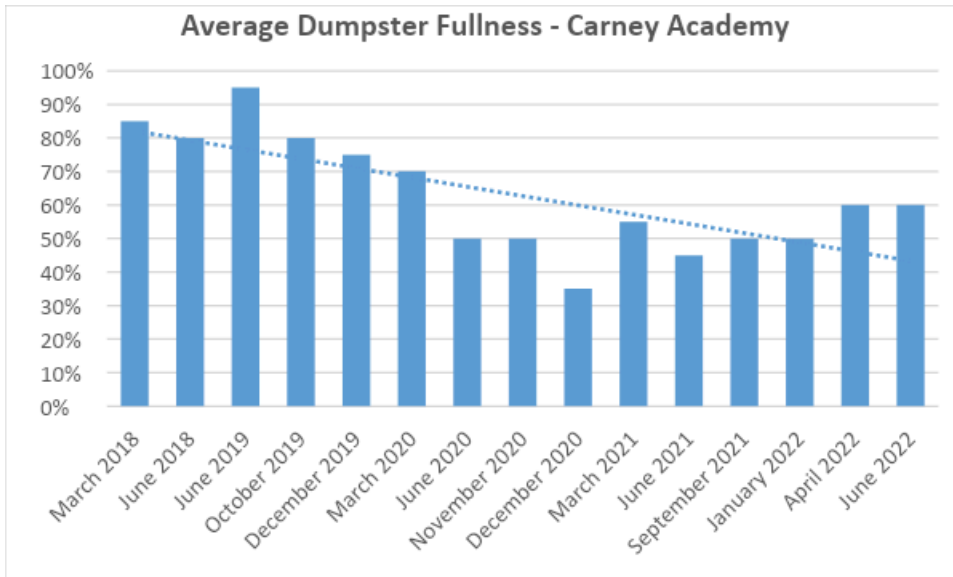
2019-2020: 65.66 tons

2020-2021: 49.21 tons

2021-2022: 85.54 tons

Looking at average weekly weights from October 2019 through the week of March 2-6, 2020, the average weight is 17.89. This would represent pre-pandemic waste. In the 2021-2022 school year, the average weekly weight was 21.39. Again, there can be many reasons for the increase.

The last measure of solid waste is the fullness of the dumpsters at Carney Academy and Hayden McFadden Elementary School. The graphs show the average dumpster fullness from March 2018 through June 2022.



Future Efforts

NBPS and the City continue to coordinate to reduce waste in the schools. NBPS and the City thank MassDEP for the grant award.