FEED STUDENTS -- NOT LANDFILLS

Recovering Food in Missouri School Cafeterias

ABSTRACT

"Share tables" are one way Missouri schools can feed hungry students. However, schools may not be using share tables to their fullest potential. Food recovery observations for 1,881 school lunch trays provided the basis to estimate each student discards about 25 pounds of usable food and 17 cartons of milk during one Missouri school year – food that could be safely offered for consumption by other students.

Produced by the
University of Missouri-
Center for Health Policy

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Table of Contents

"Feed Students – Not Landfills"

History/Background

"Feed Students - Not Landfills" is a proof-of-concept project designed to help schools in low-income areas of Missouri understand the amount of food that could be made available on a share table and offered at no cost for student consumption.

A "**share table"** is a designated station where children may return unopened food or beverage items they do not intend to eat. The share table[1] strategy, supported by the United States Department of Agriculture, (USDA) was designed to encourage the consumption of nutritious food and reduce food waste in meal programs designed for children. Share tables provide an opportunity for food and beverage items to be recovered according to federal, state, and local food safety standards and re-used within the school setting. Share tables have been in use since at least 2013, and likely before, but were formalized and promoted by USDA in 2016. Initiatives like share tables, aimed at reducing food waste may re-emerge in popularity since "improving food access" is a component of the 2022 White House National Strategy on Hunger, Nutrition and Health.

The 2019 World Wildlife Fund (WWF) report, Food Waste Warriors: A deep dive into food waste in US schools[2], with support from the Kroger Foundation and the US Environmental Protection Agency, concluded schools, on average produce 28.7 cartons of milk and 39.2 pounds of food waste per student per year. Some of this waste is food and milk that could be safely consumed rather than placed in a trash can destined for the landfill. While usable food is wasted, Map the Meal Gap reports, one in five Missouri children are hungry.[3] Schools can play a vital role to recover food destined for the landfill and feed hungry children.

There are several ways schools can safely use recovered food. Encouraging the donation of excess food to external non-profit organizations in an *open-loop food system* has been a long-standing USDA practice for child nutrition programs. Protections in the Bill Emerson Good Samaritan Food Donation Act extended safeguards to encourage open-loop practice, such as donations to a food bank or soup kitchen outside of the school setting. However, this project focused on understanding the number of food items that could be re-used within school settings, thus creating a *closed-loop food system*.

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[1] *Use of Share Tables in Child Nutrition Programs*, *Food and Nutrition Services*. Available at: https://www.fns.usda.gov/cn/use-share-tables-child-nutrition-programs (accessed February 2, 2024).

[2] (accessed February 2, 2024).

[3] Hake, M., Dewey, A., Engelhard, E., & Dawes, S. (2024). *Map the Meal Gap 2024: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2022*. (accessed February 2, 2024).

One of the first steps for creating a closed-loop food system is to conduct a **food recovery review** to determine the number of food items that could be safely placed on a share table. This review helps schools understand the amount and type of food available to offer to children in school rather than donating food to an external organization or disposing of food in a landfill. Once the food recovery review is completed, schools decide their own next steps, including evaluating the items collected, modifying existing procedures for their student meal services and utilization practices for share tables or establish new practices to complement food recovery.

Literature Review

Food recovery in school cafeterias is not a new phenomenon. In 2016, USDA issued guidance to child nutrition program operators promoting share tables as an "innovative strategy" to reduce food waste. USDA followed up with a Guide to Conducting Student Food Waste Audits - A Resource for Schools in 2017. USDA recently issued a report, Household Food Security in the United States in 2023 indicating 13.5% of American households are food insecure (up from 12.8% in 2022), suggesting a need for stronger food recovery efforts nationwide. There has been recent attention at the national level since "Improving Food Access" is a major component of the 2022 White House National Strategy on Hunger, Nutrition and Health. Initiatives like share tables, aimed at reducing food waste, may re-emerge in popularity to address increasing food insecurity.

The literature revealed food recovery reviews serve a variety of purposes and can be conducted in various locations. Purposes include recycling efforts for food, plastics, glass, metal, paper or cardboard, safe disposal of hazardous household waste, efficient use for water and conscious management of energy sources. These robust resources examined for the literature review go well beyond the scope of this project in that the publications were designed for a variety of purposes beyond repurposing food in a close loop system in schools. The resources were expansive and encompassed small and large businesses, households, waste management operators, with schools as only a small part of their overall strategy. This project focuses exclusively on schools, students, and USDA school lunch specifically.

Organizations like *STOPWASTE*, a public agency in Alameda County, California promotes broad waste reduction efforts at home, work and at school. Waste reduction efforts align with supporting their statewide edible food donation mandate which requires food generators to increase the percentage of edible surplus food that is donated in an open loop system rather than ending up in the landfill.

Several organizations like *Leanpath* offer targeted resources for ways to cut costs across the food service and hospitality industry, including steps to conduct a food waste audit. Composting solutions as well as identifying food waste beyond "plate waste" in areas such as expiration, spoilage, overproduction, and trim waste are highlighted.

Figure 1

At least six states ***(See Figure 1)*** have developed toolkits to implement food waste management strategies. Varying content includes waste prevention, recovery, redistribution, recycling, composting, hands-on classroom and service-learning projects, curricula and teaching tools and resources. Many communities are leading their own efforts, including locally. A 2021 journal article[4] featuring a plate waste review at a Columbia, Missouri private school concluded 50% of food served was wasted.

In 2018, the *Institute of Child Nutrition* released a resource list of 25 reports, articles and tools school nutrition professionals can utilize to understand food waste and strategies to reduce that waste. This list spans publications from 2002 to 2017. A cursory review of the list suggested few, if any, of these tools have been updated or modified since they were published.

Finally, the USDA, Environmental Protection Agency, and University of Arkansas collaborated to produce a *Guide to Conducting Student Food Waste Audits*, released in 2017, as a resource for schools. It is a comprehensive 21-page document that includes project planning, interviewing students about food preferences, math and science curricula integration as well as strategy design for multiple points of the Food Recovery Hierarchy. **(See *Figure 2*.)** One focal point of that publication is to learn why students are not eating certain foods.

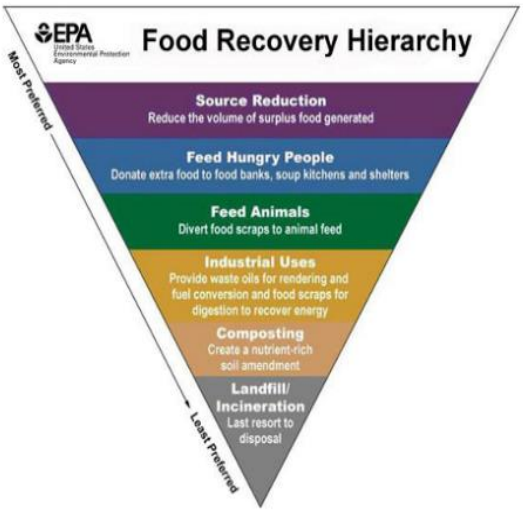
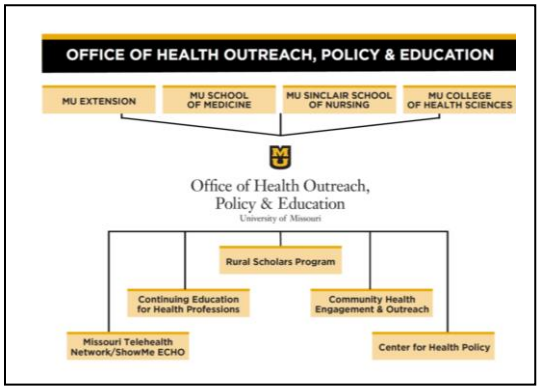


Figure 2

The Center for Health Policy (CHP) used the USDA food waste audit guide along with other resources, including those among the literature review, to develop and test a more simplistic and narrowly tailored strategy to identify only the number of food items suitable for re-use within a closed loop school setting, with a share table being one of many options to consider, rather than the food items being sent to the landfill. Schools were challenged to utilize the data about the re-usable food collected to develop next steps appropriate for their own nutrition program.

[4] Garcia-Herrero, L., Costello, C., DeMenna, F; Schreiber, L; Vittuari, M (2021). Eating away at sustainability. Food consumption and waste patterns in a US school canteen. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.123571 (accessed March 7, 2024).

Partners



The Office of Health Outreach, Policy & Education **(HOPE)** coordinates the activities of five collaborating units across the MU School of Medicine, Sinclair School of Nursing, College of Health Sciences, and MU Extension and is involved in telehealth, health policy, medical education in rural Missouri, health outreach, and health professionals' continuing education. The units within HOPE are integrated within the community and work collaboratively to identify issues and develop strategies to solve them. The **CHP**, within the College of Health Sciences and a part of HOPE, led this project. CHP is an objective, nonpartisan center to foster dialogue and analysis of health policy issues important to the welfare of Missourians. CHP used the expansive network of partners to assist with this work, specifically:

- **Community Partners** - the Family and Community Trust and its network of twenty Community Partnerships, including the Community Partnership of the Ozarks, Mississippi County Caring Communities and the Local Investment Commission.

- **State Agencies** – specifically, the Department of Elementary and Secondary Education (DESE) which administers the national school breakfast (NSB) and lunch (NSL) programs and the Department of Social Services (DSS) which funds, in part, projects like these; and

- **School Districts** – The project was designed to partner with up to four school districts in low–income, food-insecure areas to assess recoverable items in both urban and rural areas as well as small and large USDA school meal programs.

There are 521 public school districts in the state of Missouri[5] *with at least one district in each of the 114 counties and the City of St. Louis.* To narrow the pool of potential pilot participants, all school districts that:

[5] *MO School Statistics | Missouri Department of Elementary and Secondary Education*. (n.d.). https://dese.mo.gov/media/pdf/mo-school-statistics (accessed August 1, 2024)

- already participate in the Community Eligibility Provision (CEP)[6]or
- are eligible to, but do not participate in CEP; or
- are non-CEP districts but have buildings within the district with an Individual Student Percentage (ISP) [7] of 50% or greater

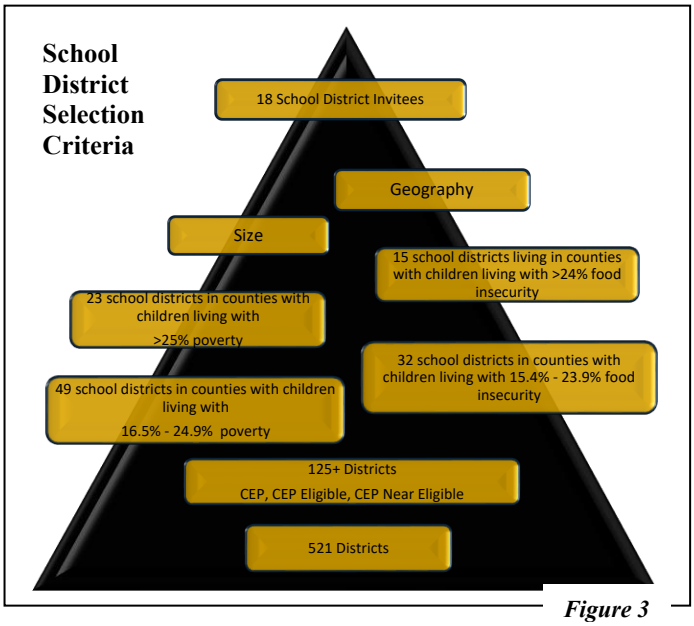


Figure 3

were identified. This resulted in more than 125 districts. To further narrow the list, two other factors, *poverty and food insecurity* were also examined.

Since **poverty** is a driver of food insecurity, the percentage of kids living in poverty in each county as reported in *2023 Missouri Kids Count* was also examined. The statewide average of '*children living in poverty'* is 16.5% so schools were placed in two categories - counties with poverty rates greater 16.5% and those with rates equal to or less than the statewide average. From that pool of 49, counties with greater than 25% children living in poverty were weighted more heavily, which yielded 23 school districts.[8] ***See Figure 3***.

Indicator	**Statewide Average**	**Number of Counties Between 16.6% - 24.9%**	**Number of Counties >=25%**
Children Living in Poverty	16.5%	49	23

Food insecurity is another measure that is also available from the *Missouri Kids Count*. The statewide average for this metric is 15.4%, so like for *children living in poverty*, schools were categorized with districts in counties with food insecurity rates, first greater than 15.4% (32), then from that list, districts in counties greater than 24% (15) were weighted more heavily.

Indicator	**Statewide Average**	**Number of Counties Between 15.5% - 23.9%**	**Number of Counties >=24%**
Child Food Insecurity	15.4%	32	15

[6] The community eligibility provision (CEP) is a United States Department of Agriculture (USDA) meal service option that allows schools and local education agencies in high poverty areas to offer meals at no cost to all enrolled students without collecting household applications.

[7] The ISP for a school identifies the number of students that are automatically eligible for free school meals without filling out a separate application because their household is receiving the Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF), the student is homeless or in foster care.

[8] Since school district boundaries do not always align with county boundaries, there were some counties with poverty rates greater than 16.5% but the school district was not CEP or CEP eligible or include an ISP or FRL higher than 50% so they were not considered. Further, if a school district was in more than one county, the counties were averaged to produce a poverty rate applicable to the school district.

Interestingly, while there was some overlap between the counties with the highest rates of poverty and food insecurity, not all 15 counties with the highest rates of food insecurity were included among the 23 counties represented by the highest rates of children living in poverty. After that computation, as secondary criterion – both the size of school district and geographic dispersion was considered.

To collect information from both large and small schools, the **size** of the school district was examined. To assess school districts by size, based on student enrollment information, the districts from the scaled list were grouped into four categories:

Size	# of Students		Size	# of Students
Extra small	<100		Small	101-500
Medium	501-1,000		Large	1,001+

Once these size selections were added, attention shifted to geographic dispersity representing four areas of the state – Bootheel, Springfield, Kansas City and St. Louis. After taking all the criteria into consideration[9], 18 school districts were identified and outreach was conducted with each using publicly available contact information. Refer to ***Figure 3*** which demonstrates the school selection criteria and methodology.

Joel E. Barber/Laclede County C-5, (hereinafter "Laclede" or "Laclede County") is a rural pre-Kindergarten (PK)-Grade 8 school district near Lebanon, with about 500 students, and the only district in this study to operate on a four-day school week. Laclede was the first to respond and immediately accepted the invitation to participate.

A second school district responded quickly, but only to decline the invitation. Additional follow-up contacts were made with the remaining 16 districts, and while this outreach yielded some interest, none of the districts committed to participate. Since cold contact recruitment efforts did not yield sufficient interest, the network of **Community Partnerships** that comprise the ***Family and Community Trust*** assisted with engaging school district partners. With the network's assistance, three additional districts[10] agreed to participate in the pilot.

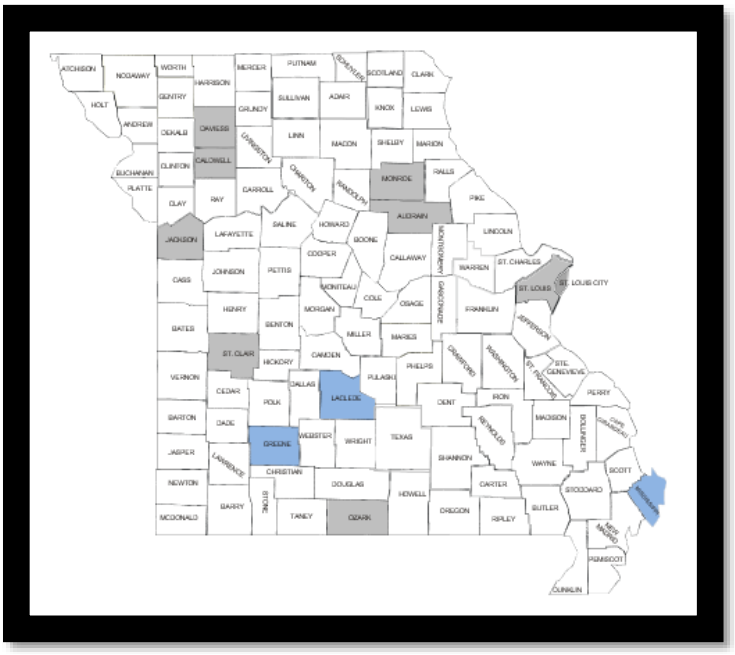
The *Community Partnership of the Ozarks* recruited the largest district in Missouri, the **Springfield Public School District** (hereinafter "Springfield" or "SPSD") to participate. Student enrollment across all the schools, PK-Grade 12 in the SPSD is about 25,000 – roughly the same number of undergraduate students at the University of Missouri-Columbia. After consultation with SPSD, three of the 52 schools within the district were selected to participate in this project. These three schools have a total enrollment of about 1,100 students.

[9] According to the Missouri Department of Elementary and Secondary Education (DESE), there is no central repository to collect information about a school district or building's individual usage of share tables thus current share table usage could not considered as a factor.

[10] In addition to Laclede County, with the assistance of the Community Partnerships, three more districts agreed to participate in the pilot initially, but one had to drop out due to an incident that restricted access to the school campus.

Mississippi County Caring Communities recruited the final partner, the **East Prairie R-II School District**, (hereinafter "East Prairie" or "EP") located in a county with one the highest rates of poverty in Missouri, to participate in the pilot. EP's enrollment is about 1,000 students, PK-Grade 12.

The map in ***Figure 4*** depicts the priority areas shaded in grey while the blue highlight depicts the counties where the three school districts that agreed to participate in the pilot are located.



School District Invitees and Participants

Partner Districts

Springfield Public Schools
Your Future. Our Focus.

JOEL E. BARBER
"Once a Buckskin, Always a Buckskin"

Key	
	Invited Districts
	Partner Districts

Figure 4

Expectations for Participating Partners

School staff, including nutrition professionals and senior level administrators, played key roles in the project. This created both a "top-down" and "bottom-up" approach to buy-in for the project. The expectations provided to school partners are identified in ***Appendix 1.***

Project Timeline/Funding

Funding for the pilot project was, in part, through a federal grant from the Department of Social Services[i] beginning October 1, 2023, and ending September 30, 2024. Planning was conducted during the first quarter with partner selection occurring during the second quarter. Intensive work, including on-site reviews, were conducted during the third quarter of the performance period. The final quarter was spent following up with partners and documenting the project.
See Appendix 2 for a more detailed project timeline.

Food Recovery Reviews (FRR)

HOPE, FACT, Community Partnership and School District staff volunteered to conduct FRRs on-site during 24 school lunch periods. Volunteers reviewed menu information with school nutrition professionals and mutually selected the items from the school meal would be eligible for recovery. Volunteers stood in front of trash receptacles and intercepted meal trays after students had eaten. Volunteers collected items eligible for food recovery from each tray before disposing of the

remaining contents. Item type and approximate weight was recorded for each lunch period. Schools determined the disposition of the food collected, with some items routed to the school nurse's office, offered to students in after-school athletic programs or disposed of.

Photographs and Video

Photos were taken at each food recovery event and are included in the "Results" packet provided to each school district. **See *Attachment A*.** A video to showcase the project was produced by the Local Investment Commission, the Community Partnership based in Kansas City.
The video can be viewed at Food Recovery Project 2024.

Observations

Student Demographics

Basic student demographic information was collected from publicly available sources to better understand socioeconomic factors of the communities where the school districts in this project are located. Socioeconomic factors affect a child's cognitive, language, social, physical and emotional development. These factors correlate to educational achievement and a host of other quality of life factors.

Three socioeconomic factors are compared in ***Figure 5*** below – homelessness, mobility rate and educational attainment in math, English and science. All three school districts exceeded the state average for homelessness, by a significant degree. According to the National Alliance to End Homelessness[11], children experiencing homelessness are twice as likely to get sick and go hungry as children with homes. Mobility, or frequent moving and changing schools can disrupt stable food sources, potentially leading to inconsistent nutrition and risk of hunger, especially when children are new to the community.[12] The correlation between high rates of homelessness and/or mobility can contribute to lags in key educational outcomes. The Impact of Homelessness on Education estimates three-six months of education lost with every move putting these children significantly behind their peers. Of the three districts, Springfield experienced the highest mobility rates, more than 10% above the statewide average. East Prairie, while at only 10% for mobility (one half the state average) but significantly higher than average for homelessness also scored well below educational attainment rates statewide. All three districts, with the exception of Laclede for science, scored below the statewide average which suggests a correlation that either homelessness or high mobility can negatively impact measures for educational attainment in certain key subjects.

[11] Soucy, Daniel; Hall, Andrew; State of Homelessness: 2024 Edition. *National Alliance to End Homelessness in the United States*. Retrieved from https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness/, accessed August 27, 2024.
[12] Gallegos D, Eivers A, Sondergeld P, Pattinson C. Food Insecurity and Child Development: A State-of-the-Art Review. Int J Environ Res Public Health. 2021 Aug 26;18(17):8990. doi: 10.3390/ijerph18178990. PMID: 34501578; PMCID: PMC8431639, accessed August 27, 2024.

Socioeconomic Factors[13] for Participating School Districts Homelessness, Mobility and Select Education Metrics					
	Homelessness	*Mobility*	*Educational Attainment*		
School District	**Percentage of Child Homelessness**	**Mobility Rate[14]**	**Percentage Below Basic Math**	**Percentage Below Basic English**	**Percentage Below Basic Science**
Laclede	3.9%	21.5%	30.5%	31.2%	21.7%
Springfield	3.6%	30.1%	32.4%	20.8%	27.7%
East Prairie	4.2%	10%	38.8%	30.1%	33.3%
Statewide	**2.5%**	**20%**	**28.5%**	**18.5%**	**24.9%**

Figure 5

The racial composition of the schools in Springfield that participated in the project[15] ***(Figure 6)*** are similar to the racial composition of Missouri's total population[16] **(*Figure 7*)** suggesting sample observations in the selected SPSD cafeterias could be representative of Missouri. Aside from the 7% difference in the "white" category, the two largest differences are the "multiracial" and "Hispanic" categories, 4.3% and 4.5%, respectively, but the differences may be attributed to the categorization methodology between Proximity One and the Missouri Census Data Center (MCDC). Proximity One uses seven categories for race while the MCDC uses six categories for a one race (white alone, black alone, Asian alone, etc.), six categories for two or more races, and calculates Hispanic or Latino (any race) in its own category.

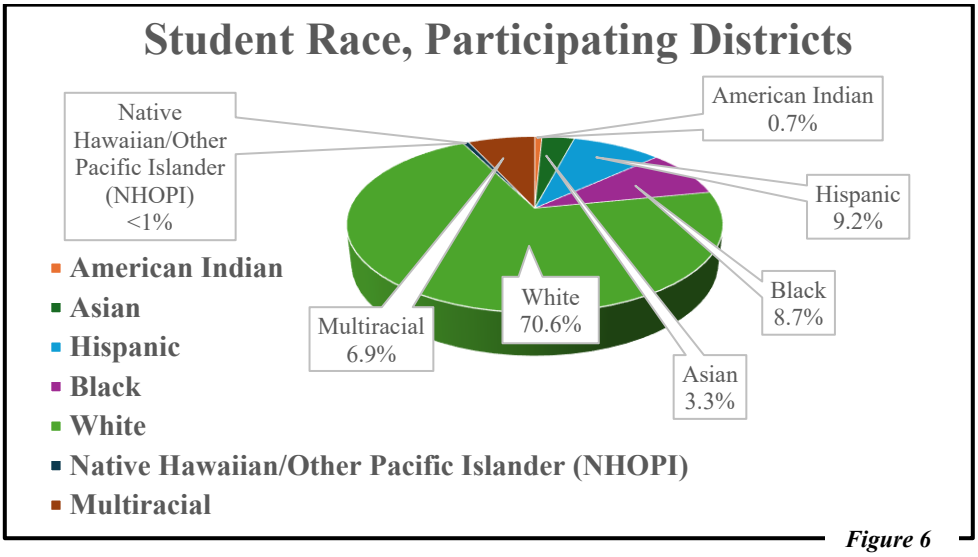


Figure 6

Racial Composition of Missouri	
Am Indian	0.3%
Asian	2.2%
Black	10.7%
Hispanic	4.7%
White	77.6%
NHOPI	0.1%
Multiracial	2.8%

Figure 7

[13] 2022 data, unless otherwise specified. Data from Missouri Kids Count for child homelessness, by county where school district is located and DESE Comprehensive Data System for other demographics, accessed August 27, 2024.
[14] DESE defines "student mobility" as students who change districts during a school year for any reason other than advancing to the next highest grade.
[15] Proximity One, School Districts 2022-23 Interactive Table, accessed 08/27/2024. Proximity One is an interactive mapping tool that provides demographic and other information for approximately 13,500 US school districts.
[16] MCDC, ACS Profile Report: 2022 (1-year estimate), accessed August 28, 2024.

Food Recovery Reviews: Twenty-four food recovery reviews were conducted across three school districts with five schools in eight different cafeterias.

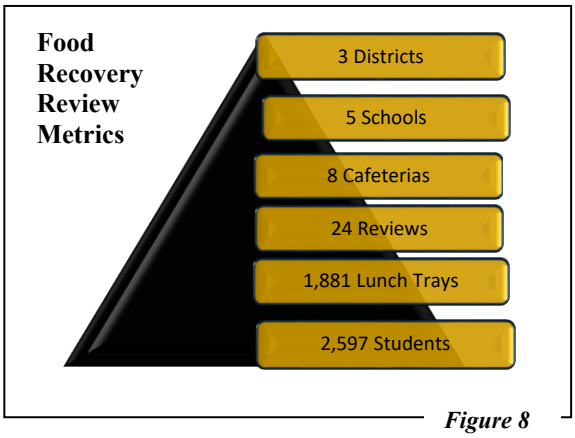


Figure 8

Enrollment: Enrollment for the school campuses where reviews were held was 2,597 students. A total of 1,881 meal trays were reviewed. ***See Figure 8.*** Without accounting for absenteeism during the lunch period, ~73% of the student enrollment took a school lunch tray on the dates the reviews occurred. Meal trays were observed from a variety of grade levels. ***See Figure 9***.

Lunch Tray Observation, By Grade Level			
Grade Level	**Number of Schools**	**Student Enrollment**	**Number of Lunch Trays Observed**
PreK/K - Grade 5	2	613	464
PreK – Grade 8	1	523	422
Grade 6 – Grade 8	1	466	294
PreK – Grade 12	1	995	701
TOTAL		**2,597**	**1,881**

Figure 9

Lunch Period: Lunch periods lasted from 25 to 37 minutes for an average of 29.4 minutes per lunch period (excluding East Prairie whose information was not available). While Missouri law, RSMo Section 167.720.2(4) permits a minimum twenty minute per day recess period to be combined with lunchtime, none of the districts in this review combined recess with lunch. The U.S. Centers for Disease Control and Prevention (CDC) recommends that students get at least twenty minutes of "seat time"[17] to eat lunch, and some experts recommend more because healthy food takes longer to consume, i.e., peeling an orange versus consuming canned orange slices served on a meal tray.

Share Table Usage: All districts reported that the use of a share table in the cafeteria is at the discretion of the administration for that building. In some schools, the Nutrition Services Director (or comparable title) decide whether a share table will be used. In other schools the principal, or in the case of smaller school districts, the superintendent decides whether a share table will be

[17] The average time for lunch periods for this project was calculated as total minutes from the daily schedule of start time and end time of each meal period provided by each school, and not by the "seat time" method used by the CDC. The CDC states, "seat-time is different from the total time for the lunch period and does not include waiting in line to select and pay for the meal."

available in each of the building cafeterias. All five schools reported having used share tables pre-COVID, but only three returned to the practice once COVID contact restrictions were lifted. During the reviews in the cafeterias where share tables were already in use, there were no modifications to the usual procedures related to existing share table practices. Thus, items left on or removed from the share table were not included in the count of recoverable items collected. The small data set is insufficient to identify a correlation between schools that do not utilize a share table and an increase in recoverable items per student, as Laclede logged the highest number of recoverable items per student and East Prairie, one of the lowest, and both use a share table. ***See Figure 10.***

Interestingly, students in schools that are already using a share table produced a higher number of average items destined for the landfill (0.9 versus 0.6). One possibility for this difference is that students were not placing all items eligible for the share table into the collection bin. The average weight of the collected items for schools using a share table and those without a share table was the same, 2.5 ounces. ***See Figure 10.***

Offer versus Serve (OVS): Four (except for Pre-K) of the five schools utilize the offer versus serve provision in the USDA school lunch program which permits students to decline some food offered. The goal of OVS is to reduce food waste in meal programs by permitting students to decline food they do not intend to eat. The single school that does not use OVS produced the largest average number of items per student (1.3) which could suggest a correlation between more item waste if students are not permitted to decline food they do not intend to eat.

Offer versus Serve

For a USDA reimbursable lunch, schools must offer students all five required food components in at least the minimum required amounts.

The components at lunch are:
meat/meat alternates
grains
vegetables
fruit
fluid milk

OVS is required at the high school level but is discretionary for younger students.

Under OVS, to claim a reimbursable meal, a student must take at least three components in the required serving sizes, and one selection must be at least ½ cup from either the fruit or vegetable component, but other components are selected by the student.

USDA

Unsurprisingly, the school with the highest number of recoverable items (1.3) also had the highest number of ounces collected per student (4.13). This school is CEP, meaning all students are eligible for a no-cost school meal. This location also refrains from the use of OVS, so the student's meal contains all five USDA meal components. It is inconclusive, however, whether CEP, OVS or myriads of other factors, such as student preferences for menu items that day, played a role in either the number or the volume of recoverable items. ***See Figures 10 and 11.***

Share Table and Offer versus Serve Usage Average Items and Ounces Collected					
School	**Share Table In Use**	**Number of Lunch Trays Observed**	**Items Collected Per Student (Average)**	**Ounces Collected Per Student (Average)**	**Offer versus Serve (OVS)**
Laclede	No	422	1.3	4.1	No
Boyd	Yes	146	0.5	1.9	Yes
Jarrett	Yes	294	0.4	1.7	Yes
Bingham	Yes	318	0.9	3.9	Yes
East Prairie	No	701	0.4	0.9	Yes
Share Table	Yes	758	0.9	2.5	
No Share Table	No	1,123	0.6	2.5	
TOTAL		**1,881**			***Figure 10***

Community Eligibility Provision: Two of the schools utilize the community eligibility provision (refer to *Footnote 6*) while the remaining three have an average free and reduce lunch price[18] rate of 76%, which significantly exceeds the statewide public school average of 47%.[19] With such as small set of observations, it is not possible to determine with certainty, but the data collected during this review suggests that schools that utilize the CEP:

- Serve more students a school meal (74% versus 70%);
- produce a slightly higher average number of items collected per student (0.9 versus 0.6,);
- have a lower number of average ounces collected, per student ratio (2.5 versus 3.8). ***See Figure 11.***

Community Eligibility Provision and Free or Reduced-Price Lunch Rates							
School	**Student Enrollment**	**Number of Lunch Trays Observed**	**Percentage of Students Served[20]**	**CEP**	**Items Collected Per Student (Average)**	**Ounces Collected Per Student (Average)**	**FRL**
Laclede	523	422	81%	Yes	1.3	4.1	
Boyd	187	146	78%	No	0.5	1.9	83%
Jarrett	466	294	63%	No	0.4	1.7	67%
Bingham	426	318	75%	No	0.9	3.9	78%
East Prairie	995	701	70%	Yes	0.4	0.9	
CEP	1,518	1,123	74%		0.9 items	2.5	
Non-CEP	1,079	758	70%		0.6 items	3.8	76%
TOTAL	**2,597**	**1,881**					***Figure 11***

[18] Children in households with incomes below 130% of the poverty level or those receiving certain public assistance programs qualify for free school meals. Those with family incomes between 130-185% of the poverty line qualify for reduced-price meals. Government Benefits, Food Assistance, School Meals for Children, accessed 09/03/2024.
[19] Missouri DESE 2023-2024 Lunch Statistics, October 2023.
[20] The number and percentage of students served does not include absenteeism. Each school district supplied enrollment information, as of that day, as well as the number of school lunches claimed.

Results

Number of Items: 1,300 items were collected from the 1,881 student lunch trays reviewed for an overall rate of 0.7 items per student.

Item Weight: These 1,300 items had a total weight of 4,374 ounces (273 pounds) – comparable to 10 car tires, resulting in an overall average of about 2.5 ounce or 0.15 pounds of recoverable food, per student. Average ounces collected per student ranged widely between schools from 0.9 to 4.1 ounces, while number of items collected per student had less variation ranging from 0.4 to 1.3. ***See Figure 12.***

Items Collected/Item Weight							
School	**Number of Lunch Trays Observed**	**Number of Items Collected**	**Items Collected Per Student (Average)**	**Number of Ounces Collected**	**Ounces Collected Per Student (Average)**	**Number of Pounds Collected**	**Pounds Collected Per Student (Average)**
Laclede	422	555	1.3	1,741	4.1	109	0.26
Boyd	146	77	0.5	281	1.9	18	0.12
Jarrett	294	130	0.4	486	1.7	30	0.07
Bingham	318	279	0.9	1,255	4.0	78	0.25
East Prairie	701	259	0.4	613	0.9	38	0.05
TOTAL	1,881	1,300	0.7	4,375	2.5	273	0.15

Figure 12

Types of Items: All five USDA meal components were represented in recoverable food. Fruit made up the largest percentage of recoverable items collected (37%). Combined, fruits and vegetables accounted for 60% of recoverable items (778 items) ***See Figure 13.*** Fruit and vegetables items recovered included prepackaged baby carrots, fresh, whole, unpeeled fruit such as bananas, apples and pears, as well as individually sealed cups of applesauce, frozen strawberries and peach fruit cups.

Sixteen percent of the food recovered was from the milk group. Cartons of flavored (chocolate or strawberry) milk (158) were the most frequently rejected items from the milk group, followed by white or skim milk (47).

Note: Because very few meat/meat alternatives and grains were eligible for recovery on review days as only whole, unpeeled fruit and unopened, factory sealed products can be used, the fruit and vegetable amounts may be disproportionately high. The list of food items eligible for recovery for this project are included as part of the reference material in the Guide for Recruiting Volunteers to Assist with Food Recovery Reviews (***Appendix 3)***. Menus detailing items served and items eligible for recovery from the FRR at each school are included in ***Attachment A***.

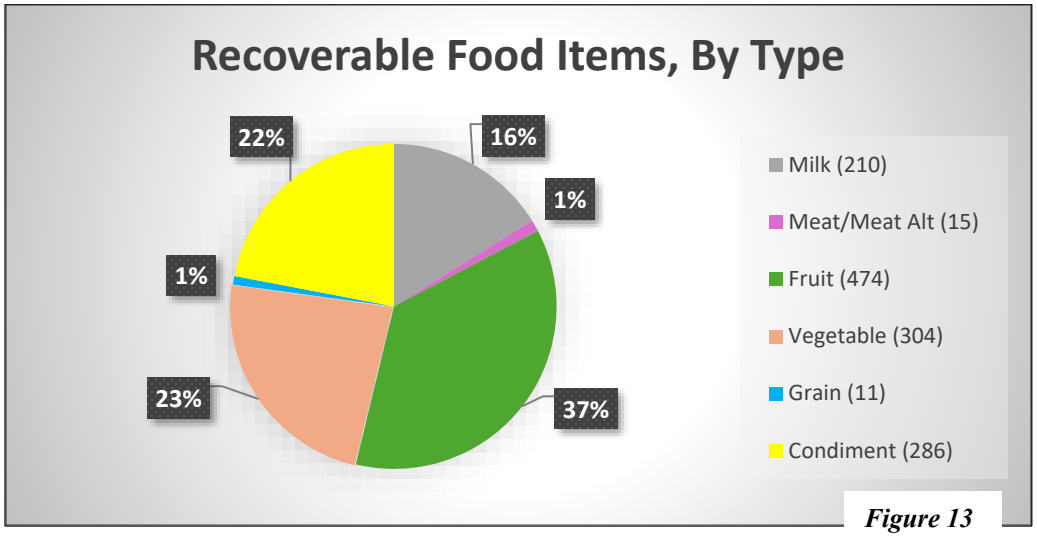


Figure 13

While condiments are not required as part of the national school lunch program and do not count towards the required USDA meal pattern[21], condiments were available (self-serve) for students at all twenty-four of the FRRs conducted. Twenty-two percent (286 items) of all recoverable food collected was individually packaged condiments. Ketchup was by far (228 packets) the most common condiment destined for the landfill. Since condiments are not part of USDA meal pattern requirements, but accounted for a significant number of items collected, the number of condiments is reported separately. Removing the condiments from the overall count of the number of items collected including condiments (0.7 items per student) and without condiments reduced the items collected per student to 0.6, a difference of 0.1 ounce per student. ***See Figure 14***.

Items Collected - With and Without Condiments					
School	**Number of Items Collected**	**Number of Condiments Collected**	**Percentage of Condiments**	**Items Collected Per Student Including Condiments (Average)**	**Items Collected Per Student Without Condiments (Average)**
Laclede	555	35	6%	1.3	1.2
Boyd	77	11	14%	0.5	0.5
Jarrett	130	34	26%	0.4	0.3
Bingham	279	49	18%	0.9	0.7
East Prairie	259	157	61%	0.4	0.1
TOTAL	1,300	286	22%	0.7	0.56

Figure 12

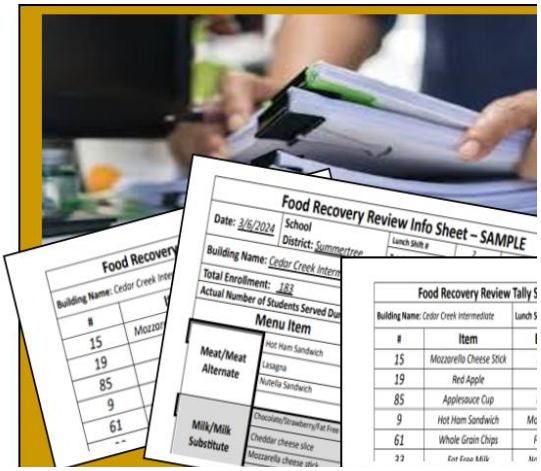
For one school, more than 60% of the recoverable food items were condiments. While that certainly had an impact on East Prairie's number of items, overall changes to the weight of

[21] USDA National School Lunch Meal Pattern Requirements

recoverable items, was fairly insignificant in total. Without condiments, the total weight of all recoverable items (273 pounds) is reduced by less than 6 pounds. Overall changes to the weight of recoverable items with or without condiments, per student is insignificant – a variance of 0.05 ounces making the average ounces per student vary slightly (2.51 versus 2.45 ounces, respectively). ***Figure 15*** demonstrates the differences in number and weight, both with and without condiments.

Ounces Collected - With and Without Condiments						
School	**Number of Items Collected**	**Number of Condiments Collected**	**Ounces Collected Including Condiments**	**Ounces Collected Per Student Including Condiments (Average)**	**Ounces Collected Without Condiments**	**Ounces Collected, Per Student Without Condiments (Average)**
Laclede	555	35	1,741	4.13	1,723	4.08
Boyd	77	11	281	1.92	277	1.89
Jarrett	130	34	486	1.65	476	1.61
Bingham	279	49	1,255	3.95	1,239	3.89
East Prairie	259	157	612	0.87	564	0.8
TOTAL	1,300	286	4,375	2.51	4,279	2.45
Pounds			*273*		*267*	

Figure 15



Information packets were provided to each school with detailed results collected during the review. Menu sheets that were included as part of the information packets were prepared in coordination with school nutrition personnel during the morning of each of the reviews which identified every food item served, whether it was eligible for recovery, the brand name and approximate weight of each item. Additionally, a tally of each food item and its estimated weight was recorded during each of the 24 lunch shifts observed. **See *Attachment A*** for the "Food Recovery Review Results Packet" for each school district.

A variety of information, some collected as part of the project were recorded but not utilized. Some of those factors are discussed in ***Appendix 4.***

Data Extrapolation/Inference

This section considers the results of the project if they were to be scaled up to all schools in Missouri. While lunch at only eight of the more than 2,363[22] public-school buildings that operate during the year were reviewed, it does provide an opportunity to reflect on potential impact for the volume of recoverable food.

According to the latest data available on the Missouri Department of Elementary and Secondary Education's website[23] Missouri's public school system served 861,494 students, Kindergarten through Grade 12, not including Pre-K during the 2022-2023 school year. While not every student enrolled in public school eats lunch served by the school, for the same 2022-2023 school year, DESE reports 80,026,574 school lunches were claimed for reimbursement by public schools.[24] Using the multiplier information from only this project, the potential impact for number of recoverable items in the national school lunch program in public schools in a single year exceeds 56 million as shown below in ***Figure 16***. To quantify, 56 million recoverable items per year equals about the same number of minutes in 107 years.

Data Inference – Number of Items		
Total Number of Student Lunches Served	**Recoverable Items/ Per Student/Per Lunch**	**Total Recoverable Items/ Per Year (Potential)**
80,026,574	0.7	56,018,602

Figure 16

80 million school lunches per year

DESE reports the total number of lunches served to public school students each year, for five school years, ending with 2022, as displayed in ***Figure 17***. With the two school years impacted by COVID (shown in green), removed from the calculation as anomalies, it is a fair estimate that Missouri public schools serve an average of 80 million lunches each year. Therefore, the estimate for lunches served using the multiplier in ***Figure 16*** to calculate weight of recoverable items per year appears to be prudent.

[22] *MO School Statistics | Missouri Department of Elementary and Secondary Education*. (n.d.). "Number of School Buildings – High School, Jr High, Middle, Elementary, Other, and Charter Schools" https://dese.mo.gov/media/pdf/mo-school-statistics (accessed August 16, 2024).

[23] DESE, Missouri Food & Nutrition Services, Total Reimbursable Lunches Served, School Year 2022-2023, (accessed August 14, 2024).

[24] This does not include the additional 1.7M lunches served through the national school lunch program in private schools. This figure includes only lunches served in the national school lunch program and does not include any other meals served by USDA meal programs, such as school breakfast.

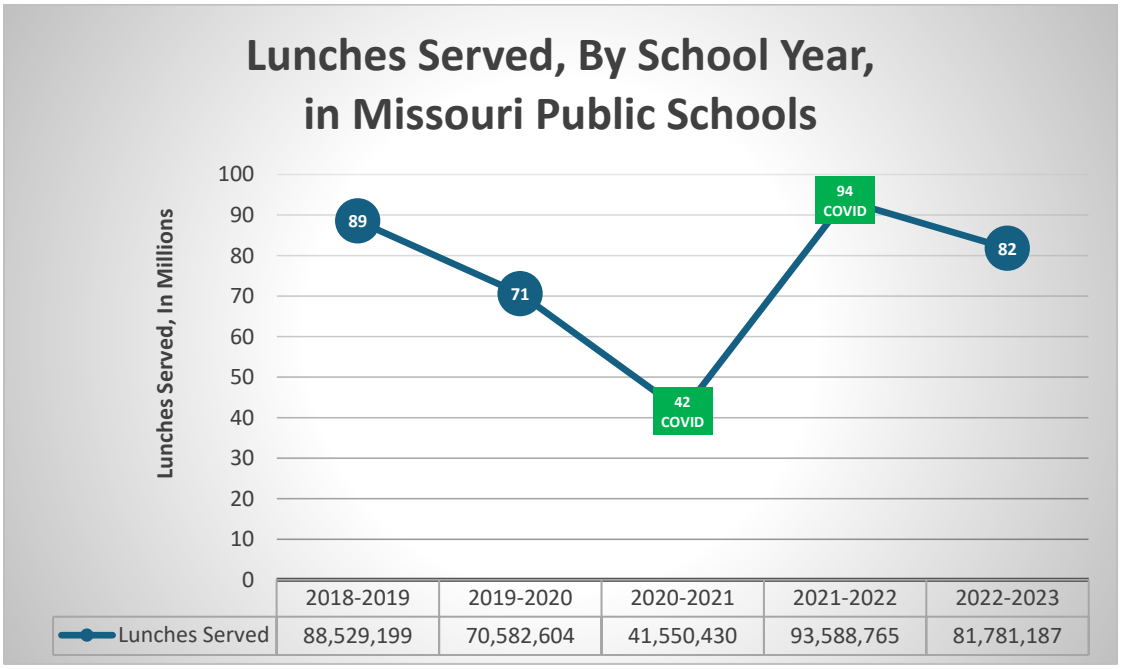


Figure 17

Similarly, using multiplier information from only this project, the potential impact for the weight of food, per year, destined for the landfill is 6,250 tons as shown in ***Figure 18***.

Data Inference – Weight of Items				
Number of Lunches Served	**Recoverable Ounces/ Per Student/Per Lunch (Average)**	**Recoverable Ounces/ Per Year**	**Recoverable Pounds/ Per Year**	**Recoverable Tons/ Per Year**
80,000,000	2.5	200,000,000	12,500,000	6,250

Figure 18

Six thousand tons, ***(See Figure 18)*** or the weight equivalent of ~350 school buses may seem to be a mathematical error; however, other studies have estimated well in excess of 2.5 ounces per student. This estimate using 2.5 ounces or 22-27 recoverable pounds per Missouri student – (***See Figure 19)*** per school year is modest compared to a similar review conducted in 2019 in an elementary school in Lawrenceville, Georgia where students collected food during lunch on one day. During that review, 721 students produced 589 pounds, or 13.1 ounces (0.82 pounds) of recoverable food and milk per student.[25]

Recoverable Food Waste During Lunch in one year

Equivalent to

~350 school buses

Similarly, the findings from the WWF report *(see Footnote 2),* also exceed the weight estimate from the Missouri review.

[25] Food and Environment Reporting Network

WWF estimates that schools on average produce 39.2 pounds of food waste (not all of which is recoverable) per student per year. The WWF study does not differentiate between recoverable food and food waste, but assuming at least some of the 39.2 pounds of wasted food is recoverable further affirms that the Missouri estimate of 22-27 pounds appears appropriate. ***See Figure 19***.

Data Inference – Recoverable Ounces Per Student, Per Lunch Meal, Four- and Five-Day School Weeks[26]

Recoverable Ounces Per Student/ Per Meal	Number of School Days (4-day weeks)	Number of School Days (5-day weeks)
2.5	142	174
TOTAL OUNCES (per student/per year)	355	435
TOTAL POUNDS (per student/per year)	**22.19**	**27.19**

Figure 19

In addition to food waste, the WWF estimates 28.7 cartons of milk waste per student per year. The WWF estimate is also higher for recoverable milk than estimates from this project, likely for the same reason, that is, not all milk waste WWF collected is recoverable. The data collected for this project infers that each student meal claimed through the Missouri public school national school lunch program produces between 15.6 and 19.1 cartons of recoverable milk for four day and five-day school weeks, respectively, per year, about half of the WWF estimates. Therefore, the interference for the quantity of recoverable milk in Missouri schools also appears to be a prudent estimate. ***See Figure 20***.

Data Inference – Recoverable Cartons of Milk Per Student, Four[27]- and Five-Day School Weeks

Recoverable Milks Per Student/ Per Meal	Number of School Days (4-day weeks)	Number of School Days (5-day weeks)
0.11	142	174
TOTAL Cartons of Milk (per student/per year)	15.6	19.1

Figure 20

[26] National Center for Education Statistics, Table 5.14. Number of instructional days and hours in the school year, by state: 2018 (ed.gov)

[27] About 30% of Missouri school districts statewide, mostly in rural areas with higher rates of free and reduced-price lunch, have elected to use a four-day school week, therefore calculations are provided for both four- and the traditional five-day school week.

Focus Groups

To further evaluate food recovery reviews, focus groups were conducted with ten of 21 reviewers, resulting in a response rate of 48%. Focus groups were held between July 16th and July 29th. Participants included seven food recovery review volunteers from the University of Missouri and the FACT, and three participating school cafeteria supervisory staff. There was difficulty in contacting school staff participants (i.e., food service managers and staff) such that future food recovery reviews should avoid planning evaluation or other activities during the summer period when school (and summer school) sessions have ended, and the next school year has not yet started.

Below, experiences and recommendations from the food recovery review project are described based on the results of focus groups. Participants saw food recovery reviews and share tables as an effective means of reducing food waste and found the specific reviews to be efficient and effective. They also had several suggestions, including food recovery review process ideas, updating food offerings to better match students' tastes, clearing up rules around required parts of school meals, and considering the social and government context in which school meals occur. Food is vital for life and carries cultural and social meaning. Solutions to food waste should keep the complex meanings surrounding food and nourishment in mind when applying interventions, as this project accomplished.

Experiences

- **Staff:** Participants spoke highly of CHP staff and saw them as effective to work with. Particularly, focus group participants spoke about strong event planning, preparation, event organization, and the inclusion of school staff in processes. When asked to elaborate, one participant stated "it was coordination with the staff and a lot of communication, a lot of early communication. No bad surprises. Trying to, as much as possible, not disrupt the flow of what they're normally doing." School staff participants and volunteers confirmed this perspective and confirmed a particular appreciation for review processes not disturbing normal workflows.
- **Food recovery review experiences:** Some participants reported little previous experience with food recovery processes, stating they previously had only a vague awareness of practices related to share tables or no knowledge at all. Some participants with experience in education, like former teachers, were more aware of the practices. Others had experience with food recovery in an agricultural setting but not in a school setting.
- **Student age differences**: Nearly all participants noted that older students engaged more efficiently in review processes than elementary-aged students (who had more questions about the purpose of the review and visits from outside volunteers). Younger students seemed to need additional explanations about the review's purpose, review process, and the purpose of review

volunteers' presence. This experience is not uncommon in projects serving youth in a variety of developmental stages.

Focus Group Recommendations

- **Education:** Participants noted that some students seemed confused by the presence of CHP staff and volunteers conducting food recovery reviews. Some believed that additional preparatory education by school would help with students' confusion about the role of staff and the purpose of food recovery reviews. Discussing students, one participant noted, "they had a lot of questions, when they were emptying the tray, like, what were we going to do with the food? And could they have some of the food that we were actually recovering?" Participants noted this was especially common with elementary-aged students. While a degree of youth confusion is probably inevitable schools were asked not to engage in student education prior to the project, in the event that educating students as to recovery review's processes and purposes prior to their implementation could influence engagement at review sites. All but one district complied with the request to refrain from announcements about the purpose of the food recovery reviews.

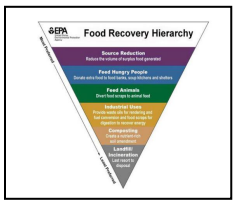
- **Autonomy:** Participants noted that future food recovery practices and events should continue to avoid disrupting normal operations, saying "at the end of each lunch shift, someone's going to have to take all these items, and count them and put them back in the fridge or wherever they go. They've got to allow enough staffing or employees to have a little time to do that." Participants also noted that a share table may be accomplished by an educated student body or especially with junior high and high-school aged students, with one saying, "people are always going to balk because they don't have staff. But the kids could easily put an apple or orange in a different basket. You don't have to have staff to do that if that's done on a daily basis, kids are adaptable."
- **Empowerment:** School staff anticipated that providing lunchroom staff with information to encourage students not to take food they will not eat would reduce food waste. For example, several participants pointed out lunchroom staff told students taking milk with a school meal was mandatory, but that it is not a requirement for reimbursement through the national school lunch program. One said, "our teachers are constantly telling kids they have to take milk. We did do some education with teachers at the beginning of the year, but some of the older teachers still stick to 'you have to have a milk.'" Schools would benefit from an easy-to-understand information sheet (i.e. a one-page handout) from the state of Missouri as to what school lunch requirements are (and are not), to ensure that students are receiving mandatory parts of meals while also communicating accurate information about meal requirements. While urging

students to take food is likely designed only to be well-intentioned, this project provides evidence that food waste is occurring.

- **Staff**: Participants highlighted the importance of having multiple staff at food recovery reviews. Students leave their lunch periods in waves, meaning many students will interact with review staff all at once as they all move to exit the lunchroom. Multiple staff are needed to deal with this sudden influx of students. Participants also noted students were easy to work with, but such a large influx at once requires multiple review staff to maintain efficiency.
- **Top-down vs bottom-up approaches**: Participants noted that while food recovery reviews are an effective bottom-up approach to food waste, their effectiveness would be limited without complementary top-down policy. Participants especially noted the importance of food selection and quality to eliminate food waste, with one saying, "I get students need vegetables. I get that they must have so much of this and have that on the plate. But if the food is going to go in the trash or if it is going to be recovered and then set on the table and not eaten and then go into the trash, then how much of an impact are we making with those things, right? So, I think having more selection and understanding of what the kids are going to eat and figuring out ways to tie what we know they need as far as vegetables into what they would like. Budgets are short, staffing is short, I get it, this is still important enough." This recommendation speaks to reducing food waste by focusing on both source reduction (reducing the volume of surplus food generated) and feeding hungry people (i.e., share tables). ***See Figure 2***.

Focus Group Recommendations (con't)

- Staff
- Top Down/Bottom-Up Approaches
- Reducing Stigma



- **Reducing Stigma**: The topic of stigma and food insecurity is complex. One participant highlighted how stigma can stem from a lack of awareness of food insecurity, saying "there are some people in the world that think every child eats a square meal at least twice a day, but there are some children out here that don't get a square meal at all during the day." This may be true of students, families, and/or staff. Another participant saw share tables as having the potential to reduce stigma among youth who experience food insecurity, saying "at school in a cafeteria, if a student says, 'I can't afford to get extra food,' if they could just go up to a table and pick something up for free, people might not make that connection." A lack of awareness of the reality of food insecurity can lead to the stigmatization of those with it. People experiencing food insecurity understand that stigma, and it can influence their actions in a way that stops them from taking advantage of resources. Share tables are resources open to all students, without any special requirements. Programs like this can reduce stigma by breaking the connection between having need and the use of programs limited to those with need.

School District Follow-Up Activities

All three participating districts were polled approximately 30 days and again at 60 days to determine what, if anything, the district had done with the information. At the 30-day mark, all districts had reviewed the information, shared it with appropriate staff and expressed some surprise at the volume of recoverable food collected. At the 60-day mark, schools reported:

JOEL E. BARBER "Once a Buckskin, Always a Buckskin"	**Laclede County** reported being overwhelmed and saddened by the amount of recoverable food that was wasted within the meal program. The school is "tackling the issue head-on" by re-implementing its share table. Laclede County received a No Kid Hungry grant administered by FACT to purchase warmers to assist staff in maintaining hot food items, particularly breakfast sandwiches, at appropriate temperatures for re-service. Prior to this purchase, there was no way to keep food items hot and eligible to re-serve. Laclede County has used a survey to record student food preferences in the past but has not done so recently. The school district intends to conduct another survey and anticipates that information will inform future menus to reduce waste.
Springfield Public Schools Your Future. Our Focus.	The Springfield School District used the information collected during its food recovery reviews to present to the 250 district-wide food service staff to demonstrate the volume and type of food waste. The Superintendent and Student Nutrition Director has made food waste reduction a priority in all 52 schools in the district. Based on the FRR data, Springfield has taken steps reduce waste. One action is to educate lunch monitors, teachers and students that a serving of milk is not a required component for the reimbursable school meal program even though there seems to be a pervasive thought that students must take a milk with each lunch. Springfield was also a recipient of a No Kid Hungry grant, and they purchased additional carts. These carts allow each cafeteria to mobilize the share table stations and wheel them throughout the cafeteria. This provides easier access for students to collect or donate items from the during the meal.
EP	The East Prairie district reports it is still reviewing the information it received and is determining the appropriate courses of action. East Prairie hopes to implement at least some changes within their food service program. Steps have already been taken to add share tables back into the cafeterias. They hope to fully re-instate share table usage during the 2024-2025 school year. East Prairie also reports it will be reviewing condiment usage to minimize waste. East Prairie also received a No Kid Hungry breakfast challenge grant and purchased a warmer and steam well to allow for more homemade meals for breakfast.

Policy

USDA guidance allows schools to take items left on a share table and reclaim them during another meal service,[28] specifically:

"Share tables allow food or beverage items to be reused in a number of ways, depending on the program's preference:

- ❖ Children may take an additional helping of a food or beverage item from the share table at no cost;
- ❖ Food or beverage items left on the share table may be served **and claimed for reimbursement during another meal service** (i.e., during an afterschool program when leftover from a school lunch); and/or…" **[emphasis added]**

For example, to illustrate the emphasized section above, a school could take a whole, unpeeled banana left over from a reimbursable national school breakfast meal and re-serve that same banana in a reimbursable national school lunch (or breakfast) the same (or different) day.

USDA's School Meals Policy Division in the national office confirmed the practice of re-claiming is allowable within and across any USDA student meal program, but that states/territories may choose to adopt a more restrictive approach and not permit schools to reclaim the same food item within the same or different programs.

Missouri has adopted a more restrictive approach by allowing schools to reclaim food in a separate USDA program. While it is not a federal requirement to limit claims to a separate program, Missouri has chosen this allowable application of the federal policy. To better understand the cross-program restriction, DESE was invited to discuss reclaiming leftover items within the same meal program. DESE is amenable to collaborating with partners to explore opportunities to re-claim food across USDA programs. Work is expected to commence by winter of 2025.

One district in the pilot was aware of DESE's rule to permit reclaiming in a separate program. Two districts were not aware of the option to reclaim food at all, in any programs. The district that attempts to reclaim food between the national school lunch program and the child and adult care snack/supper program, when practical, which DESE allows, admits coordination between two different USDA programs can be difficult.

Gaining an understanding about the amount of food destined for the landfill is one of the first steps toward waste prevention. A food recovery review provides data driven information for policy makers at the local, state, and federal level to enhance closed-loop system elements in an effort to feed students - not landfills.

[28] Use of Share Tables in Child Nutrition Programs | Food and Nutrition Service (usda.gov)

Appendices and References

See also:

Appendix 1 – Expectations for Participating Schools

Appendix 2 – Timeline for Project Completion

Appendix 3 – Guide for Recruiting Volunteers to Assist with Food Recovery Reviews (see page 2 for recoverable food items)

Appendix 4 – Other Factors Noted During Food Recovery Reviews

Attachment A – Food Recovery Review Results Packets with Photos

Reference*:*

Figure 1 – States with Food Waste Toolkits

Figure 2 – EPA Food Recovery Hierarchy

Figure 3 - School District Selection Criteria

Figure 4 – School District Invitees and Participants

Figure 5 - Socioeconomic Factors for Participating School Districts – Homelessness, Mobility and Select Education Metrics

Figure 6 – Student Race, Participating Districts

Figure 7 – Racial Composition of Missouri

Figure 8 – Food Recovery Review Metrics

Figure 9 – Lunch Tray Observations, by Grade Levels

Figure 10 – Share Table and Offer Versus Serve Usage – Average Items and Ounces Collected

Figure 11 – Community Eligibility Provision and Free or Reduced-Price Lunch Rates

Figure 12 – Items Collected/Item Weight

Figure 13 – Recoverable Food Items, By Type

Figure 14 – Items Collected, With and Without Condiments

Figure 15 – Ounces Collected, With and Without Condiments

Figure 16 – Data Inference – Number of Items

Figure 17 – Lunches Served, By School Year, in Missouri Public Schools

Figure 18 – Data Inference – Weight of Items

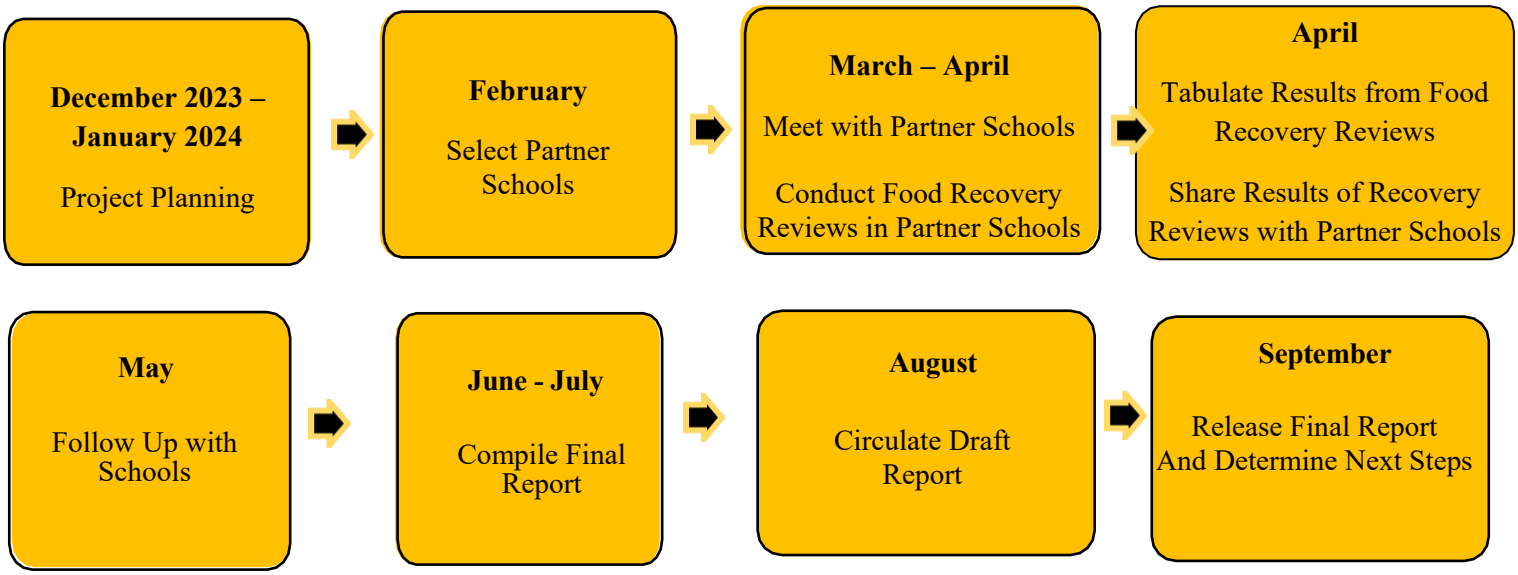
Figure 19 – Data Inference – Recoverable Ounces Per Student, Per Lunch Meal, in Four- and Five-Day School Weeks

Figure 20 – Data Inference – Recoverable Cartons of Milk Per Student, in Four- and Five-Day School Weeks

Appendix 1 – Expectations for Participating Schools – 1 page

Appendix 2 – Timeline for Project Completion - 1 page

Timeline for Project Completion



Appendix 3 – Guide for Recruiting Volunteers to Assist with Food Recovery Reviews - 7 pages

Center for Health Policy

University of Missouri

"Feed Students Not Landfills"
Food Recovery Review - Volunteer Information

Thank you for considering the opportunity to volunteer for this project.

Project: Select schools have been invited to partner with the University of Missouri, Center for Health Policy (CHP) to examine the use of **"share tables"**[1] as a method to maximize food recovery in school cafeterias in high need areas of Missouri.

What is a Share Table: A "share table" is a strategy supported by the United States Department of Agriculture (USDA) to encourage the consumption of nutritious food and reduce food waste in meal programs designed for children. Share tables provide an opportunity for certain food and beverage items to be recovered according to federal, state, and local food safety standards and re-used within a school setting. Share tables have been in use since at least 2013 and were formalized and promoted by the United States Department of Agriculture (USDA) in 2016. Initiatives like share tables, aimed at reducing food waste may re-emerge in popularity since "Improving Food Access" is a component of the 2022 White House National Strategy on Hunger, Nutrition and Health.

Why is this Project Important: According to the World Wildlife Fund (WWF), schools, on average, produce 39.2 pounds of food waste and 19.4 cartons of milk waste per student per year[2] while 1 in 5 Missouri children go hungry[3]. Some of this waste is food and milk that can be safely recovered for re-use rather than placed in a trash can destined for the landfill. Schools can play a role in food recovery in many ways. This project explores on way to recover food – that is by establishing food share tables in school cafeterias. One of the first steps to maximizing the use of share tables, is to conduct a Food Recovery Review.

What is a Food Recovery Review (FRR): Food Recovery Reviews are conducted for many reasons. The purpose of this food recovery review or "food audit" is to count the number of food items destined for the landfill that could be safety re-used within the school and offered to hungry kids.

[1] A "share table" is a designated station where children may return whole and/or unopened food or beverage items they choose not to eat. Use of Share Tables in Child Nutrition Programs | Food and Nutrition Service (usda.gov)
[2] Plate Waste in School Cafeterias.
[3] From Feeding America's Map the Meal Gap for Missouri.

What Will I Have to Do: You will collect certain food/beverage items directly from student lunch trays and throw away uncollectible items. You will count the number of each type of item you

collect and write the number down on a "Food Recovery Review Tally Sheet." You are also asked to observe and record any observations you make during the review. Tips for writing observation comments are included at the end of this document. Your Team Lead will also complete the "Food Recovery Review Information Sheet" and will share it with you before the review begins. Examples of completed forms are included as ***Attachment 1***. Finally, after all the reviews have been conducted, you will be invited to participate in a focus group to discuss your experience with the project.

What Foods Will Be Included in the Review: Only certain food items are eligible for recovery so included items will vary based on the school lunch menu on the day of the review. The rule of thumb is any food that is unopened, uneaten, or has tamper-proof packaging. Examples include (not an exhaustive list):

Food Items Eligible for Re-Use	Food Items Not Eligible for Re-Use
Unopened cartons or sealed beverage containers	Any items opened or bitten
Whole, unbitten fruit with inedible peeling (banana, kiwi)	Sliced fruit served in a cup with re-sealable lid where it is not possible to determine if the seal has been tampered with
Whole unbitten fruit with edible peeling (apple, peach)	Raw vegetables cut up on site even if they are in individual zipper-type bags
Sealed single serve containers (yogurt, fruit cup, cheese stick, applesauce)	Items served without a lid
Single serve factory packaged and sealed cold food (sandwich, granola bar, crackers, cereal cups)	Food served directly onto the plate or tray
Single serve factory packaged and sealed hot food (sandwich, omelet)	Items brought from home (even if sealed)

Your team lead will instruct you on which foods you will collect on the day of the FRR.

Which Schools Will Be Participating in this Project: CHP has invited public school districts in low-income, high need areas representative of Missouri. These areas include:

- Springfield
- Southwest (Ozark, St. Clair, Laclede* Co areas)
- St. Louis
- Central Northeast area of Missouri (Randolph, Monroe Co areas)
- Northwest (Daviess, Caldwell Co area)
- Bootheel (Pemiscot, New Madrid, Mississippi Co areas)

CHP anticipates as many as four district partners.

How Many Food Recovery Reviews Will be Conducted/When Will the Reviews be Conducted/What are the Review Dates: CHP estimates it will conduct up to twelve (12) food recovery reviews. Please note that multiple reviews can occur on the same date, in the same district at sites for different meal periods. For example, in Anytown, Missouri, three separate food recovery reviews for a K-12 school could be conducted on the same day. The first at *Any Garden* for a kindergarten-second grade (but not for grades 3-6) lunch shift, at *Any Garden* for the 7th grade (but

not for 8th grades) lunch shift and finally at *Any Garden* for the sophomore (but not for freshman, junior or senior) lunch periods. A great deal of variation and flexibility according to the school's preference will be necessary. The school districts will help CHP determine how many reviews will be conducted, the location of the reviews, the age group for students and the date/times for the reviews. At this time, dates/times have not been selected.

How Long Will I Have to Be at a Meal Site for the Review: CHP estimates the food recovery volunteer work will take approximately four (4) hours at each meal site as we anticipate conducting several reviews at the same site on the same day.

Will I Have to Stay Overnight: Maybe. Depending on your proximity to the location where the Food Recovery Review will be conducted, you may need to arrive the evening before.

Will I Receive Compensation for Participating in a Food Recovery Review: No. We are asking for volunteers. Mileage, lodging and per diem will vary, based on several factors. You will not be expected to incur non-reimbursable charges.

How Many People Will Be on My Food Recovery Team: We anticipate 4 people per team and one team per lunch shift (up to 100 students) to include:

- 1 Team Lead for general oversight, questions, troubleshoot and document the project with photographs;
- 2 People to collect, sort, count and write down the number of food items;
- 1 additional volunteer will be available to assist where needed.

Will I Know the People on My Food Recovery Team: Maybe. We are asking members of the CHP staff, Family and Community Trust, and other University staff to volunteer. Personnel at each meal site are invited to participate on a team but are not required to do so. Capacity for the school to supply volunteers will vary depending on the school, but schools are not expected to provide volunteers.

What Can I Expect at the School Meal Site: You will be in a school lunchroom/cafeteria. You will need to wear comfortable clothing and footwear suitable for a school setting. You will be standing for extended periods of time collecting and sorting of food items and disposing of ineligible items. School lunch periods are noisy, fast paced environments that will require you to move quickly so as not to disrupt the flow of the lunch period.

What Type of Protective Gear is Available: Since volunteers will be sorting among eaten and uneaten food directly from student trays, gloves should be worn. Hand sanitizer is available. Face coverings are available upon request.

Do I Have to Participate: No. CHP is recruiting a team of volunteers to assist with this project.

If I Participate, Do I Have to Attend All Events: No. You may choose the sites and dates based on your availability. If you participate, we prefer that you are available during the entire review on the selected date.

Am I Required to Obtain a Food Handler Permit: No.

Am I Required to Interact with Students: No. The project does not include any data or information collected directly from individual students.

When Will the Project Be Done: Food Recovery Reviews will be conducting during the months of March and April 2024. The entire project will be completed by September 30, 2024.

How Will the Information I Collect Be Used: The information CHP gathers will be used to create a report that provides a collection of observed, emerging or promising practices and identifies barriers and challenges Missouri schools experience with collecting food items for use of share tables. The report will be shared with partners, including volunteers and added as a resource in the Missouri Antihunger Toolkit.

Ready to Volunteer or Still Have Questions about this Project. Contact the "*Feed Students Not Landfills*" CHP Project Lead:

Kimberley Sprenger
Senior Program/Project Support Coordinator

University of Missouri, Center for Health Policy
Columbia, MO
573/659-9963 - Mobile
Kimberley.Sprenger@health.missouri.edu

Simple Tips for Writing Observations for this Project:

Some helpful terms to keep in mind:

- **FACTUAL** and **SPECIFIC** and **OBJECTIVE** – Write what you saw not what you think you saw. No opinions, please.
- **ACCURATE** – Only write what you know, not what you suspect.
- **STAND ALONE STATEMENTS** – Someone who is not present should be able to read your observation and determine what happened.
- **RELAVANT** – Ask yourself the question, "will recording this information be useful to the project's purpose or the team's future observations". If your answer is "yes" or "maybe," write it down!

Examples:
POOR – there were a bunch of trays in the way and when they fell over one student cried
GOOD – A stack of trays piled up and fell over
BETTER – Trays piled up at the end of the lunch shift because students waited until the bell rang to return their tray.
BEST – About 50 trays piled up on the sorting station at the end of the lunch shift because students waited until the bell rang to return their tray. The contents of approximately 25 trays spilled onto the floor. None of the food on the floor was included in the count.

Examples of statements that may be interesting but are not relevant:

- Most of the students were wearing blue shirts – some long sleeve and some short sleeve and a few were wearing red.
- A few students put mustard on their meatloaf.
- I think a student brought a fish sandwich from home. Another student complained about the smell.
- Two kids asked me what I was doing.

WHEN IN DOUBT – WRITE IT OUT – Don't worry about including something irrelevant. Use your best judgement on what to include in the moment. We can always omit information that isn't relevant.

Food Recovery Review Tally Sheet - SAMPLE

Building Name: *Cedar Creek Intermediate*

Lunch Shift: *2* of *5*

#	Item	Brand	Apx Weight
15	*Mozzarella Cheese Stick*	*Alpine*	*3 oz*
19	*Red Apple*		*5 oz*
85	*Applesauce Cup*	*Mayve*	*4 oz*
9	*Hot Ham Sandwich*	*Moutainside*	*7.4 oz*
61	*Whole Grain Chips*	*Frenchly*	*2.8 oz*
33	*Fat Free Milk*	*North Dairy*	*5.9 oz*
17	*1% Milk*	*North Dairy*	*5.9 oz*
2	*Chocolate Milk*	*North Dairy*	*5.9 oz*
9	*Strawberry Milk*	*North Dairy*	*5.9 oz*
14	*Frozen Grape Juice Cup*	*Midland*	*4.2 oz*
4	*Dried Cranberries*	*Marlin*	*0.5 oz*

OBSERVATIONS/NOTES:

About 50 trays piled up on the sorting station at the end of the lunch shift because students waited until the bell rang to return their tray. The contents of approximately 25 trays spilled onto the floor. None of the food on the floor was included in the count.

Went through 3 sets of gloves (gloves tore) during this lunch shift

Lunch monitor had not been informed why we were there; asked us to leave until she could contact principal

Apx 25 students had not been served when the cafeteria ran out of apples towards end of lunch shift and had to sub cranberries.

Apx 15 students did not place trays at sorting station and threw food away before count

Reviewer: Janna Smiley

Date: 03/31/24

Attachment 1
to Food Recovery Review Volunteer Guide

Food Recovery Review Info Sheet – SAMPLE

Date: *3/6/2024*	**School District:** *Summertree*	**Lunch Shift #**	*2*	**Offer vs Serve:** ☐Yes ☒No	
		Total Lunch Shifts	*5*		
Building Name: *Cedar Creek Intermediate*		**Lunch Shift Start Time:**	*11:05*	**Total Min of Lunch Shift:**	*23*
		Lunch Shift End Time:	*11:28*		
Total Enrollment: *183*				**Grade Levels:** *6-7-8th*	
Actual Number of Students Served During Lunch Period: *125*					

	Menu Item	Eligible for Recovery	Description
Meat/Meat Alternate	Hot Ham Sandwich	☒Yes ☐No	Individually wrapped and mfg sealed
	Lasagna	☐Yes ☒No	Homemade
	Nutella Sandwich	☐Yes ☒No	Prepared and wrapped in cafeteria
		☐Yes ☐No	
Milk/Milk Substitute	Chocolate/Strawberry/Fat Free milk	☒Yes ☐No	Individual sealed carton
	Cheddar cheese slice	☐Yes ☒No	Served directly on tray
	Mozzarella cheese stick	☒Yes ☐No	Individually wrapped
		☐Yes ☐No	
Fruit	Red apple	☒Yes ☐No	Served whole with peeling on
	Dried cranberries	☒Yes ☐No	Individually sealed packet
	Applesauce cup	☒Yes ☐No	Individual cup with foil seal
	Grape frozen juice cup	☒Yes ☐No	Individual cup with foil seal
Vegetable	Broccoli florets	☐Yes ☒No	Repackaged in cafeteria
	Corn coblet	☐Yes ☒No	Not wrapped
		☐Yes ☐No	
		☐Yes ☐No	
Grains	Whole grain chips	☒Yes ☐No	Individually sealed bag
	Slice of wheat bread	☐Yes ☒No	Served directly onto tray
	Quinoa	☐Yes ☒No	Served directly onto tray
		☐Yes ☐No	
Other/Misc	Ketchup	☒Yes ☐No	Individually sealed packet
	Mayonnaise	☐Yes ☒No	Served from squirt-type dispenser
		☐Yes ☐No	

Reviewer: Janna Smiley

Photos Taken: ☒Yes ☐No

Notes:
Charlotte, Head Cook, reported the cafeteria typically serves about 160 students, but today they served 125. She speculated this could be because students don't really like school lasagna because it is made with whole wheat noodles and many students bring their lunch. She said she also heard several students in second grade were absent due to influenza which has hit their school hard.

Appendix 4: - Other Factors Noted During Food Recovery Reviews – 2 pages

Four-Day School Week/Day of Week: One of the five schools utilizes a four-day school week, and the remaining schools are on a five-day school week schedule. Reviews were conducted on each day of the week except Tuesday (Monday, Wednesday, two on a Thursday and Friday). No data was examined to consider any correlations between length of school week or day of the week when the review occurred.

Menu/Student Preferences: Most of the cafeterias utilize a four-week menu rotation schedule, however, supply interruptions are still an issue post-COVID, so substitutions must be made when menu items are unavailable. The menu on review days varied significantly among the schools, even cafeterias within the same district. Menu items served included "kid friendly" items one may expect to be available in any cafeteria on any school day - pizza, tacos, hamburgers, fries, chocolate milk, as well as additional items such as chicken sandwiches, wraps, salads, yogurt, juice, fruit cups, baby carrots, and tator tots. Since student preferences were not considered as part of the review, the menu items were documented but not examined to draw any conclusions about whether the item should be included in future menu options.

Cafeteria/Share Table Set-Up: Cafeteria space, some exclusively for food service and others as multi-purpose areas, used a variety of set-ups to accommodate the flow of traffic for students collecting meal trays. Similarly, share table stations were set up in a multitude of ways – no share table at all, some tables immediately after the point of service as students exit the serving line, others set up right before food trays are dumped into the trash can and some utilizing both locations. The logistics of cafeteria set-up or share table locations were not taken into consideration as best practices can vary widely among schools.

Cafeteria Monitors: Some schools used a designated, assigned monitor whose role was to observe and enforce cafeteria code of conduct, while others used a more informal system where some teachers consumed their own lunch while observing students. Others still had school nutrition staff circulating among students, talking with them, observing, and formally or informally making items available for re-use in the cafeteria. It was not possible to compare these practices, but worthy of mention that every school district affirmed it used the space and resources available to ensure children were fed.

Re-Use of Collected Food Items: Two hundred and sixty-eight (268) individually packaged baby carrots were headed to the landfill at one school cafeteria. Since 64% of the students did not open the package of baby carrots the first time they were served, it is unlikely these carrots would be consumed, even if they had been offered through a share table. Rejected food items such as baby carrots, while recoverable, may not be eaten by students, even if collected. This information was noted and provided to the district for their internal consideration.

Other factors, such as nutrition professional staff to student ratios, time of day for lunch service, whether districts prepare food or contract with companies such as Tahar or Aramark, were recognized, and in some cases noted during the reviews, but not discussed as part of the project.

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[i]*This project is supported by the (U.S.) Department of Health and Human Services (HHS) as part of a financial assistance award totaling $273,402 with 100% funded by HHS through DSS. The contents do not necessarily represent the official views of, nor an endorsement, by HHS, or the U.S. or state government.*

Attachment A – Food Recovery Review Results Packets with Photos - (39 pages, including cover sheet)

--Springfield Public School District-Boyd Results

Review Date: Wednesday, April 1, 2024 (6 pages)

--Springfield Public School District-Bingham Results

Review Date: Wednesday, April 3, 2024 (6 pages)

--Springfield Public School District-Jarrett Results

Review Date: Wednesday, April 5, 2024 (9 pages)

--Laclede County C-5 School District Results

Review Date: Thursday, April 25, 2024 (5 pages)

--East Prairie Public School District- Results

Review Date: Thursday, May 2, 2024 (12 pages)

Center for Health Policy

University of Missouri

"Feed Students Not Landfills"
Proof of Concept Project for Maximizing Food Recovery

Food Recovery Review (FRR) Results East Prairie (EP) School District **Information Summary For Review Date Thursday, May 2, 2024**		
Total Student Enrollment: **995** Grade Level: **PreK – 12th**	Total Number of Students Served on Review Date: **701**	Percentage of Students Served (not including absentees)*: **70%**
Total Items Collected: **259** Number of Condiments Inc: **157**	Total Ounces Collected: **613 ounces**	Total Pounds Collected: **38.3 pounds**
Total Items Collected Per Student Served: **0.4 items/student**	Total Ounces Collected Per Student Served: **0.9 ounces**	Total Pounds Collected Per Student Served: **0.05 pounds**
Four Day School Week: ☐**Yes** ☒**No**	CEP School: ☒**Yes** ☐**No** OR FRL:	Share Table In Use: ☐**Yes** ☒**No**
Number of Lunch Shifts: **11**	Average Lunch Period/Minutes: **25**	Offer versus Serve: ☒**Yes** ☐**No** (except Pre-K)
Current Share Table Practices**: There is no share table system in use at the East Prairie School District. A share table existed in the past, but discontinued during COVID, and its use was not resumed. Offer versus Serve in use except for PreK.**		
Food Recovery Reviewers**: Jeananne Markway, Donna Imhoff, Kathryn Wilson, Shelby Yake, Susan Norship-Haney, Dana Brown-Ellis, Danielle Cogdill and Kimberley Sprenger**	School Contact: **Jennifer Jones, Food Service Director** jennifer.jones@eastprairie.org **Office: 573/313-1188** **Kitchen Managers** **Elizabeth Schulte – Elementary – 573/233-4297** **Faith Owens – Middle School – 573/427-6362** **Tina McCutchen – High School – 573/649-7616**	

PreK – 4th: 311 lunches

Grades 5 – 8: 226 lunches

Grades 9-12: 164 lunches

TOTAL: 701 lunches

Number of lunch periods observed: 11

Average lunch period/minutes: 25

Menu Item on Review Date*		Eligible for Recovery	Packaging	Brand	Apx Weight	Total Number Collected (from all shifts)
Meat/Meat Alternate	Chicken Alfredo	☐Yes ☒No				
	Cheeseburger	☐Yes ☒No				
	Chef Salad	☐Yes ☒No				
	Pizza	☐Yes ☒No				
	Chicken Patty	☐Yes ☒No				
	Sub sandwich	☐Yes ☒No				
	Taco/Nachos	☐Yes ☒No				
	Chicken Cheese Rice	☐Yes ☒No				
Milk/Milk Substitute	White Milk	☒Yes ☐No	Ind ½ pt carton	Prairie Farm	8 oz	8
	Chocolate Milk	☒Yes ☐No	Ind ½ pt carton	Prairie Farm	8 oz	32
	Strawberry Milk	☒Yes ☐No	Ind ½ pt carton	Prairie Farm	8 oz	7
Fruit	Applesauce	☒Yes ☐No	Sealed cup	Peterson	4.5 oz	18
	Apple Juice	☒Yes ☐No	Ind carton		4 oz	1
	Banana	☒Yes ☐No	Whole		4 oz	8
	Cranberries	☒Yes ☐No	Ind package		1.6 oz	2
	Tomatoes	☐Yes ☒No				
Vegetable	Baby Carrots	☒Yes ☐No	Ind package	Bunny Love	2 oz	26
	Bell Peppers	☐Yes ☒No				
	French Fries	☐Yes ☒No				
	Salad	☐Yes ☒No				
	Cowboy Beans	☐Yes ☒No				
Grains	Roll	☐Yes ☒No				
Other/Misc	Condiment-Ketchup	☒Yes ☐No	Sealed packet		0.32 oz	147
	Condiment-Mustard	☒Yes ☐No	Sealed packet		0.2	7
	Condiment-Mayo	☒Yes ☐No	Sealed packet			
	Condiment-Taco Sauce	☒Yes ☐No	Sealed packet	West Creek	0.32 oz	1
	Condiment-Salt	☒Yes ☐No	Sealed packet		0.03	1

	Condiment-Pepper	☒Yes ☐No	Sealed packet		0.004	1
	Condiment-Ranch	☐Yes ☒No	Self-dispensed			
Total Items Collected						**259**
NOTES	*Not every item is offered during every lunch shift. The East Prairie (EP) School District utilizes the Tahar Food Service Company for its meal planning and service. The menus are rotated every six weeks. Tahar uses some commodity allocations in meals. EP also offers an all-you-can-eat self-service fresh fruit and vegetable bar (FFV) for the middle and high school students. The FFV is available for any student to self-select items, even if the student brings their lunch from home. The FFV was made possible through a grant. The High School students have an "open campus" for their lunch period. This means that while the students cannot leave without permission, outside food items can be delivered to the cafeteria from local establishments. Food from outside sources was delivered on the review date. Students may elect to receive two entrees, but the second entrée is self-paid, and not part of the CEP meal service. All condiments are self-serve. At the high school, at least 75% of the trays contained multiple servings of ranch. It appeared some students had not used any of the ranch dispensed onto their tray. This was mentioned post-review to staff. Staff explained they had tried multiple options to reduce self-dispensed condiment waste.					

Detailed information, by lunch shift, is provided below.

Lunch Shift #	1	**Offer vs Serve:** ☐Yes ☒No	
Total Lunch Shifts	1		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xxx
Lunch Shift End Time:	xxx		
Grade Levels:	Pre-K	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, White	1	8	8	
Ketchup	9	0.32	2.88	
TOTAL	**10**		**10.9**	**0.5**

Lunch Shift #	1	**Offer vs Serve:** ☐Yes ☒No	
Total Lunch Shifts	1		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xxx
Lunch Shift End Time:	xxx		
Grade Levels:	Kindergarten	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Ketchup	40	0.32	12.8	
TOTAL	**40**		**12.8**	**0.8**

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	1		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	1	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Banana	1	6	6	
Baby Carrots	1	2	2	
Ketchup	21	0.32	6.72	
TOTAL	**23**		**14.7**	**0.9**

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	1		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	2	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	7	8	56	
Milk, Strawberry	1	8	8	
Banana	1	6	6	
Applesauce	3	4.5	13.5	
Baby Carrots	1	2	2	
Ketchup	24	0.32	7.68	
Mustard	4	0.2	0.8	
TOTAL	**41**		**94**	**5.8**

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	1		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	3	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	4	8	32	
Milk, White	3	8	24	
Applesauce	3	4.5	13.5	
Ketchup	25	0.32	8	
TOTAL	**35**		**77.5**	**4.8**

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	1		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	4	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	4	8	32	
Milk, White	2	8	16	
Milk, Strawberry	3	8	24	
Apple Juice	1	4	4	
Banana	2	6	12	
Applesauce	4	4.5	18	
Ketchup	14	0.32	4.48	
TOTAL	**30**		**110.5**	**6.8**

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	2		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	Middle School	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	7	8	56	
Milk, Strawberry	3	8	24	
Banana	2	6	12	
Applesauce	6	4.5	27	
Baby Carrots	11	2	22	
Ketchup	14	0.32	4.48	
TOTAL	**43**		**145.5**	**9**

Lunch Shift #	2	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	2		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	Middle School	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	7	8	56	
Applesauce	2	4.5	9	
Baby Carrots	7	2	14	
TOTAL	**16**		**79**	**4.9**

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	High School	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	1	8	8	
Milk, White	1	8	8	
Baby Carrots	1	2	2	
TOTAL	**3**		**18**	**1.1**

Lunch Shift #	2	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	High School	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Milk, Chocolate	2	8	16	
Milk, White	1	8	8	
Baby Carrots	1	2	2	
Cranberries	2	1.6	3.2	
Salt	1	0.03	0.03	
Pepper	1	0.004	0.004	
Taco Sauce	1	0.32	0.32	
TOTAL	**9**		**29.6**	**1.8**

Lunch Shift #	3	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	xxx	**Total Min of Lunch Shift:**	xx min
Lunch Shift End Time:	xxx		
Grade Levels:	High School	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Banana	2	8	12	
Baby Carrots	4	2	8	
Mustard	3	0.2	0.6	
TOTAL	**9**		**20.6**	**1.5**

Photos Collected at the Event


Prairie Farms


Prairie Farms


Prairie Farms


Prairie Farms
Prairie Farms
APPLE SAUCE
ORIGINAL


LOCAL FRESH
1% LOW FAT
MILK


Prairie Farms
LOCAL FRESH
1% LOW FAT
MILK

Center for Health Policy

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Food Recovery Review Results Laclede County C-5 School District **Information Summary** for Review Date Thursday, April 25, 2024**		
Total Student Enrollment: **523** Grade Level: **Pre-K – 8th**	Total Number of Students Served on Review Date: **422**	Percentage of Students Served (not including absentees): **81%**
Total Items Collected: **555** Number of Condiments Inc: **35**	Total Ounces Collected: **1,741 ounces**	Total Pounds Collected: **109 pounds**
Total Items Collected Per Student Served: **1.3 items/student**	Total Ounces Collected Per Student Served: **4.1 ounces**	Total Pounds Collected Per Student Served: **0.26 pounds**
Four Day School Week: ☒**Yes** ☐**No**	CEP School: ☒**Yes** ☐**No** OR FRL:	Share Table In Use: ☐**Yes** ☒**No**
Number of Lunch Shifts: **4**	Average Lunch Period/Minutes: **25**	Offer versus Serve: ☐**Yes** ☒**No**
Current Share Table Practices**: An informal system to share food exists at Laclede County C-5. Breakfast in the Classroom is served each school day and any shelf stable items left over from breakfast are collected and made available during the lunch shifts for Grades 3-8 to self-select items at no cost. Also, paraprofessionals that assist during the lunch period monitor student consumption to the extent possible and move uneaten items to students that may still be hungry. Finally, as time permits, the Kitchen Manager and staff are in the cafeteria while students are eating observing student preferences, including uneaten items and shifting those to students who may want additional food.**		
Food Recovery Reviewers: **Donna Imhoff and Kimberley Sprenger**	School Contact: **Edith Pearcy** epearcy@jebc5.k12.mo.us **Ofc: 417/532-4837 x 5163**	

Menu Item on Review Date		Eligible for Recovery	Packaging	Brand	Apx Weight	Total Number Collected (from all shifts)
Meat/Meat Alternate	Pepperoni Pizza	☐Yes ☒No				
	Chef Salad	☐Yes ☒No				
Milk/Milk Substitute	White Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	8 oz	18
	Chocolate Milk	☒Yes ☐No	Ind ½ pint carton	Hiland	8 oz	29
Fruit	Strawberry Fruit Cup	☒Yes ☐No	Sealed cup	Wawona	4.5 oz	204
	Apple Juice	☒Yes ☐No	Individual carton	Hiland	4 oz	0
	Orange Juice	☒Yes ☐No	Individual carton	Hiland	4 oz	0
Vegetable	French Fries	☐Yes ☒No				
	Tator Tots	☐Yes ☒No				
	Baby Carrots	☒Yes ☐No	Prepackaged	Markon	1.6 oz	268
Grains	Breadstick	☐Yes ☒No				
Other/Misc	Fudge Brownie	☐Yes ☒No				
	Condiment-Ketchup	☒Yes ☒No	Sealed packet	Red Gold	0.32 oz	28
	Marinara	☒Yes ☐No	Sealed cup	Red Gold	1.25 oz	7
	Croutons	☐Yes ☒No				
	Crackers	☒Yes ☐No	Sealed package	Lance	0.23 oz	1
Total Items Collected						**555**

Detailed information, by lunch shift, is provided below.

Lunch Shift #	1	**Offer vs Serve:** ☐Yes ☒No	
Total Lunch Shifts	4		
Lunch Shift Start Time:	11:10 AM	**Total Min of Lunch Shift:**	25 min
Lunch Shift End Time:	11:35 AM		
Grade Levels:	Pre-K and Kindergarten	**Total Number of Students Served:**	72

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Carrots	44	1.6	70.4	
Marinara	4	1.25	5	
Milk, Chocolate	1	8	8	
Milk, White	1	8	8	
Strawberry Fruit Cup	27	4.5	121.5	
Ketchup	4	0.32	1.28	
TOTAL	**81 items**		**214.2 ounces**	**13.4 pounds**

Lunch Shift #	2	**Offer vs Serve:** ☐Yes ☒No	
Total Lunch Shifts	4		
Lunch Shift Start Time:	11:40	**Total Min of Lunch Shift:**	**25** min
Lunch Shift End Time:	12:05		
Grade Levels:	1-2	**Total Number of Students Served:**	70

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Carrots	31	1.6	49.6	
Marinara	2	1.25	2.5	
Milk, Chocolate	2	8	16	
Milk, White	3	8	24	
Strawberry Fruit Cup	37	4.5	166.5	
Ketchup	1	0.32	0.32	
TOTAL	**76 items**		**258.9 ounces**	**16.2 pounds**

Lunch Shift #	3	**Offer vs Serve:** ☐Yes ☒No	
Total Lunch Shifts	4		
Lunch Shift Start Time:	12:10	**Total Min of Lunch Shift:**	**25** min
Lunch Shift End Time:	12:35		
Grade Levels:	3-4	**Total Number of Students Served:**	107

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Carrots	80	1.6	128	
Milk, Chocolate	12	8	96	
Milk, White	8	8	64	
Strawberry Fruit Cup	47	4.5	211.5	
Ketchup	2	0.32	0.64	
TOTAL	**149 items**		**500.1 ounces**	**31.3 pounds**

Lunch Shift #	4	**Offer vs Serve:** ☐Yes ☒No	
Total Lunch Shifts	4		
Lunch Shift Start Time:	12:45	**Total Min of Lunch Shift:**	**25** min
Lunch Shift End Time:	1:10		
Grade Levels:	5-8	**Total Number of Students Served:**	173

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Carrots	113	1.6	180.8	
Marinara	1	1.25	1.25	
Milk, Chocolate	14	8	112	
Milk, White	6	8	48	
Strawberry Fruit Cup	93	4.5	418.5	
Ketchup	21	0.32	6.72	
Crackers	1	0.23	0.23	
TOTAL	**249 items**		**767.5 ounces**	**48 pounds**

Photos Collected at the Event

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Food Recovery Review (FRR) Results Springfield School District/Bingham **Information Summary Review Date Wednesday, April 3, 2024**		
Total Student Enrollment: **426** Grade Levels: **K – 5th**	Total Number of Students Served on FRR Date: **318**	Percentage of Students Served (not including absentees)*: **75%**
Total Items Collected: **279** Number of Condiments Inc: **49**	Total Ounces Collected: **1,255 ounces**	Total Pounds Collected: **78 pounds**
Total Items Collected Per Student Served: **0.9 items/student**	Total Ounces Collected Per Student Served: **3.9 ounces**	Total Pounds Collected Per Student Served: **0.25 pounds**
Four Day School Week: ☐**Yes** ☒**No**	CEP School: ☐**Yes** ☒**No** OR **FRL:** 78%	Share Table In Use: ☒**Yes** ☐**No**
Number of Lunch Shifts: **3**	Average Lunch Period/Minutes: **30**	Offer versus Serve: ☒**Yes** ☐**No**
Current Share Table Practices**: There is no universal district wide practice for share tables. Each of the 52 individual school building determines its own system (if any) for sharing food. Bingham places a share table by the water station for students to drop off unwanted items. Any student (including those who do not buy school lunch) can collect any item from the share table. Bingham does not believe it is using its share table to the fullest potential, stating "…some students forget its there and it is under used." A challenge identified at Bingham is making sure the share table contains "only packaged items and not open containers."**		
Food Recovery Reviewers**: Shelby Yake, Larita Emanuel, Donna Imhoff and Kimberley Sprenger with assistance from Ciera Fields, SPSD**	School Contact: **Kim Keller, Director of Student Nutrition** **kkeller@spsmail.org** **Office: 417/523-1110** Debra Maples - damaples@spsmail.org	

Number of Lunch Periods: 3

Average Lunch Period/Minutes: 30

Menu Item on Review Date**		Eligible for Recovery	Packaging	Brand	Apx Weight (per item)	Total Number Collected (from all shifts)
Meat/Meat Alternate	Chick Nuggets	☐Yes ☒No				
	Roll	☐Yes ☒No				
	Pizza/MYO	☐Yes ☒No				
Milk/Milk Substitute	White Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	6
	Chocolate Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	39
	Strawberry Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	2
	Skim Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	2
	Cheese Stick	☒Yes ☐No	Sealed	Land O Lakes	1 oz	9
Fruit	Peach Cup	☒Yes ☐No	Sealed cup	Tabatchnick	4 oz	47
	Apple Juice	☒Yes ☐No	Ind carton	Hiland	4 oz	32
	Orange Juice	☐Yes ☐No	Ind carton	Hiland	4 oz	16
	Pear	☐Yes ☐No	Whole		5 oz	1
	Banana	☐Yes ☐No	Whole, unpeeled		6 oz	33
	Apple	☒Yes ☐No	Whole, Unpeeled		8 oz	42
Vegetable	Corn	☐Yes ☒No				
	Broccoli	☐Yes ☒No				
	Red Pepper Strips	☐Yes ☒No				
	Salad	☐Yes ☒No				
	Zucchini	☐Yes ☒No				
Grains	PB Sandwich	☐Yes ☒No				
	WW Goldfish Crackers	☐Yes ☒No	Indiv bag	Pepp Farms	0.75	1
Other/Misc	Condiment-Ketchup	☒Yes ☒No	Sealed packet	Heinz	0.32 oz	24
	Condiment-Ranch Cup	☒Yes ☐No	Sealed cup		0.75	5
	Condiment-BBQ Sauce	☒Yes ☐No	Sealed packet	Heinz	0.42	5
	Condiment - Butter	☒Yes ☐No	Sealed cup	Gold n Sweet	0.18	15
Total Items Collected						**279**
NOTES	*Attendance at this school is calculated by hours, so it is possible not all students were present during lunch. **Not every item is served at every meal shift.					

Detailed information, by lunch shift, is provided below.

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	10:05 AM	**Total Min of Lunch Shift:**	45 min
Lunch Shift End Time:	10:50 AM		
Grade Levels:	Kindergarten and Grade 5	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
White milk	2	6	12	
Choc Milk	8	6	48	
Strawberry Milk	2	6	12	
Skim milk	1	6	6	
Apple	12	8	96	
Banana	12	6	72	
Peach cup	15	4.4	66	
Cheese Stick	4	1	4	
Apple juice	7	4	28	
Orange juice	4	4	16	
Ketchup packet	7	0.2	2.24	
Ranch cup	5	0.75	3.75	
BBQ sauce packet	4	0.42	1.68	
Whole Wheat Goldfish Crackers	1	0.75	0.75	
TOTAL	**84**		**368.4**	**23**

Lunch Shift #	2	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	10:40 AM	**Total Min of Lunch Shift:**	50 min
Lunch Shift End Time:	11:10 AM		
Grade Levels:	Grade 2 and Grade 4	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
White milk	3	6	18	
Choc Milk	13	6	78	
Apple	7	8	56	
Banana	18	6	108	
Pear	1	5	5	
Peach cup	11	4.4	48.4	
Cheese Stick	1	1	1	
Apple juice	11	4	44	
Orange juice	7	4	28	
Ketchup packet	7	0.2	2.24	
TOTAL	**79**		**388.6**	**24.3**

Lunch Shift #	3	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	11:15 AM	**Total Min of Lunch Shift:**	30 min
Lunch Shift End Time:	11:45 AM		
Grade Levels:	Grade 1 and Grade 3	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
White milk	1	6	6	
Choc Milk	18	6	108	
Skim milk	1	6	6	
Apple	23	8	184	
Banana	3	6	18	
Peach cup	21	4.4	92.4	
Cheese Stick	4	1	4	
Apple juice	14	4	56	
Orange juice	5	4	20	
Ketchup packet	10	0.2	3.2	
BBQ sauce packet	1	0.42	0.42	
Butter cup	15	0.18	2.7	
TOTAL	**116**		**500.7**	**31.3**

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Food Recovery Review Results Springfield School District/Boyd **Information Summary** **for Review Date Monday, April 1, 2024**		
Total Student Enrollment: **187** Grade Levels: **PreK – 5th**	Total Number of Students Served on Review Date: **146**	Percentage of Students Served (not including absentees)*: **78%**
Total Items Collected: **77** Number of Condiments Inc: **11**	Total Ounces Collected: **281 ounces**	Total Pounds Collected: **18 pounds**
Total Items Collected Per Student Served: **0.5 items/student**	Total Ounces Collected Per Student Served: **1.9 ounces**	Total Pounds Collected Per Student Served: **0.12 pounds**
Four Day School Week: ☐**Yes** ☒**No**	CEP School: ☐**Yes** ☒**No** OR **FRL:** 83%	Share Table In Use: ☒**Yes** ☐**No**
Number of Lunch Shifts: **3**	Average Lunch Period/Minutes: **30**	Offer versus Serve: ☒**Yes** ☐**No** (except Pre-K)
Current Share Table Practices**: There is no universal district wide practice for share tables. Each of the 52 individual school building determines its own system for sharing food. Boyd places a share table at the front of the cafeteria loaded with ice packs, where the kids may put items in the tub for others to utilize. Any student (including those who do not buy school lunch) can collect any item from the share table. Boyd believes it is using its share table to the fullest potential. Boyd identified its biggest challenge as "Too much milk. Kids are grabbing the milk if they don't need it, and place in share table." Offer versus serve in use except for PreK.**		
Food Recovery Reviewers**: Jeremy Milarsky and Kimberley Sprenger with assistance from Ciera Fields, SPSD**	School Contact: **Kim Keller, Director of Student Nutrition** **kkeller@spsmail.org Office: 417/523-1110** Beth Edwards - eaedwards@spsmail.org	

Number of Lunch Shifts: 3

Average Lunch Period/Minutes: 30

Menu Item on Review Date		Eligible for Recovery	Packaging	Brand	Apx Weight	Total Number Collected (from all shifts)
Meat/Meat Alternate	Fish Sticks	☐Yes ☒No				
	Flat Bread	☐Yes ☒No				
	Chicken Parm	☐Yes ☒No				
Milk/Milk Substitute	White Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	3
	Chocolate Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	20
	Strawberry Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	1
	Cheese Stick	☒Yes ☐No	Sealed	Land O Lakes	1 oz	3
Fruit	Mixed Berry Fruit Cup	☒Yes ☐No	Sealed cup	Tabatchnick	4 oz	17
	Apple Juice	☒Yes ☐No	Individual carton	Hiland	4 oz	6
	Orange Juice	☒Yes ☐No	Individual carton	Hiland	4 oz	8
	Mixed Fruit	☐Yes ☒No				
Vegetable	Red Pepper Strips	☐Yes ☒No				
	Tator Tots	☐Yes ☒No				
	Salad	☐Yes ☒No				
Grains	Cheez-It	☒Yes ☐No	Indiv Bag	Nabisco	0.75 oz	8
Other/Misc	Condiment-Ketchup	☒Yes ☒No	Sealed packet	Heinz	0.32 oz	11
	Condiment-Mayo	☒Yes ☐No	Sealed packet	Heinz		0
	Condiment-Tartar Sauce	☒Yes ☐No	Sealed packet	Heinz		0
Total Items Collected						**77**
NOTES	*Attendance at this school is calculated by hours, so it is possible not all students were present during lunch. **Not every item is served at every meal shift. Students utilized standard lunch line/business as usual procedures, meaning that the share table was open and students could place unopened items. Some students placed unwanted items at the share table. None of the items students placed on the share table were included in the counts as it was not possible to record items left because some were quickly picked up by other students. During the food recovery review, only food items destined for the landfill were included in the count.					

Detailed information, by lunch shift, is provided below.

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☒No Yes for Kindergarten/No for Pre-K	
Total Lunch Shifts	3		
Lunch Shift Start Time:	10:30 AM	**Total Min of Lunch Shift:**	30 min
Lunch Shift End Time:	11:00 AM		
Grade Levels:	Pre-K and Kindergarten	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Cheez-Its	1	0.75	0.75	
Apple Juice	1	4	4	
Cheese Stick	1	1	1	
Milk, Chocolate	2	6	12	
Milk, Strawberry	1	6	6	
Milk, White	3	6	18	
Mixed Berry Cup	3	4	12	
Ketchup	5	0.32	1.6	
TOTAL	**17**		**55.4**	**3.5**

Lunch Shift #	2	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	11:00 AM	**Total Min of Lunch Shift:**	30 min
Lunch Shift End Time:	11:30 AM		
Grade Levels:	1-2-3	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Cheez-Its	4	0.75	3	
Apple Juice	3	4	12	
Cheese Stick	1	1	1	
Milk, Chocolate	14	6	84	
Orange Juice	1	4	4	
Mixed Berry Cup	9	4	36	
Ketchup	4	0.32	1.28	
TOTAL	**36**		**141.3**	**8.8**

Lunch Shift #	3	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	11:30 AM	**Total Min of Lunch Shift:**	30 min
Lunch Shift End Time:	12:00 PM		
Grade Levels:	4-5	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
Cheez-Its	3	0.75	2.25	
Apple Juice	2	4	8	
Cheese Stick	1	1	1	
Milk, Chocolate	4	6	24	
Orange Juice	7	4	28	
Mixed Berry Cup	5	4	20	
Ketchup	2	0.32	0.64	
TOTAL	**24**		**83.9**	**5.2**

Photos Collected at the Event

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Food Recovery Review (FRR) Results Springfield School District/Jarrett **Information Summary for Review Date Friday, April 5, 2024**		
Total Student Enrollment: **466** Grade Levels: **6th – 8th**	Total Number of Students Served on FRR Date: **294**	Percentage of Students Served (not including absentees)*: **63%**
Total Items Collected: **130** Number of Condiments Inc: **34**	Total Ounces Collected: **485 ounces**	Total Pounds Collected: **30 pounds**
Total Items Collected Per Student Served: **0.4 items/student**	Total Ounces Collected Per Student Served: **1.7 ounces**	Total Pounds Collected Per Student Served: **0.1 pounds**
Four Day School Week: ☐**Yes** ☒**No**	CEP School: ☐**Yes** ☒**No** OR FRL: **67%**	Share Table In Use: ☒**Yes** ☐**No**
Number of Lunch Shifts: **3**	Average Lunch Period/Minutes: **30**	Offer versus Serve: ☒**Yes** ☐**No**
Current Share Table Practices**: There is no universal district wide practice for share tables. Each of the 52 individual school building determines its own system (if any) for sharing food. At Jarrett, students place items on the share table that they do not want to eat so that another student can eat it. Any student (including those who do not buy school lunch) can collect any item from the share table. Jarrett believes it is using its share table to the fullest potential. Jarrett identified its biggest challenge as the share table is "always empty at lunch time."**		
Food Recovery Reviewers**: Kathryn Wilson, Jeananne Markway and Kimberley & DeWayne Sprenger**	School Contact: **Kim Keller, Director of Student Nutrition** **kkeller@spsmail.org Office: 417/523-1110** Site Contact: **Kim Wahlquist, Cafeteria Supervisor** **krwahlquist@spsmail.org Office: 417/523-6690**	

Number of Lunch Shifts: 3

Average Lunch Period/Minutes: 37

Menu Item on Review Date		Eligible for Recovery	Packaging	Brand	Apx Weight	Total Number Collected (from all shifts)
Meat/Meat Alternate	Taco (hard or soft)	☐Yes ☒No				
	Chicken Sand (spicy or reg)	☐Yes ☒No				
	Turkey Wrap	☐Yes ☒No				
Milk/Milk Substitute	White Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	12
	Chocolate Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	28
	Skim Milk	☒Yes ☐No	Ind ½ pt carton	Hiland	6 oz	1
	Yogurt	☒Yes ☐No	Ind serving	Danimals	4 oz	2
	Cheese Stick	☒Yes ☐No	Sealed	Land O Lakes	1 oz	3
Fruit	Orange Juice	☒Yes ☐No	Ind carton	Hiland	4 oz	11
	Apple Juice	☒Yes ☐No	Ind carton	Hiland	4 oz	17
	Apple	☒Yes ☐No	Whole		8 oz	7
	Pear	☒Yes ☐No	Whole		5 oz	1
	Orange	☒Yes ☐No	Whole		5.5 oz	3
Vegetable	Corn	☐Yes ☒No				
	Baby Carrots	☒Yes ☐No			2.6 oz	10
Grains	PB Sandwich	☐Yes ☒No				
	Kickin Beans	☐Yes ☒No				
	Cilantro Rice	☐Yes ☒No				
Other/Misc	Condiment-Ketchup	☒Yes ☐No	Sealed packet	Heinz	0.32 oz	18
	Condiment-Mustard	☒Yes ☐No	Sealed packet	Heinz	0.2 oz	5
	Condiment-Ranch Cup	☒Yes ☐No	Sealed cup	Heinz	0.75 oz	1
	Condiment-Taco Sauce	☒Yes ☐No	Sealed packet	Heinz	0.3 oz	10
	Graham Crackers	☒Yes ☐No	Sealed packet	HoneyMaid	0.5	1
Total Items Collected						**130**
NOTES	*Attendance at this school is calculated by hours, so it is possible not all students were present during lunch. **Not every item is served at every meal shift. At Jarrett – Lunch shift #2 and #3 overlap slightly but care was taken to record the number of items per shift. During shifts #2 and #3, lunch supervisor announced "volunteers are here to see if you are eating good."					

Detailed information, by lunch shift, is provided below.

Lunch Shift #	1	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	11:25 AM	**Total Min of Lunch Shift:**	30 minutes
Lunch Shift End Time:	12:05 PM		
Grade Levels:	Grade 6?	**Total Number of Students Served:**	294

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
White milk – 1%	5	6	30	
Choc Milk	15	6	90	
Apple	5	8	40	
Yogurt	1	4	4	
Cheese Stick	1	1	1	
Apple juice	8	4	32	
Orange juice	6	4	24	
Ketchup packet	2	0.32	0.64	
Mustard packet	1	0.2	0.2	
Taco sauce packet	1	0.3	0.3	
Baby carrots	3	2.6	7.8	
TOTAL	**48 items**		**229.9 ounces**	**14.4 pounds**

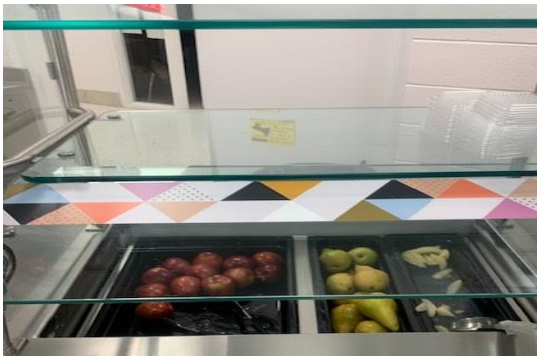
Lunch Shift #	2	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	12:10 PM	**Total Min of Lunch Shift:**	40 min
Lunch Shift End Time:	12:50 PM		
Grade Levels:	Grade 7	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
White milk	6	6	36	
Choc Milk	5	6	30	
Apple	2	8	16	
Yogurt	1	4	4	
Cheese Stick	2	1	2	
Apple juice	7	4	28	
Orange juice	4	4	16	
Ranch cup	1	0.75	0.75	
Taco sauce packet	2	0.3	0.6	
Ketchup packet	2	0.32	0.64	
Baby carrots	7	2.6	18.2	
TOTAL	**39 items**		**152.2 ounces**	**9.5 pounds**

Lunch Shift #	3	**Offer vs Serve:** ☒Yes ☐No	
Total Lunch Shifts	3		
Lunch Shift Start Time:	12:40 PM	**Total Min of Lunch Shift:**	40 min
Lunch Shift End Time:	1:20 PM		
Grade Levels:	Grade 8	**Total Number of Students Served:**	000

Item	Number Collected	Apx Weight Per Item (in ounces)	Total Weight (in ounces)	Total Weight (in pounds)
White milk	1	6	6	
Skim milk	1	6	6	
Choc Milk	8	6	48	
Orange	3	5.5	16.5	
Apple	1	8	8	
Graham cracker	1	0.5	0.5	
Apple juice	2	4	8	
Orange juice	1	4	4	
Mustard	4	0.2	0.8	
Taco sauce packet	7	0.3	2.1	
Ketchup packet	14	0.32	4.48	
TOTAL	**43 items**		**104.4 ounces**	**6.5 pounds**

Photos Collected at the Event




Hillandale


LUNCH
PAD
SHARE
TABLE
Please place unopened food on
the share table, instead of
throwing it away.
Hiland
APPLE
JUICE


SHARE
TABLE