

# Senator George J. Mitchell Center for Sustainability Solutions

## 2025 Maine School Cafeteria Wasted Food Study

*“No More Wasted Food Challenge”*



# Study Overview

## Goals:

- Reduce Student Wasted Food
- Increase Student Nutrition (reduce fruit & veggie waste)

## Strategies:

- Use elementary and middle school student- directed interventions and education.
- Engage whole school community in the project: principals, faculty, staff, parents, and more...
- Regular meetings with Nutrition Directors and site visits to schools

## New this year:

- Announced selected schools on Maine Food Waste Awareness Week
- Planning meetings with Nutrition Directors began 10/10/24
- Expanded “baseline” period



# Study Participants

*Four Participating Schools...*



Easton Elementary, Easton, ME

Sherwood Heights Elementary,  
Auburn, ME

Sugg Middle School, Lisbon Falls, ME

Brown Elementary, South Portland, ME

# Study Interventions

## Sorting Stations

### #1 SILVERWARE



### #2 LIQUIDS



### #3 TRASH



### #4 FOOD SCRAPS

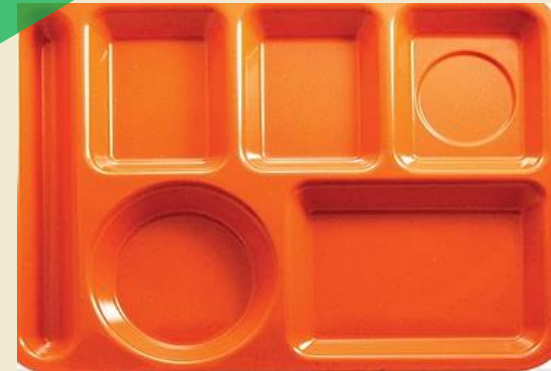
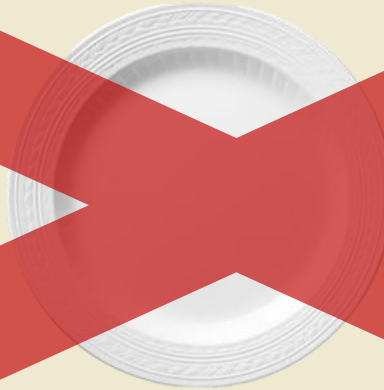


### #5 TRAYS



# Study Interventions

*Reusables*



# Study Interventions

## Share Basket + Community Fridge



# Study Interventions

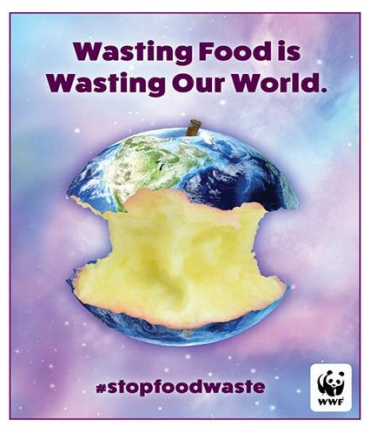
*Educational Assembly, Posters, Follow-up Videos*

## Maine Food Waste Hierarchy

How Can YOU Stop Food Waste?



To learn more, visit: [umaine.edu/foodrescuemaine/](http://umaine.edu/foodrescuemaine/)



School Food Waste Assembly

**How Can You Help Stop Food Waste?**



**FEED YOUR BODY!**



**NOT THE TRASH BIN**



Grab a **Smart Spoon**  
Fill it up - that's your 1/2 cup!



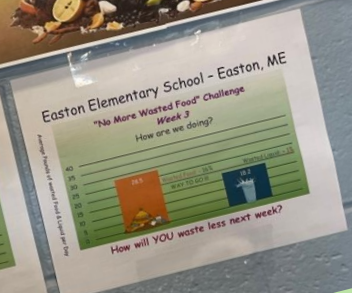
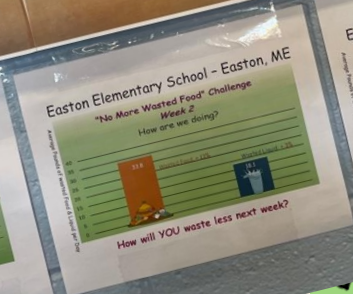
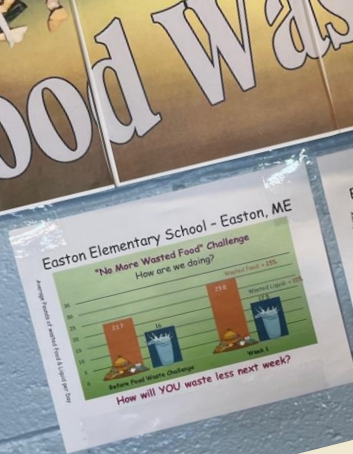
# Study Interventions

*Connect to Compost Service or Farmers*



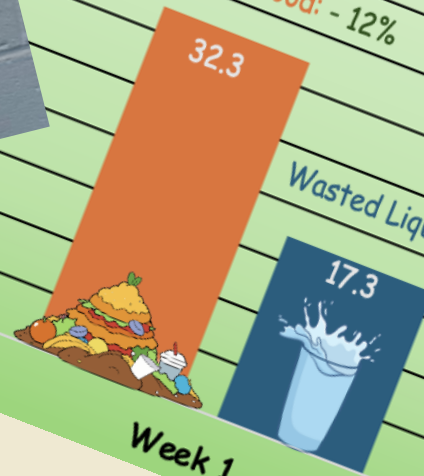
# Study Interventions

## Weekly Progress Reports



## "No More Wasted Food" Challenge How are we Doing?

Wasted Food: - 12%



Wasted Liquid: + 2%

# Study Data Key

- **Note:** results are preliminary; we are still waiting on more data and are continuing to analyze data. As such, these results are incomplete. We will have more to share in the coming weeks!
- **“Wasted Food”\***: student-generated cafeteria food waste (non-Kitchen waste)
- **“Baseline Weeks”**: represents wasted food pre-Study interventions, \*\*
- **“Wasted Food per 100 Meals Served”**: Study metric:
  - ✓ *Average quantity of wasted food produced with each lunch meal served*
  - ✓ *Eliminates effect of school size*
  - ✓ *Allows comparison of all Maine schools*
  - ✓ *Eliminates impact of missed school days or other disruptions to weekly data*

# Quantitative Results: Overview

## Wasted Food Totals:

Across Study (prelim.): 21.8 lbs/100 meals

Baseline: 20.9 lbs/100 meals

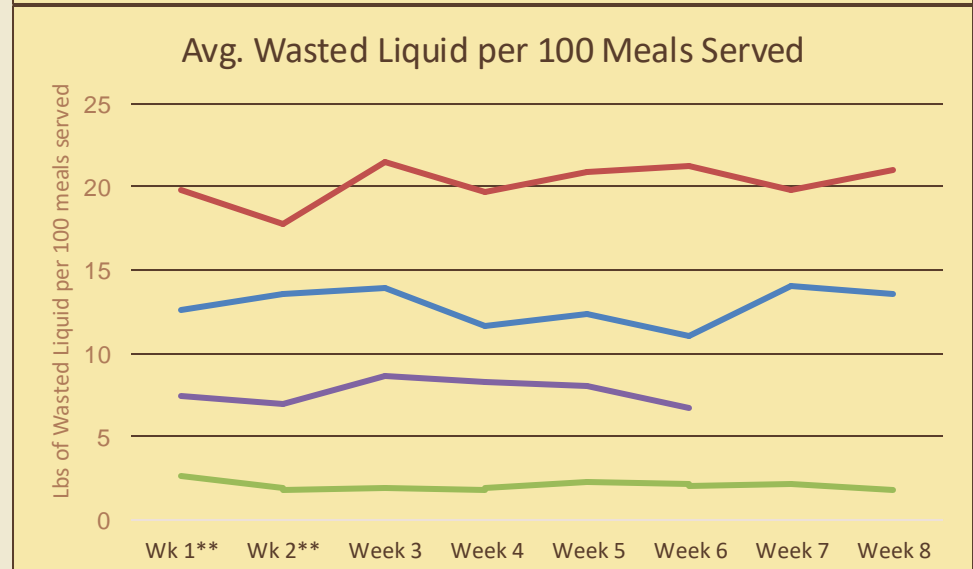
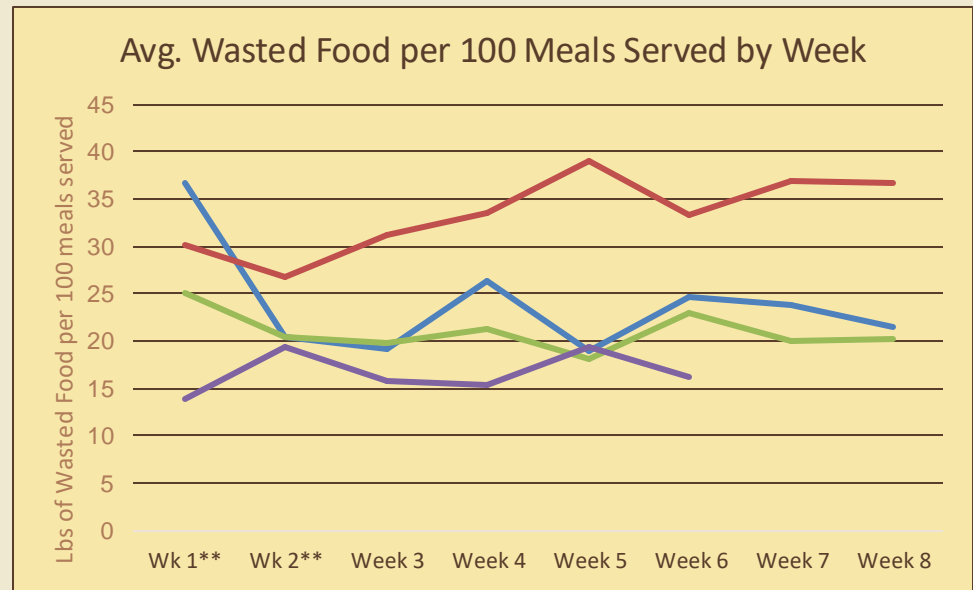
Post-Interventions: **22.2 lbs/100 meals**

## Wasted Liquid Totals:

Across Study (prelim.): 8.9 lbs/100 meals

Baseline: 8.7 lbs/100 meals

Post-Interventions: **9 lbs/100 meals**

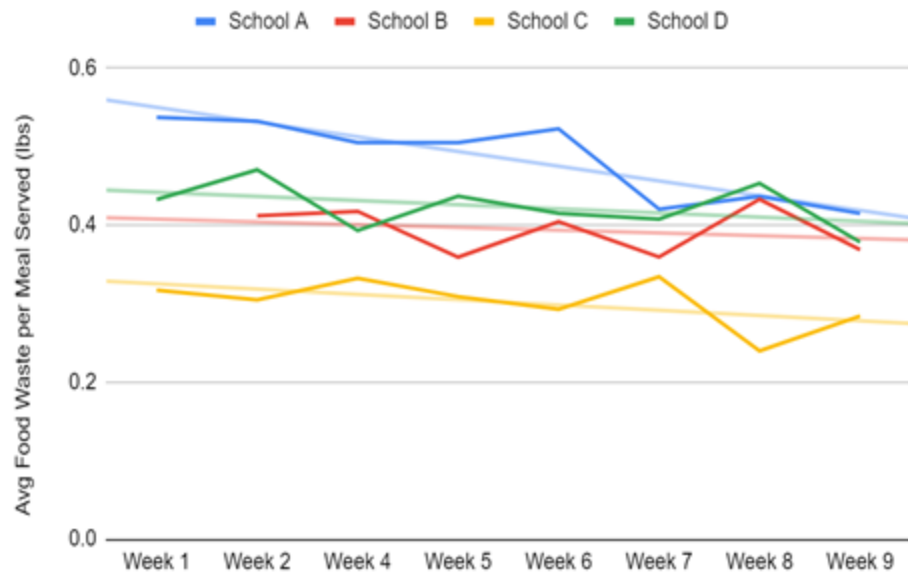


# Quantitative Results: Comparison

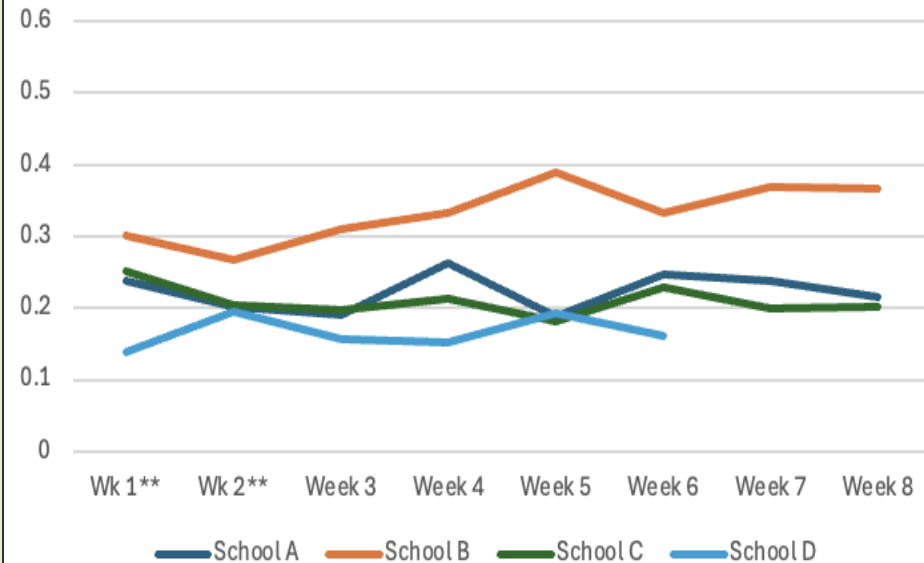
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2025

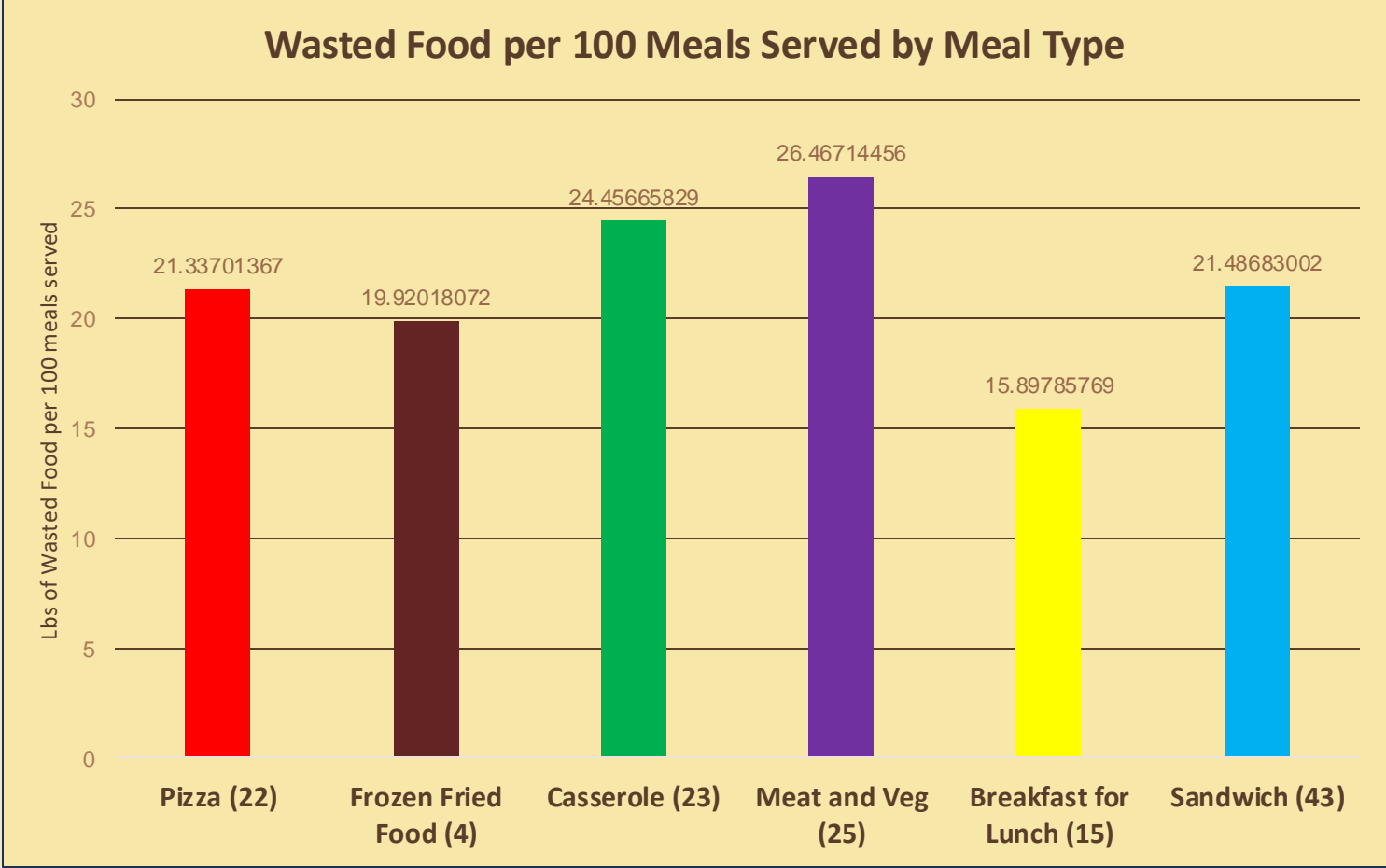
Avg Food Waste Per Meal Served Across Study



Average Food Waste per Meal Served Across Study



# Quantitative Results: By Meal Type



# Quantitative Results: Baseline vs Lowest

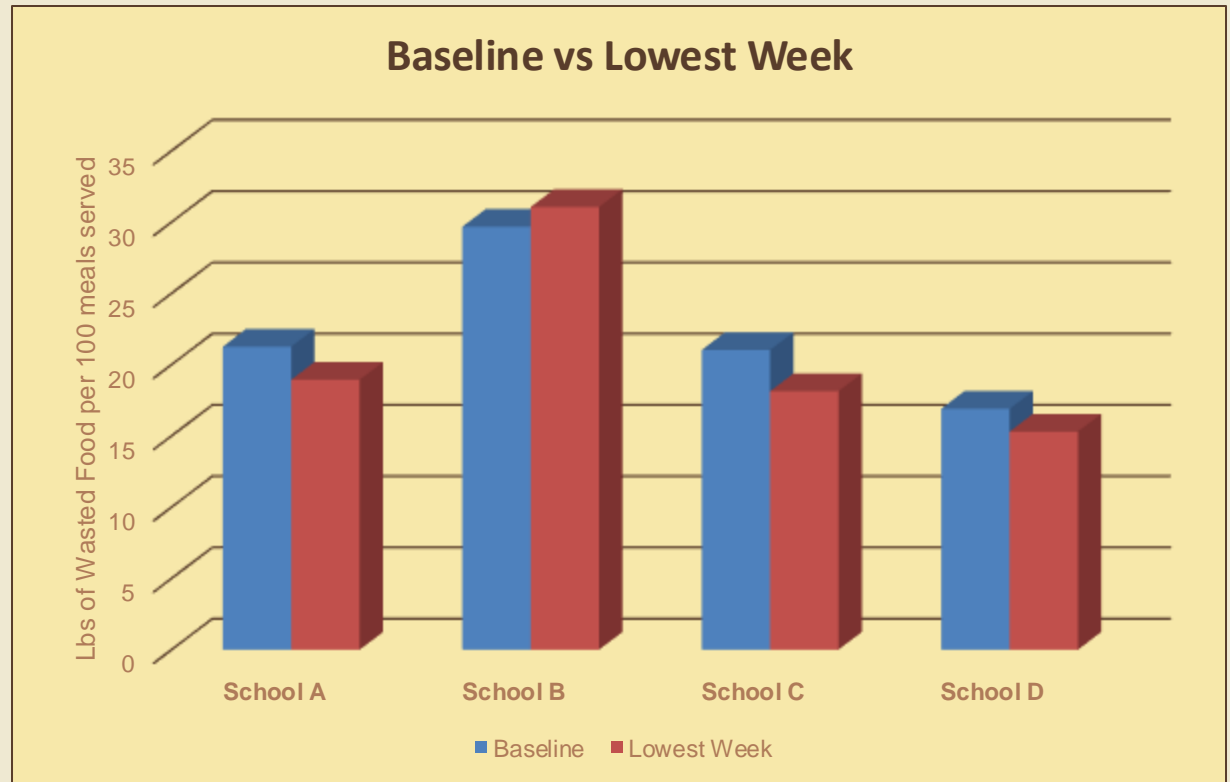
School A: - 11%

School B: + 5%

School C: - 14%

School D: - 9%

**AVERAGE: - 6%**

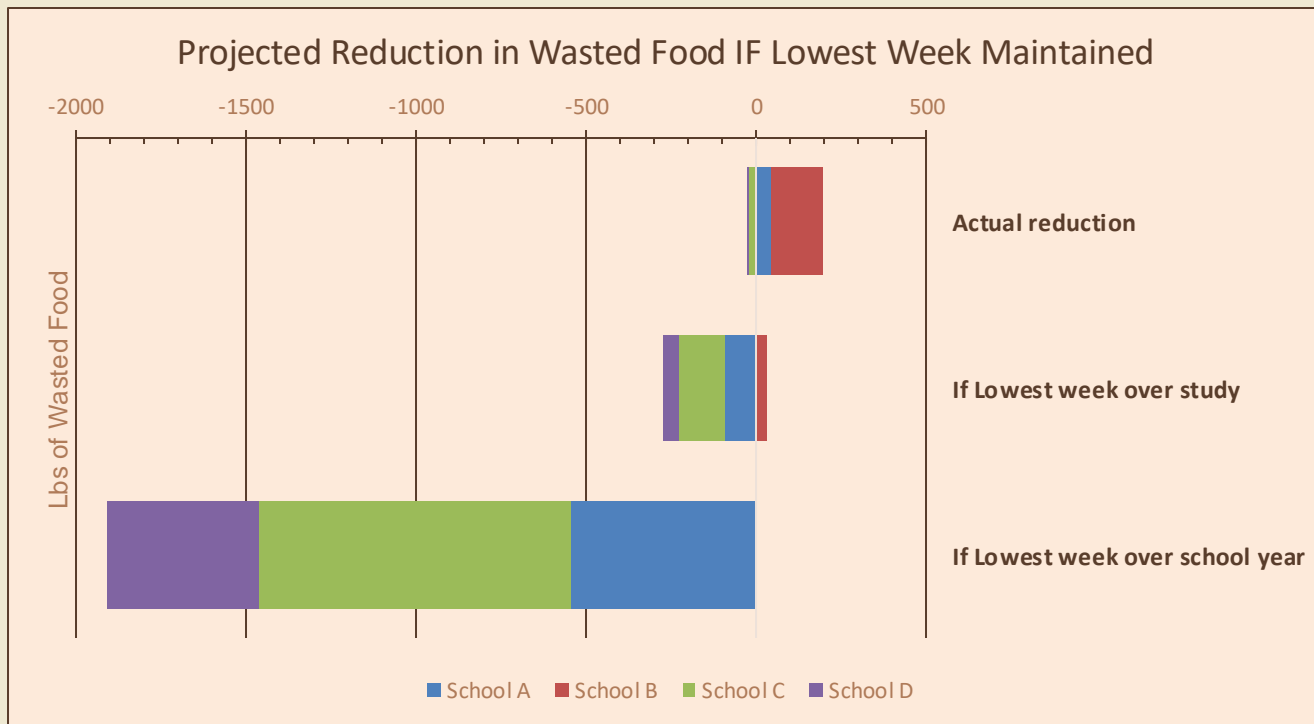


# Wasted Food: Lowest Week Projections

IF our Pilot schools maintained their lowest week of waste reduction over the course of the study...

They would have saved over 240 lbs of food!

... Over the course of a school year, they would have saved nearly a ton!



# Food Waste Audit: School B Case Study

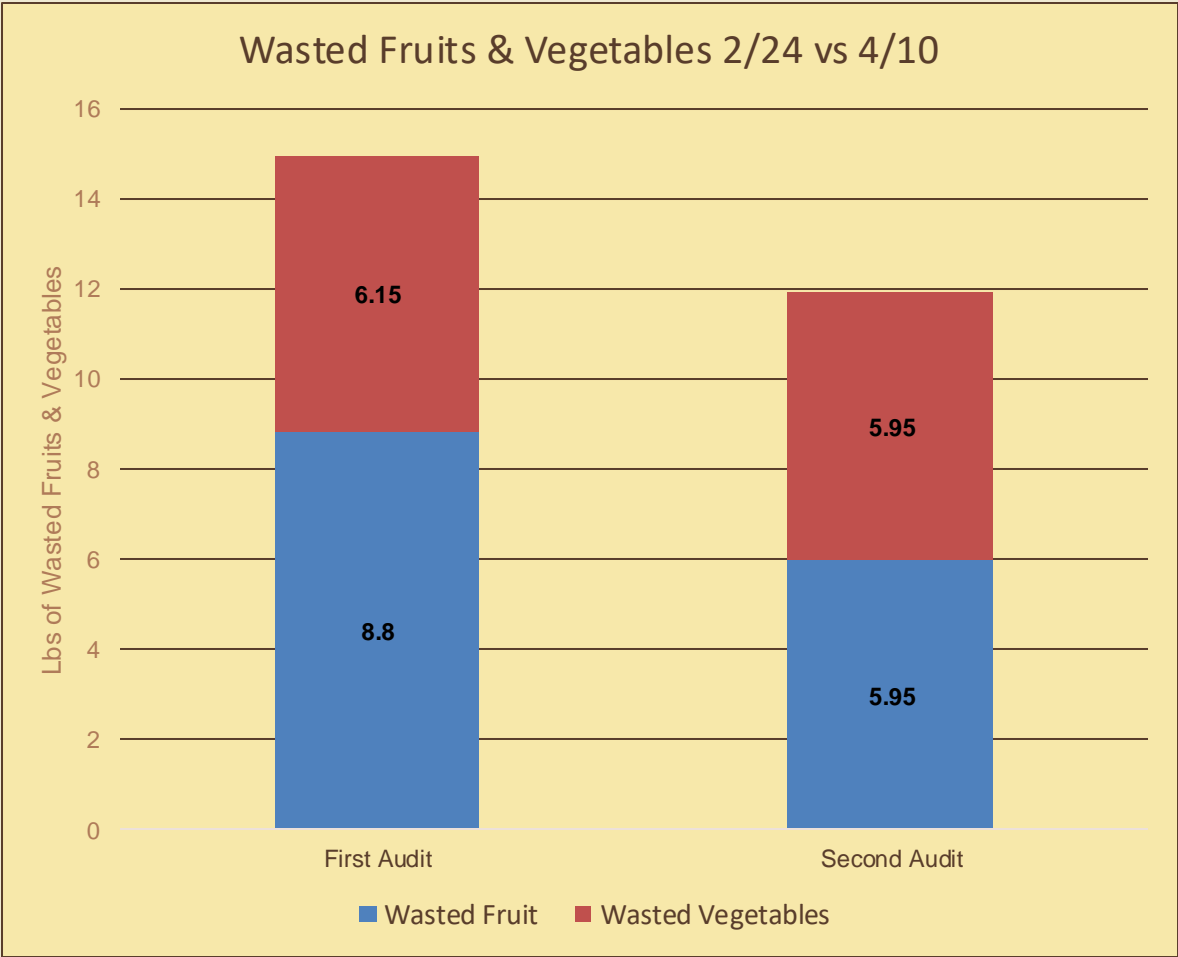
## Food Waste Audit:

- Selected repeat meals pre-interventions and in final study week
- Sorted waste by entrée offerings, fruits, veggies, liquids

Wasted Fruit: - 32%

Wasted Veggies: - 3%

Total Wasted Fruit & Veg Reduction: - 20%



# Qualitative Data: Stakeholder Interviews

## Overview

- Over 20 interviews
- Cafeteria and Custodial Staff
- Teachers
- Principals
- Students
- Causes of Wasted Food?
- Study Benefits?
- Most Successful Intervention?
- Changes to Work Routine?

# Qualitative Data: Stakeholder Interviews

Why is food wasted at your school?

“To some extent, it is an age-expected behavior as their palate and food experiences are not as robust as adults... sometimes there are social behaviors between students in terms of perceived or actual judgements on eating foods, both in terms of body image and... a sort of ‘you’re part of my group so we eat the same foods. Don’t eat a food the rest of the group doesn’t like.’”

“There will be likes and dislikes that create waste. If everyday we served mac and cheese and chicken nuggets, we wouldn’t be talking much about food waste, right?”

*Ryan McKenney* – Principal, Phillip W. Sugg Middle School

# Qualitative Data: Stakeholder Interviews

What are some benefits you have seen resulting from the study?

“We all know kids waste a lot of food but actually seeing it and weighing the poundage and knowing how much of it there is. It’s a lot! It’s eye opening.”

*Crystal Ferris* – Food Services Manager, Easton Elementary School

“This is something that will continue long after the study is over... We used to do this years ago, now we are kind of back to where we were post-Covid. We are back to using [metal] utensils, students know what they should take or not take.”

*Mike Davis* – Principal, Sherwood Heights Elementary School

# Qualitative Data: Stakeholder Interviews

Which intervention was most effective?

“The physical sorting station has the biggest impact. Because it does force them to go through and be intentional about what they are doing... The way to keep it going is to keep physical structures in place.”

*Mike Davis* – Principal, Sherwood Heights Elementary School

“One of my favorite benefits is the saved food. In the past, if a bagel had gone unopened and uneaten it would have gone in the trash. And now we’re saving that bagel and putting it in our fridge for a student who may be hungry later and can now have that saved food.”

*Beth Kellogg* – Principal, Brown Elementary School

# Qualitative Data: Stakeholder Interviews

How has the study affected your daily work?

“If we are short staffed it makes it nice because the trays are just neatly stacked [by the students] and we can just push them aside and not worry about them piling up with trash until we get to it.”

*Amy Coppola* – Cook, Easton Elementary School

“Less food going in the trash bags, and the silverware, no more [plastic] forks in the trash... the trash bags are lighter, smaller... it [the study] helps keep things organized.”

*Brian Hess* – Custodian, Sherwood Heights Elementary School

“For me in the kitchen I haven’t noticed much of a difference.”

*Erica* – Cook, Phillip W. Sugg Middle School

# Study Limitations

## Limitations

- Small sample size: Only four schools, only 9 weeks.
- Menu variation causes unavoidable fluctuations in wasted food: e.g. pineapple rinds, chicken bones, heavier/lighter foods.
- Students make mistakes when learning the sorting station (e.g. accidentally throwing food in the trash). This can affect the baseline wasted food numbers.
- Length of lunch: the time a given student has to eat lunch (from sitting down with meal to dismissal) can vary dramatically.
- In some schools, students got involved in the weighing of wasted food. While this is encouraged, it means there may be a higher likelihood for measurement error.

## Solutions

- Share study materials with as many schools as possible; create network for data sharing, questions, ideas, publicity, etc.
- Repeat menu items throughout course of study (February menu = March menu).
- Weigh trash in addition to wasted food to account for student sorting errors.
- More accurate measure of length of lunch: track how long the last student in line has to eat.
- Formalize student participation with faculty supervision; part of a math or science class

# Thank You!

## Thank You!

Food Rescue Maine and the Mitchell Center are hosting our annual Maine Wasted Food Solutions Summit which is presented via Zoom on Friday, April 18, 2025 from 10am to noon.

Please let myself or Susanne Lee ([susanne.lee@maine.edu](mailto:susanne.lee@maine.edu)) know if you need a link. Or go to [umaine.edu/foodrescuemaine/](http://umaine.edu/foodrescuemaine/)

