

# **RHODE ISLAND**

## **Section 1: School Demographics**

### **School Name**

Barrington High School

### **Principal's name**

Joseph Hurley

### **School Address**

220 Lincoln Avenue  
Barrington, Rhode Island 02806  
United States

[Map It](#)

### **Number of students (total enrollment)**

1034

### **Lowest grade**

9

### **Highest grade**

12

### **This school is:**

- A public school

Please explain:

### **Number of students by grade level**

<b>Elementary or lower</b>	<b>Middle grades</b>	<b>High or upper school</b>
1486	817	1034

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

<b>Free lunch</b>	<b>Reduced lunch</b>	<b>Neither free nor reduced lunch</b>
38	17	979

## **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?**

24

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

No

**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 nuggets 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?**

Yes, somewhat content

Please explain:

Many students are satisfied, however some believe the food is not as appetizing as they would hope.

**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?**

Disposable paper plates or trays

Please explain:

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

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

- Procedures put in place to reduce food loss to expiration
- “Offer versus serve” policy in place
- Share table created for unopened food items

Please explain:

**Has the school performed a food waste audit previously?**

No, the school has discussed an audit but decided not to move forward

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, somewhat important

### **Section 4: School Waste Data Form**

**School name**

Barrington High School

**Date of audit**

03/28/2017

**Students in attendance on day of audit**

996

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

402

**Menu served on day of audit**

Nacho Chips

Chicken Taco

Taco Beef

Shredded Cheddar

Shredded Lettuce

Salsa

Refried Beans

Hamburger/Roll

Chicken Patty/Roll

Buffalo Chicken

Chicken Nuggets

Vegan Burger

French Fries

Pizza  
 Meatball Calzone  
 Ham & Cheese Calzone  
 Pasta Salad 6oz  
 Tossed Salad 1c  
 Apple  
 Orange  
 Applesauce Cup  
 Milk

**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)**

We decided to use different categories (based on MyPlate) to evaluate the variety, amount, and nutrition of food served. See linked data spreadsheet

Total net weight of unopened food

Notes regarding unopened food

**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**

We decided to use different categories (based on MyPlate) to evaluate the variety, amount, and nutrition of food served. See linked data spreadsheet

Total net weight of food waste

**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**

We decided to use different categories (based on MyPlate) to evaluate the variety, amount, and nutrition of food served. See linked data spreadsheet

Total net weight of liquid waste

**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**

We decided to use different categories (based on MyPlate) to evaluate the variety, amount, and nutrition of food served. See linked data spreadsheet

Total net weight of recycling

**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**

We decided to use different categories (based on MyPlate) to evaluate the variety, amount, and nutrition of food served. See linked data spreadsheet

Total net weight of other wastes (landfill)

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

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

To be sure all students understood what was happening and how to react, we went on our school's TV show (used for school announcements) and explained the project to the entire school community. Inside the cafeteria, we placed signs telling students where to bring trays when they finished eating and where to dispose of any waste that was brought from home. We also had additional members from our school's LifeSmarts team helping out by taking trays from students when they were finished eating and sorting the waste into the appropriate bins.

We made a team decision to separate our food differently than the competition outlined. Instead of using the food categories provided, we decided to sort our waste using the MyPlate categories (Vegetables, Fruit, Grain, Protein, and Dairy). Since eating healthy is especially important for high school students, we were interested to see how much waste accumulated in each of the MyPlate categories. Additionally, we were interested in evaluating the variety, amount, and nutrition within the available choices and determine how healthy students are eating at our school. This data will be shared with the food distributor for our high school as well as the School Committee.

**Upload photos**

- [RI-Audit-10.jpg](#)
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**Link to files unable to upload**

Data Spreadsheet:  
[bit.ly/RIAudit](http://bit.ly/RIAudit)

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

Yes

**Section 5: Critical Thinking**

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

Upon reflection of our food waste audit, there are a few recommendations that we believe should be passed forward to the school committee. These will find their way to the school committee as Eli Shea is serving as the Student Representative to the Barrington School Committee. One of the things that was noticed about the audit is that a very large portion of fruit was being wasted compared to other food groups. We have deduced that this observation is a result of the requirement that students take a piece of fruit with their lunches. While we recognize that this is an attempt to get students to eat healthier, clearly it is not fully working. We recommend that the school has no requirements on

lunches, allowing full selection for students. Another recommendation is that the school take effort through signage and other campaigning strategies to educate students about food waste, so that they will be more aware. Finally, because perhaps the most wasted item was applesauce (individually packaged in unopened containers), we recommend that if the school is not willing to change the fruit requirement they should instead set up a bin for people to deposit unopened applesauce containers. We believe that these recommendations would go a long way in helping to eliminate food waste in our high school.

**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.**

Food waste is an undeniable problem in the twenty-first century, and it must be faced as such. There are some very simple ways to address this problem, though, and foremost among them is to build awareness. When people do not know that food waste poses such a large problem, they cannot begin to attempt to fix it. Because of this, it is necessary for schools to treat the issue as important, and introduce to students the many problems this issue creates.

These problems include negative effects on school budgets, the environment, and hunger. Wasting food forces schools to buy in excess, which increases their budget unnecessarily. A school must support the food that students waste in addition to the food they consume, which, in turn, reduces the availability of funds for the school's other necessary programs. In addition, food waste damages the environment. By wasting food in this manner, landfill space is increased. This, in addition, leads to release of greenhouse gases into the atmosphere. All of this contributes to the destruction of the environment and the concerningly accelerating warming of the Earth. Hunger is also increased worldwide by the proliferation of food waste. When food is unnecessarily wasted by people who have the ability not to waste it, it takes more food away from those who do need to eat that food. This increases the problem of world hunger by a large amount. All of these issues should be highlighted by schools in order to raise awareness for and help students act to mitigate this serious issue.

**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.**

Although many hurdles remain to be overcome - and Americans may be forced to reevaluate the way they approach food entirely - our food waste audit suggests a heartening first step to achieving the USDA's 2030 food waste goals.

In the educational realm, high schools can serve as incubators of successful methods, mini-laboratories to explore ways to minimize food waste in all settings. For example, in a striking contrast to the national average of 40% food waste, our audit yielded only 9.44% waste over three lunch periods. What can account for this major difference? One crucial factor is choice. At our school, students are offered a wide variety of options, meaning they are most likely to choose foods that they will eat. Much of the uneaten waste collected at the end were USDA-mandated standards, such as untouched packets of applesauce stuffed on students' plates to satisfy a fruit requirement. In fact, one 2015 study found that the USDA's 2012 fruit and vegetable regulations increase food waste by up to 56% - an observation which seems quite accurate in light of our results. If other schools and environments can follow our student-choice paradigm, and if all schools expand fruit options so that students can select healthy and appetizing foods, that could put a major dent in school-based food waste and help reduce waste by the coveted 50%. We should also implement other commonsense, wide-reaching solutions such as smaller serving sizes. It will be more difficult in the home and other unsupervised areas, but the low waste percentage attained at our school is a testament to how achievable this goal really is.

**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.**

After conducting our audit and analyzing the data, we uncovered some surprising findings. The first being the extremely high waste of fruit. Our school's food waste was composed of 18.59% fruit waste. We determined the reason for this unusually high waste to be due to apple sauce. More importantly, the fact that students are forced to take a cup of applesauce to fulfill the fruit requirement of the school lunch system. Whether students want the applesauce or not they must take it. This requirement prompts them to turn around and waste the food. Most of the applesauce containers we received were unopened. This fact surprised us even more. Since the food is individually packaged, we couldn't understand why students would not save the fruit and keep it for a snack later.

The second being the relatively small waste of vegetables. 6.99% of our school's waste came from vegetables. It was assumed that students who were forced to take a vegetable, would waste it and the situation would be similar to the applesauce. However, this was not the case. The majority of students who took salads and a variety of other vegetables consumed them. This may be due to the fact that students determine the size of their salad and the fact that our school offers dressings of choice to students.

Conducting this audit opened the eyes of our team to the real challenge that is food waste in America. We were shocked by the amount of unopened packages of applesauce that could have been used to feed the less fortunate. It was frustrating to open all the perfectly good containers and see the fruit go to waste. It is certain that the next time our team orders food from school or while out, we will think about what we are ordering and how much we are actually going to need.

**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?**

Even though our food waste audit ran smoothly, there were a few minor obstacles that we encountered. When the planning process started, we had a vision as to what the audit would look like. This vision included weighing every student's lunch tray before they started eating to obtain our baseline data. As we got further in the planning process, this started to seem illogical. Lunch period is only 24 minutes long at our school and we didn't want to be a significant disruption to the other students. We decided to abandon the idea of weighing trays initially and replace it by using average weights. All of the food was weighed ahead of time and we recorded the results in our spreadsheet. Since (for example) every piece of pizza doesn't weigh the exact same, this added to our overall percent error.

Another obstacle that we faced was how to prevent students from throwing food away that we needed for our audit. In order to prevent this from happening, we gathered every trash/recycling bin in the cafeteria and placed them in the back where our bins were. We also placed signs up where the trash cans used to be indicating that all of the trash must be brought to the back of the cafeteria or handed to a member of our team. Lastly, we floated around and reminded students as they were eating to bring us their trays and waste when they were finished. Despite our best efforts, it is possible that some of the food waste was not included in our data.

## **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 not be required to do audits excessively, but rather every now and then. Eating habits do not change in a short period of time, so auditing too frequently seems unnecessary. Preparing the audit takes a lot of work and organizing students to throw away their trash properly is difficult. Our LifeSmarts team had a large group of students assisting and a cohort of that size is tough to obtain on a regular basis.

On the other hand, doing a food waste audit is useful. It allows the school to identify the composition of wasted food, thereby developing a desired, healthy selection. Auditing food waste also raises awareness of the issue in the minds of students. Unfortunately, not many students consider the repercussions of wasting food as discussed above. Conducting regular audits provides a platform for schools to discuss global issues arising from food waste.