

MASSACHUSETTS

Section 1: School Demographics

School Name

Palmer High School

Principal's name

Susan North

School Address

4105 Main St

Palmer, Massachusetts 01069

United States

[Map It](#)

Number of students (total enrollment)

486

Lowest grade

8

Highest grade

12

This school is:

- A public school

Please explain:

Number of students by grade level

Elementary or lower	Middle grades	High or upper school
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0	135	351
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Number (or percent) of students eligible for free or reduced lunch

Free lunch	Reduced lunch	Neither free nor reduced lunch
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28.7%	4.3%	67%
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Section 2: Background about school lunch

How many students buy lunch in the school's cafeteria?

51 to 70 percent

How many minutes do students have to eat lunch?

29

Are students allowed to eat lunch in rooms/buildings other than the cafeteria?

No

Are students allowed to leave campus for lunch?

Yes

Which students are allowed to leave campus for lunch?

Seniors

Are there any times during the school year when breakfast or lunch is free to all students?

Yes

Please explain:

On class day, there is a large barbecue for all students. Almost all students take advantage of the free meal.

Who controls the portions and servings students receive?

Students (buffet style or open access allows students to choose their own portion)

Please explain:

Does the school serve set meals (e.g. chicken nuggets with potatoes and carrots) or can students choose what they want from the menu?

Other

Please explain:

Certain foods are preportioned and plated by the cafeteria staff while certain sides can be taken or left by individual students.

Are fruits/vegetables required with every meal?

Yes, fruits/vegetables are included in the price

In your teams' opinion, are students content with the meal options at school?

Yes, somewhat content

Please explain:

The school offers a decent variety of meals that are consistently available to the student body.

What type of utensils do students use to eat?

Disposable utensils, such as traditional plastic

Please explain:

What type of plates/trays are used to serve the food?

Other

Please explain:

Reusable plastic trays are used during first and second lunches while single-use styrofoam trays are used during third lunch.

Section 3: Food waste activities at the school

Does the school use any of the following waste reduction activities?

Please explain:

Has the school performed a food waste audit previously?

No, a waste audit has not been considered

Please explain:

Which of the following generates the majority of food waste at your school?

Student food waste

Please explain:

On average, do you think food waste is an issue at your school?

Yes, very important

Section 4: School Waste Data Form

School name

Palmer High School

Date of audit

03/17/2017

Students in attendance on day of audit

457

Numbers of lunches served on day of audit

235

Menu served on day of audit

Choice 1) Mac'n'cheese with green beans, milk, and choice of apple

Choice 2) Popcorn chicken over salad with green beans, milk, and choice of apple

Waste type: Unopened food

A: Type of food	B: Number of items	C: Weight of empty bin	D: Total weight	E: Net weight (Total - Empty)
Fruit Sides	29	0.0 pounds	8.7 pounds	8.7 pounds
Chips/Crackers	1	0.0 oz	1 oz	1 oz
Milk Cartons	16	0.0 pounds	6.8 pounds	6.8 pounds
Rolls	4	0 oz	4 oz	4 oz

Total net weight of unopened food

16

Notes regarding unopened food

All of our foods were measured in plastic bags, so no bins were used so the weight of the bin did not affect the net weight.

Waste type: Food waste

A: Bin/Bag Number	B: Weight of empty bin	C: Total weight	D: Net weight (Total - Empty)	E: Picture taken of the bin? (Y/N)	F: Percent full
1	8.0 pounds	58.6 pounds	50.6 pounds	Y	35%
2	0	11.8 pounds	11.8 pounds	Y	10%

Total net weight of food waste

62

Waste type: Liquid waste

A: Bin/Bag Number	B: Weight of empty bin	C: Total weight	D: Net weight (Total - Empty)	E: Picture taken of the bin? (Y/N)	F: Percent full
1	13.2 pounds	32.1 pounds	18.9 pounds	Y	30%

Total net weight of liquid waste

19

Waste type: Recycling

A: Bin/Bag Number	B: Weight of empty bin	C: Total weight	D: Net weight (Total - Empty)	E: Picture taken of the bin? (Y/N)	F: Percent full
1	0 pounds	9.6 pounds	9.6 pounds	Y	90%
2	0 pounds	3.6 pounds	3.6 pounds	Y	40%

Total net weight of recycling

13

Waste type: Other (Landfill)

A: Bin/Bag Number	B: Weight of empty bin	C: Total weight	D: Net weight (Total - Empty)	E: Picture taken of the bin? (Y/N)	F: Percent full
1	12.2 pounds	17.8 pounds	5.6 pounds	Y	80%
2	0 pounds	4.0 pounds	4.0 pounds	y	75%

Total net weight of other wastes (landfill)

10

Notes regarding food, recycling, and other (landfill) wastes

Sometimes, we measured an entire bin while other times we measured only the bag of waste. The weight of the actual trash bag was negligible, so some measurements were nonfactors.

Describe the process you used to establish clear guidelines for students to follow to sort their food waste.

In the week preceding March 17th, announcements were made to inform students of the upcoming audit. Ten labeled bins were set up at all three school lunches for students to separate food waste from the students' lunches. Informational handouts with food audit guidelines were posted on the cafeteria tables, and LifeSmarts members stood around the cafeteria directing students. Some members remained at the disposal bins to advise students on which bin contained which type of waste.

Upload photos

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Would your team be interested in being part of the food waste panel at Nationals?

No

Section 5: Critical Thinking

Based on your observations during the food waste audit, make three recommendations to your School Board to reduce food waste.

The LifeSmarts team is taking concrete steps toward combating food waste at Palmer High School. Although not all of these are economically or logistically feasible in our district, a member of our team has spoken to the school council about the outcomes of the audit, and here are some of the team's suggestions: a.) come up with a using reusable utensils; b. introduce a large compost bin that would be regulated by the Outdoor Adventure Society and Ecological Preservation Taskforce; c. implement educational outreach programs about food waste and its impact; d. rework the health curriculum to incorporate healthy habits regarding food waste; e. help create a culture where the proper disposal of food is encouraged and rewarded, for example through positive peer pressure.

Justify a school's role in teaching children about food waste and the impact food waste has on school budgets, the environment, and hunger in the community.

In our state, there are no curriculum frameworks regarding teaching about food waste. In our school's AP Environmental Science course, the teacher is interested in featuring data from this audit in her future lessons. The environmental impacts of extreme food waste are limitless. From decreasing the size of landfills to diverting the waste to create compost used in the school gardens, this audit has shed light on a major problem within our school culture. Economically, food waste could save the school cafeteria quite a bit of money. Our findings are being presented to the cafeteria staff next month in order to educate the group and come up with concrete plans to battle extreme food waste. In our town, hunger is not a widespread problem, but donating unopened food waste to a local food pantry may be a solution to local hunger problems.

The US Environmental Protection Agency has set a goal to reduce food waste by 50% by the year 2030. Based upon your experience conducting this food waste audit, will the US meet this goal? Explain why or why not.

No, reducing food waste in the US seems like a daunting task. Many kids showed no awareness of how much food was being wasted- some were even dumping entire trays of completely uneaten food. If these students are the bulk of the population in 13 years, these trends do not appear to be promising. We believe education is the way to solve global food waste problems.

Detail two or three findings or observations that surprised you. Describe how conducting this food waste audit has impacted you and your team, and the way you think about food in America.

One of the most surprising observations was the insane amount of unopened food products normally thrown out. Just under 16 pounds of apples, rolls, chips, and milk were salvaged from a landfill. A second surprising element was the students' ignorance with regards to their own waste production. Numerous students asked seemingly intuitive questions regarding what waste was compostable, recyclable, or needed to go to a landfill. The problem was not just isolated to the younger students. After the audit, the LifeSmarts team held a meeting regarding the outcome of the food audit, and it became very clear to us that we need to take action. The United States should bolster its resources toward educating the student population with regards to food waste.

What is one obstacle your team faced during the audit and how did you work to resolve it? If the issue went unresolved, what steps would you take to reevaluate your approach?

Although the food audit was an overall success, minor obstacles are nearly unavoidable in just about any sort of project. We experienced a few students who would completely ignore the labeled bins and simply throw all of their waste into a random bin. Obviously we had to clean it up, but it did not affect the group majorly. Besides a few relatively uninterested students, however, there was another minor obstacle in the random rushes of students. Queues would form and chaos would be released upon the cafeteria. Each student had to do their own separating of ten different types of waste, which naturally has a large time request. Besides these two minor yet obnoxious issues, the food audit came out as an informative and beneficial practice for both the school and us participants.

Bonus Question

Should all schools be required to do food waste audits on a regular basis? Why or why not? Support your answer.

On a regular basis, schools should run food waste audits. Based on the data we received, it is evident that there is a lot of waste that comes out of the lunches at our very small school. From this, it can be assumed that a lot more is produced from schools of larger cities/ towns. For example, through the 235 lunches sold on March 17th, when our team ran the food waste audit, over 60 pounds of the total was actual food waste. With such information, schools can take steps to reduce the overall amount of waste and become much more efficient.