

ISSUE BRIEF

# WASTING LESS FOOD IN K-12 SETTINGS: BEST PRACTICES FOR SUCCESS



Schools are a vital link in the food system nourishing America's kids. When food goes to waste in K-12 settings, scarce food purchasing dollars are lost and disposal fees increase. At the same time, children's lifelong food habits are informed by their school experiences, and school meal programs are a key avenue for helping children value and enjoy their food.

As much as 40 percent of the U.S. food supply goes uneaten every year. What's more, nearly one of eight U.S. households is food insecure, including many with children.<sup>1</sup> In addition, each year wasted food generates greenhouse gas emissions equivalent to 37 million vehicles.<sup>2</sup> The United States loses more than \$200 billion annually on wasted food.<sup>3</sup>

There are many practical steps that K-12 schools can take to reduce wasted food in both kitchens and cafeterias. Below we highlight best practices for preventing food waste, ensuring that food surpluses reach people in need, and recycling food scraps. It accompanies the recently completed Food Waste Action Plan for the Minneapolis Public Schools, commissioned by the Natural Resources Defense Council.

## SETTING THE STAGE

- To maximize the environmental and economic benefits of your efforts, focus first on preventing food surpluses. When surpluses occur, ensure those foods reach people in need either within your school or in the broader community. Have material like plate waste and banana peels composted or used as animal feed to keep them out of the landfill and put back into productive use.
- Get a handle on how much food is currently going to waste in school kitchens (i.e. "pre-consumer" losses) and in cafeterias ("post-consumer" losses). Occasional school-level waste audits of discarded food can provide insight on the amount, types, and reasons why food is discarded in the kitchen or by students. Data from your waste hauler may also shed light on overall food waste generation.



- Engage, inform, and train staff. Culinary staff (along with principals, teachers, and others) are more likely to be receptive to new waste reduction strategies if they have a role in the process. Communicate the social, economic, and environmental impacts of wasted food and then involve staff in shaping action plans and creating solutions.
- Offer culinary staff a “menu of options” for reducing wasted food. The “menu” should present concrete ideas (like those discussed in this document) and the flexibility to experiment given the school’s unique circumstances.
- Start with pilot projects; test your approach and build from there.
- Ensure principals are bought in where needed.
- Consider asking each school identify a champion to provide on-site leadership and support for food waste reduction efforts.
- Establish multiyear goals for your food waste reduction efforts to give direction to the work and provide a basis for gauging progress.

## STRATEGIES FOR PREVENTING GOOD FOOD FROM GOING TO WASTE

### Engage and Empower Students

- Use Offer vs. Serve to maximize choice in school meals, recognizing that students are more likely to eat foods they choose.
- Offer samples in the cafeteria line so students can try an item before taking it.

- Expand the use of taste tests before new menu items are introduced.
- If Offer vs. Serve is used, inform students they don’t need to take a carton of milk for their meal to be reimbursable under the National School Lunch Program. Ensure that staff and others involved with lunch service are aware of this.
- Consider serving milk from bulk containers so students can determine how much they take.
- Provide easy access to water.
- Allow students to take whole fruit and wrapped items outside of the cafeteria where feasible and allowable under local health regulations.
- Form a student task force to brainstorm food waste reduction strategies and provide feedback as your program unfolds.

### Build Awareness

- Create or adapt an existing food waste awareness campaign to raise student awareness and engage them in reducing waste. (See appendix for resources.)
- Hold “Weigh the Waste” contests in which students separate discarded food into a container, weigh it, and compete with other schools (or with themselves over time) to minimize their waste.
- Connect students to their food through school gardens and Farm to School programming.
- Hold student focus groups to gather ideas for raising awareness and cutting waste.
- Invite parents to volunteer in the cafeteria.



- Encourage students and parents to adopt waste-saving tips at home.
- Connect teachers to curricula and other resources to re-enforce food waste reduction messages in the classroom.

### In the Cafeteria

- Have culinary staff, teachers, and parent volunteers interact with students in the cafeteria, encouraging them to select and then eat foods they enjoy.
- Streamline the lunch service process to maximize eating time.
- Train cafeteria staff to avoid over-serving portioned items.
- Schedule lunch periods when students are hungry. If early lunchtimes are a must, avoid pre-lunch snacks.
- Schedule recess before lunch so students are less rushed or distracted by the prospect of recess.
- Consider “Smarter Lunchroom” strategies<sup>4</sup> that provide an improved atmosphere in the cafeteria.

### In the Kitchen

- Plan menus and meal preparation to ensure that all students are served and have choices but that over-production is minimized.
- Track data on how much prepared food goes unserved. Identify the reasons for overages and strategize ways to better sync production with actual needs.
- Pre-cut fruit into age-appropriate sizes, particularly for younger students who may struggle to eat larger items.
- Use smaller serving pans toward the end of meal service to avoid waste.
- Identify food losses that may occur with food held in inventory, for instance, if products are purchased in excess or not used before hitting the code date.

## REDISTRIBUTING SURPLUS FOODS

- Set up Share Tables so students can leave unwanted packaged items from the meal program for other students to take.
- Communicate with students and staff about the Share Tables to encourage student participation, both in terms of sharing and taking.
- Ensure Share Tables are prominently located, well-marked, and managed in line with local health department requirements.
- Consider using unclaimed Share Table items like whole fruit and packaged foods at upcoming meal service, as encouraged by the USDA.<sup>5</sup>
- Track food items that remain untaken on Share Tables and identify strategies to reduce surpluses and/or utilize remaining items.
- Adopt food donation protocols for surplus foods including unclaimed Share Table items and excess food from school kitchens and central commissaries. This should include protocols for what foods can be donated, food packaging and storage, food safety procedures, and tracking systems for donated food.
- Partner with a local hunger relief organization to pick up surplus foods for re-distribution in your community.

## RECYCLING REMAINING FOOD SCRAPS

- Identify and prioritize waste haulers for your next hauling contract that can have appropriate food scraps composted off-site rather than landfilled or incinerated.
- Explore whether hog farmers in neighboring rural areas can take food scraps to use as animal feed.
- If composting or animal feed is an option for your district:
  - Set up sorting stations in school cafeterias for students to separate food scraps/compostables from other materials at the end of meal service.
  - Ask staff, student green teams, or parent volunteers to guide the separation process until students are familiar with it.
  - Consider introducing composting programs in elementary schools first as younger students may be more receptive.
  - Post signage with images of items commonly found in the cafeteria waste stream to communicate which items belong in various sorting bins.
  - Use color-coded bins and clear liners to help students identify where items belong.
- At schools with on-site gardens, provide appropriate food scraps to garden coordinators for on-site composting. This supports educational efforts about composting and generates useful soil amendments to help grow more food.

## ***Additional Resources***

**Cornell Composting: Composting in Schools** - <http://compost.css.cornell.edu/schools.html>

**Do Good, Save Food** - [http://www.fao.org/fileadmin/user\\_upload/save-food/PDF/Events/web\\_Flyer\\_Do\\_good\\_Save\\_good.pdf](http://www.fao.org/fileadmin/user_upload/save-food/PDF/Events/web_Flyer_Do_good_Save_good.pdf)

**Food Too Good to Waste** - <https://www.epa.gov/sustainable-management-food/food-too-good-waste-implementation-guide-and-toolkit>

**Food Waste Warrior Toolkit** - <https://www.worldwildlife.org/teaching-resources/toolkits/food-waste-warrior-toolkit>

**Guide to Conducting Student Food Waste Audits** - [https://www.epa.gov/sites/production/files/2017-04/documents/guide\\_to\\_conducting\\_student\\_food\\_waste\\_audit.pdf](https://www.epa.gov/sites/production/files/2017-04/documents/guide_to_conducting_student_food_waste_audit.pdf)

**International Food Waste Coalition SKOOL Pilot** - [http://internationalfoodwastecoalitionorg.webhosting.be/wp-content/uploads/2016/12/IFWC\\_SKOOL-Report\\_EN2016.pdf](http://internationalfoodwastecoalitionorg.webhosting.be/wp-content/uploads/2016/12/IFWC_SKOOL-Report_EN2016.pdf)

**The Journey of Wasted Food: A Teachers' Tool Kit for Grade 4-6** - [https://docs.wixstatic.com/ugd/715473\\_2908f14a411e400dalbdacc19fdd0254.pdf](https://docs.wixstatic.com/ugd/715473_2908f14a411e400dalbdacc19fdd0254.pdf)

**K-12 School Food Recovery Map** - Oakland Public Schools and San Diego Unified School District. <https://www.biocycle.net/2018/03/12/k-12-school-food-recovery-roadmap/>

**Leanpath** - The Leanpath food waste tracking platform is widely used to track and manage pre-consumer food waste in commercial settings. [www.leanpath.com](http://www.leanpath.com)

**Minneapolis Public Works Clean City Classroom** - [http://www.ci.minneapolis.mn.us/solid-waste/cleancity/solid-waste\\_CleanCityClassroom](http://www.ci.minneapolis.mn.us/solid-waste/cleancity/solid-waste_CleanCityClassroom)

**Reducing Waste to End Hunger** - <https://www.reducewasteendhunger.com>

**Rethink Your Waste Activity Booklet** - <https://www.niagararegion.ca/rethink/pdf/rethink-waste-booklet.pdf>

**Save The Food** - Consumer education campaign. <http://www.savethefood.com>

**Smarter Lunchrooms Movement** - <https://www.smarterlunchrooms.org>

**USDA Creative Solutions to Ending School Food Waste** - <https://www.fns.usda.gov/school-meals/creative-solutions-ending-school-food-waste>

**USDA Farm to School Planning Toolkit** - <https://fns-prod.azureedge.net/sites/default/files/f2s/F2S-Planning-Kit.pdf>

**Waste in Place Curriculum** - <https://www.kab.org/our-programs/education/waste-place>

## Endnotes

1 USDA, *Household Food Security in the United States 2016*, <https://www.ers.usda.gov/publications/pub-details/?pubid=84972>.

2 NRDC, 2017, *Wasted*, <https://www.nrdc.org/resources/wasted-how-america-losing-40-percent-its-food-farm-fork-landfill>.

3 ReFED, 2016, *A Roadmap to Reduce US Food Waste by 20 Percent*, [https://www.refed.com/downloads/ReFED\\_Report\\_2016.pdf](https://www.refed.com/downloads/ReFED_Report_2016.pdf).

4 Smarter Lunchroom Movement. <https://www.smarterlunchrooms.org/scorecard-tools/smarter-lunchrooms-strategies#Atmosphere>.

5 USDA Food and Nutrition Service, June 22, 2016 memo. [https://fns-prod.azureedge.net/sites/default/files/cn/SP41\\_CACFP13\\_SFSP15\\_2016os.pdf](https://fns-prod.azureedge.net/sites/default/files/cn/SP41_CACFP13_SFSP15_2016os.pdf).