



Sustainable School Food Toolkit Waste Prevention



From milk cartons to food packaging, tons of avoidable plastic, cardboard, and aluminum waste are generated in school cafeterias across the nation on an average day. It all adds up to thousands of dollars in annual waste management costs per school and increased carbon emissions from transporting the waste to landfills, where it can cause groundwater contamination and result in habitat loss for local wildlife. Even a simple change in packaging can significantly divert food waste from the waste stream.

Try This Best Practice

Milk dispensers, also known as steel cows, provide a less wasteful alternative to milk cartons. Avoiding wasteful individual packaging, dispensers operate with bulk milk sacks and reusable cups, allowing students to pour themselves the amount they will drink. Despite the initial cost of installation, many school districts that have switched to milk dispensers have saved thousands of dollars and created a lighter and cleaner waste stream (no soggy half-filled milk cartons) for custodians to manage. As an added nutritional benefit, evidence suggests that students tend to drink more milk when they self-serve.

Did You Know?

Every day about [30 million students](#) eat meals that are subsidized by the National School Lunch Program...and every day students waste nearly 30% of the milk they are offered in cartons. Many schools worry that if they do not give each child a carton of milk, they will not be adhering to the requirements of the program. However, a meal must include a selection of three of the following - milk, meat, alternative proteins, grains, fruits, and vegetables. While it *must* include a serving of either fruits or vegetables, milk is not a requirement to meet these standards. It only needs to be an option. For milk to meet NSLP regulations, students must take 8 ounces.



Success Story

In an audit of five schools near Vancouver, WA, [Clark County Public Health](#) examined the amount of waste produced by milk cartons versus dispensers. After making the switch, each school demonstrated a large reduction in carton waste, **with four out of five schools eliminating carton waste altogether**. As an added benefit, all five schools reduced their wasted milk by about [70% per day](#). Since producing milk is water and energy intensive, those gallons of milk saved equate to less fresh water expended and fewer carbon emissions released into the environment.

If you have questions or want more information about how to adopt this practice at your school or district, contact Sally Fisher at sally.fisher@clark.wa.gov with Clark County Green Schools.

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Resources for Taking Action!

1. [Clark County Green Schools- Tackling Milk Waste in Cafeterias](#): This story depicts the successful use of milk dispensers in Clark County schools.
2. [Should we say goodbye to the school lunch milk carton?](#): An overview of successful case studies in Pacific Northwest schools.
3. [Offer vs Serve](#): OSPI CNS School Nutrition Reference Sheet
4. Farm-to-school activities help [reduce plate waste](#), since students try, like, and eat more food items when they know their farmer or grow food themselves. See farm-to-school resources under the "Climate-Friendly Meals" section below.



Sustainable School Food Toolkit Climate-Friendly Meals



What is climate-friendly food? Healthy, climate-friendly foodservice achieves a lower carbon and water footprint than traditional foodservice. It includes a wide array of plant-based and plant-forward options. Climate-friendly foods can be sourced from local farms that offer nearby schools local, seasonal, and organic ingredients for a competitive price. With a little planning and creativity, the procurement and use of climate-friendly foods in school meal planning can help a district achieve its sustainability goals.

Try These Best Practices

There are many ways to make meals more climate-friendly and sustainable. Among them are serving more plant-based foods, more local foods, and offering foods in season.

Meatless Monday simply means that on a given day of the week (it doesn't have to be Monday!) meals served by the school do not include any meat. Reducing the amount of meat served in schools can dramatically reduce the greenhouse gas emissions caused by school meals. In place of meat, plant-based protein like beans, peas, or tofu are often used as healthy and nutritious alternatives.

Local Sourcing is another climate-friendly strategy. Purchasing food from local farmers and producers gives students access to healthy and seasonal produce. Farm-to-School programs vary based on each district's priorities, but usually include: 1) Procurement from local farms, 2) Education related to agriculture, food, health or nutrition, 3) Hands-on learning in school gardens that grow produce for the cafeteria. Visit the [Washington State Farm to School Network](#) to see examples of farm to school efforts across the state, and near you.



Success Story

Oakland Unified School District is an amazing example of how a school district can significantly reduce its carbon footprint by swapping some of the meat and dairy products it serves for plant-based foods. Not only did the district cut carbon emissions, but it also saved money. The minimal changes that were made allowed **Oakland Unified School District to save \$42,000 and reduce its food-based carbon footprint by 14% in two years** - that's over 1.3 million pounds of CO₂ per year!

If you have questions or want more information about how to adopt this practice at your school or district, contact Nancy Deming, Sustainability Manager for Oakland Unified School District, at nancy.deming@ousd.org.

Oakland Unified School District saved \$42,000 in two years

Did You Know?

Making even a single ingredient change can have huge climate impacts. For example, making tofu produces 1.66 pounds of CO₂ per pound. In comparison, a pound of beef produces [32.85 pounds of CO₂](#). You can dramatically reduce the carbon released into the atmosphere by replacing beef in a stir fry with tofu.

Resources for Taking Action!

1. [What is at the Heart of Climate-Friendly Food?](#): This resource explains climate friendly food, provides facts and figures, and gives advice on how to select and find climate friendly foods.
2. [Washington Grown Food and Recipe Kit](#): This resource provides a list of Washington-grown food products with educational tools, recipes and facts for each item.
3. [WSDA Farm to School Toolkit](#): Resources for school nutrition programs on purchasing from local farms and using Washington-grown foods in school meals
4. [Strategies for Success with Climate-Friendly School Foods](#): This resource from Friends of the Earth offers an introduction to climate-friendly school food, shares four case studies, and provides key strategies, recipes and resources.



Sustainable School Food Toolkit Food Rescue & Recovery

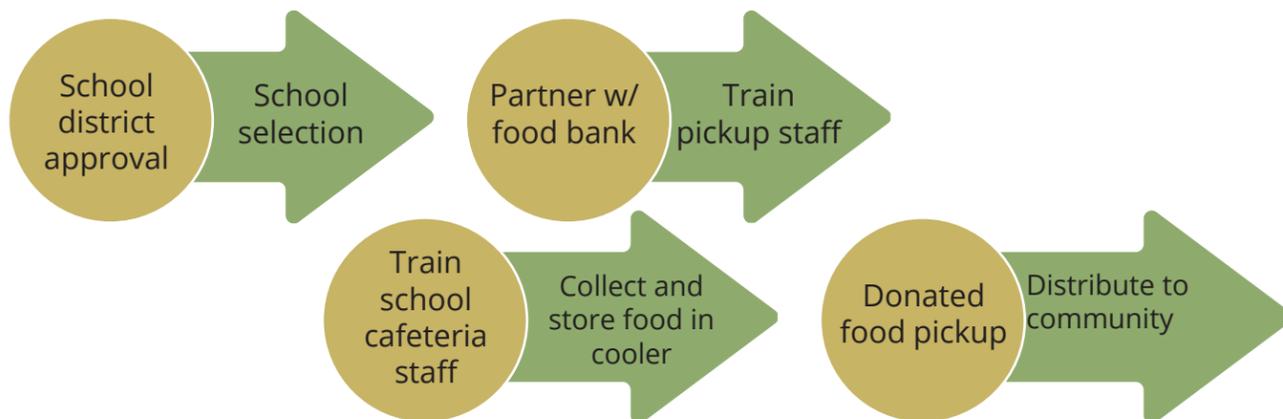
About [40%](#) of school cafeteria garbage is consumable food. In fact, **an average school will throw away roughly 30 pounds of food every day**, which leads to the emission of harmful greenhouse gases like methane and carbon dioxide when food sits in landfills, unable to properly decompose. In Washington state, where [1 out of every 7](#) children goes hungry, this wasted food also raises concerns of social injustice and inequity. Local community partners like food banks and after school programs that take place on school property can help schools in addressing these issues.

Try These Best Practices

Here are two ways to reduce wasted food in a school cafeteria while addressing the fact that many students are food insecure.

Share Tables provide an alternative to throwing away uneaten food. A designated bin in the waste sort line can offer students a space to leave unwanted food that is packaged or whole, like a box of raisins or fruits with peels. Students who would like more to eat are encouraged to take what they like from the Share Table. Once students have taken what they want from the Share Table, leftover food can be used during afternoon snack breaks, after school programming like Boys and Girls Clubs or sports teams, or backpack programs where food is sent home with students.

School Food Share is the next step in food recovery. This program guides schools and food banks to coordinate the collection of cafeteria leftovers and share them with members of their community that face hunger through nonprofit organizations and food banks. This program can also accommodate schools that have ordered too much food and are unable to serve it in a timely manner. The diagram below inspired by [EPA.gov](#), depicts the steps to begin a School Food Share program.



Success Story

Under the guidance of the School Food Share program, [Bremerton School District](#) partners with the Salvation Army to collect whole, uneaten food from its school cafeterias and donate it to local food banks. Students are taught what kind of foods are acceptable to donate and kitchen staff are educated on how to store the extra food until it could be picked up by a community partner. **As a result, the district collects between 150 and 175 pounds of food per school per week - potentially up to 32,000 pounds of food per year!**

If you have any questions or want more information about how to adopt this program at your school or district, please contact Lynn Johnson, Child Nutrition Services Supervisor, at lynn.johnson@bremertonschools.org.



Did You Know?

Organic matter, like the food scraps tossed at the end of a lunch period, can be preserved in a landfill for decades. In the early 1990s, Dr. William Rathje, a researcher from the University of Arizona, discovered that organic matter in a landfill remains [mummified](#) without access to the air, water, and organisms it needs to decompose. It really makes you think about what you throw away!

Resources for Taking Action!

1. [Washington School Food Share Program Toolkit](#): This toolkit provides detailed information on implementing a School Food Share program. It describes the program, how to get started, logistics, rules and regulations, and more.
2. [Washington State Department of Health- School Food Donation Guidelines](#): This resource offers guidelines and considerations for implementing school food donation practices.
3. [Current Food Waste and Potential Food Rescue Programs for the Auburn School District](#)



Sustainable School Food Toolkit Culturally Relevant Meals



Schools across Washington serve culturally and ethnically diverse student populations. In fact, nearly **half of the students in the state identify as Black, Indigenous, and People of Color (BIPOC)**, with nearly half of those students identifying as Latino/Hispanic. When this diversity informs the foods served within cafeterias, we can not only incorporate students' lived experiences into our meal planning but help to simultaneously reduce food waste. [Serving Up Tradition](#), A Guide for School Food in Culturally Diverse Communities defines culturally appropriate foods "ingredients and preparations of foods that acknowledge and appreciate the experiences, traditions, and diverse preferences of a group of people."

Try This Best Practice

Culturally relevant menus are not hard to develop. One of the most beneficial and effective ways to create a culturally responsive menu in a school setting is to incorporate feedback and recipes from the students' families. Students who are served familiar foods they eat at home will eat more and waste less. The [Journal of Child Nutrition & Management](#) reports, "**Multicultural awareness among educators fosters appreciation and respect for the diverse eating habits among children and their families, thereby expanding learning experiences and nutrition services for children.**"

Did You Know?

Sanislo Elementary School in Seattle is the most diverse school in Washington state. Want to know how racially diverse your school is? Check out [OSPI's Report Card](#) to track the demographics of your school or district.



Success Story

Aaron Smith, Director of Nutrition Services and Emme Ribeiro Collins, District Executive Chef and former student, both of [Seattle Public Schools](#), have dedicated themselves to diversifying the school lunches they serve to over 50,000 students in the largest district in Washington state. From Chinese dumpling soup to chickpea tikka masala, the Nutrition Services department has begun incorporating cuisines that students partake in at home, ensuring that they are familiar with what they are being served at school.

Familiarity reduces the amount of discarded food and earns buy-in from the community. SPS has partnered with the City of Seattle to ensure that culturally relevant foods continue to be served while students are learning at home during the pandemic through boxed lunches coordinated for pickup by families.

If you have questions or want more information about how to adopt this practice at your school or district, contact Rosemary Martin with Nutrition Services at Seattle Public Schools at rjmartin@seattleschools.org.

50% of students in WA state identify as Black, Indigenous, and People of Color



Resources for Taking Action!

1. [A Guide for School Food in Culturally Diverse Communities](#): This resource provides a roadmap for incorporating culturally relevant foods into school cafeteria menus. It also provides case studies and recipes.
2. [School Meals Seasoned with Cultural Flavors](#): This article shares the importance of culturally relevant school foods.
3. [Ethnic and Cultural Food Pyramids](#): Explore food pyramids from around the world to inspire menu creation.