

# PENNSYLVANIA

## Section 1: School Demographics

### School Name

Dallas High School

### Principal's name

Jason Rushmer

### School Address

2000 Conygham Avenue  
Dallas, Pennsylvania 18612  
United States

[Map It](#)

### Number of students (total enrollment)

896

### Lowest grade

9

### 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
0	0	896

### Number (or percent) of students eligible for free or reduced lunch

Free lunch	Reduced lunch	Neither free nor reduced lunch
156	14	726

## **Section 2: Background about school lunch**

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

31 to 50 percent

**How many minutes do students have to eat lunch?**

30

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

Yes

**Are students allowed to leave campus for lunch?**

No

Which students are allowed to leave campus for lunch?

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

No

Please explain:

**Who controls the portions and servings students receive?**

Cafeteria staff portion items into servings (i.e fruit into cups) but students select items and number of servings themselves)

Please explain:

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

The students can pick which sides they would like, if any

Please explain:

**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?**

Neutral

Please explain:

The quality of the lunches offered by the school is neutral, because while the food is nutritious, the variety and taste could be improved.

**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:

Styrofoam plates or trays that are not recycled.

### **Section 3: Food waste activities at the school**

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

- Menus revised to reduce commonly wasted food items
- Procedures put in place to reduce food over-purchasing
- Procedures put in place to reduce food loss to expiration
- Food is served in the most efficient way possible to reduce food waste
- Trays are no longer used
- “Offer versus serve” policy in place

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**

Dallas High School

**Date of audit**

03/31/2017

**Students in attendance on day of audit**

756

**Numbers of lunches served on day of audit**

313

**Menu served on day of audit**

Cheese Stick Dippers

Dinner Roll

Green Beans

Baby Carrots

Choice of Fruit

Choice of Milk

**Waste type: Unopened food**

<b>A: Type of food</b>	<b>B: Number of items</b>	<b>C: Weight of empty bin</b>	<b>D: Total weight</b>	<b>E: Net weight (Total - Empty)</b>
Fruit Sides	18	8	14.3	6.3
Vegetable Sides	21	8	12.9	4.9
Yogurt/Dairy	2	8	8.4	0.4
Chips/Crackers	12	8	8.8	0.8
Milk Cartons	3	8	8.5	0.5
Sandwiches	5	8	9.1	1.1

**Total net weight of unopened food**

14

**Notes regarding unopened food**

Fruits and vegetable sides are in small plastic containers, yogurt and chips are prepackaged in single servings, milk is served in paper cartons, and sandwiches are prepared by the school and placed in clam-shell packages.

**Waste type: Food waste**

<b>A: Bin/Bag Number</b>	<b>B: Weight of empty bin</b>	<b>C: Total weight</b>	<b>D: Net weight (Total - Empty)</b>	<b>E: Picture taken of the bin? (Y/N)</b>	<b>F: Percent full</b>
Bag 1	8	31	23	Y	82 %
Bag 2	8	25	17	Y	61 %
Bag 3	8	36	28	Y	100 %

**Total net weight of food waste**

58

**Waste type: Liquid waste**

<b>A: Bin/Bag Number</b>	<b>B: Weight of empty bin</b>	<b>C: Total weight</b>	<b>D: Net weight (Total - Empty)</b>	<b>E: Picture taken of the bin? (Y/N)</b>	<b>F: Percent full</b>
Bag 1	8	16	8	Y	25 %

**Total net weight of liquid waste**

8

**Waste type: Recycling**

<b>A: Bin/Bag Number</b>	<b>B: Weight of empty bin</b>	<b>C: Total weight</b>	<b>D: Net weight (Total - Empty)</b>	<b>E: Picture taken of the bin? (Y/N)</b>	<b>F: Percent full</b>
Bag 1	8	16	8	Y	65 %
Bag 2	8	17	9	Y	80 %

**Total net weight of recycling**

17

**Waste type: Other (Landfill)**

<b>A: Bin/Bag Number</b>	<b>B: Weight of empty bin</b>	<b>C: Total weight</b>	<b>D: Net weight (Total - Empty)</b>	<b>E: Picture taken of the bin? (Y/N)</b>	<b>F: Percent full</b>
Bag 1	8	26	18	Y	95 %
Bag 2	8	17	9	Y	48 %
Bag 3	8	17	9	Y	48 %
Bag 4	8	16	8	Y	44 %
Bag 5	8	13	5	Y	25 %
Bag 6	8	11	3	Y	20 %

**Total net weight of other wastes (landfill)**

52

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

Our school does not currently offer a recycling plan, but will be offering one in the near future due to student complaints.

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

We made an announcement on our school's morning broadcast, and had our coach and principal each make announcements. We worked with our school's food service and janitorial staff, and used LifeSmarts's provided labels for each of the bins. We moved the bins from their usual locations, and lined them up so that students could easily tell how to separate their waste. We then analyzed the waste and weighed it by category.

**Upload photos****Link to files unable to upload**

<https://drive.google.com/open?id=0B31Y915ubxVjOE5jOXhEZng0U2c>

**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.**

We, as members of the Dallas High School LifeSmarts team, conducted a food waste audit on March 31st. Upon consideration of our results, we have three recommendations for our school board: First, in order to reduce the overall amount of waste generated by Dallas High School, we would recommend the establishment of recycling and composting programs. Currently, Dallas has neither, so a simple and effective method of reducing waste would be to begin recycling and composting it. The 17 pounds of waste that could have been recycled were instead thrown away as trash, for a total of 69 pounds of trash instead of 52. Also, much of the 58 pounds of food waste could have been composted, further reducing our waste output. Nationwide, 21.5 million tons of food waste are generated per year, and if that waste was composted, the greenhouse gas reduction would be equivalent to removing 2 million cars from the road. Also, an EPA study found that less than 22% of the US's discarded materials are recycled, and since the amount of waste generated worldwide is steadily increasing, more recycling will be necessary in the next several years.

School lunches at Dallas are served on styrofoam plates with plastic utensils. While both of these are convenient, they are extremely detrimental to the environment - polystyrene (styrofoam) takes about 500 years to decompose, and hazardous waste is generated in its production. Polystyrene products take up around 30% of our landfill space, and Americans throw away about 25 million polystyrene cups per year. Plastic utensils are similarly harmful, because carbon pollution occurs in both their production and their disposal, even if they are recycled. If our school invested in plates and utensils that were washable, the small increase in effort would save resources, and in the long run, save money.

We also noticed that a large amount of the waste consisted of plastic water bottles. Plastic bottles are among the worst types of packaging, because there is no reason (other than convenience) to use plastic water bottles. The 17 million gallons of petroleum used to produce America's bottled water for a year could have fueled 1.3 million cars for a year, or powered 190,000 homes. Plastic water bottles are also cost ineffective - the recommended yearly amount of water (182.5 gallons) costs about \$1400 in bottled water, and only 49¢ in tap water (Any bottled water sold by either Coke or Pepsi companies is actually purified municipal water, or tap water). Also, Americans only recycle about 20% of their bottled water. Even if Dallas were to buy a reusable metal water bottle for each of its students, it would be less expensive than using bottled water. Dallas could also buy water bottle refilling stations to promote the use of reusable water bottles.

**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.**

Since children spend most of their time at school, the school has a responsibility to teach children about food waste and its impacts. A thorough understanding of food waste will prepare students to be active community members and environmental stewards. To that end, it is important that students realize just how pertinent this issue is. For example, 40% of harvested food is never eaten, and most of it is wasted by consumers (not by farmers or retailers). If community food share programs were set up to allow for the donation of extra food, the 13.5% of America that lives in poverty and relies on programs like SNAP could receive the extra food that they need. Additionally, our culture of food waste is harming the environment. The food waste that constitutes 21% of the trash in landfills decomposes and releases methane - a greenhouse gas that is more potent than CO<sub>2</sub> - making landfills the third largest source of methane. They should be producing virtually none. Finally, as we saw with our food audit, wasting food is expensive. On a local level, food waste in schools creates expenses and diverts money away from education. Nationally, according to the USDA, 160 billion dollars of food

were discarded in 2010. If food waste was better controlled, that money could be channeled into community improvement projects and school funding. For these reasons - the potential to alleviate community hunger, and waste's negative impacts on the environment and on school budgets - knowledge of the food waste issue is necessary. This knowledge should come from schools.

**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.**

**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.**

**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?**

Like many scientific studies, the food waste audit had various challenges that had to be overcome in order to be successful. One challenge that stuck out among the rest was that of communication. While our school is small in size, totaling around 900 students, it can still be complicated to reach out to every single student to relay information. To tackle this endeavor, our team utilized social media to spread the word of the food waste audit, to create a general awareness of what was happening. Our team also created a short clip paired with an informational segment to be played over the morning announcements from our school's television studio. Our final attempt to promote awareness was in the form of an intercom public service announcement by our principal, in which he stated the guidelines for the food waste audit and provided some additional information to the students. Through all of these measures, the majority of the school seemed to be informed; however, there were some students that remained confused. While our tactics spanned far and wide, our team was still not able to reach every student, and because of this, it made the communication the most difficult challenge that we had to face. In the future, there could be more avenues taken to make the communication aspect more efficient. Through the use of the automated emailing system that our school provides, our team could have reached every student in a more effective and expeditious manner. As well, we could have taken advantage of our entire team, by offering more assistance at the trash cans to aid the students in throwing out their trash.

## **Bonus Question**

**Should all schools be required to do food waste audits on a regular basis? Why or why not?**

**Support your answer.**

Schools should be required to perform food waste audits because it is necessary for them to draw conclusions from the amount and category of food waste and revise their policies to conform to the results. A food waste audit is a relatively inexpensive and simple task to perform. It would not be a burden to require it for schools, especially if a grace period is implemented to allow schools to adjust to new guidelines. Audits would also be economically beneficial to schools because they show where a school wastes food and money. By cutting back on the amount of food bought, the amount of money used to buy this food is saved. Besides this, according to the Natural Resources Defense Council, about 40% of food (approximately 34 million tons of food) and 165 billion dollars in the United States are wasted. The environment also benefits from the decrease of food waste: food is the largest constituent of municipal solid waste. When food rots in landfills, the greenhouse gas methane is released; according to the Environmental Protection Agency, only 3% of food waste does not end up in landfills, instead going to compost. Thirteen percent of all greenhouse gas emissions are related to

food. If every school and the majority of businesses implement this, then surely the amount of food needed to be produced will decrease, and this will reduce the strain on the soil and the greenhouse gases made in order to cultivate food. The University of Texas reduced waste by 48% after providing a remedy for the dismal results produced by a food waste audit that they conducted. While the initial audit would be relatively cheap, the potential to decrease food waste and, therefore, the school's ecological footprint is just too great to pass up. These benefits are why food waste audits should be required for schools across the nation.