MCPS ZERO by FIFTY Zero Waste Plan

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"[I care] because my future matters."
"Change starts with us!"

—MCPS High School Students on the MCPS Zero Waste Initiative

Prepared by:

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Executive Summary

In February 2016, the Missoula City Council unanimously adopted a Zero Waste Resolution. The City committed to a Zero Waste goal: a community-wide 90 percent reduction in landfill disposal by 2050. Since titled ZERO by FIFTY: Missoula's Pathway to Zero Waste, this effort is gaining momentum, and a City ZERO by FIFTY Zero Waste plan is nearing completion.

In spring 2017, Major John Engen convened a meeting with MCPS Superintendent Mark Thane and the ZERO by FIFTY leadership team to discuss the role of MCPS in supporting the City's Zero Waste goal. Representatives from Home ReSource and MCPS then made public comment to the Board of Trustees on an emerging MCPS Zero Waste effort. In October, MCPS and Home ReSource began co-hosting an Energy Corps service member charged with coordinating Zero Waste planning for the district.

This spring, we solicited input on this effort from over 50 high school students at Willard Alternative, Sentinel, and Hellgate high schools. With Superintendent Thane, we convened 17 administrators, board members, principals, teachers, staff, and students in a MCPS Zero Waste Steering Committee. The committee offered input, identified barriers, brainstormed solutions, and ultimately generated this Zero Waste plan.

After providing brief context, the MCPS ZERO by FIFTY Zero Waste Plan uses the City's framework of four pathways to achieve Zero Waste: Access, Infrastructure, Education, and Policy. Plan objectives include: modifying operations to maximize source reduction, developing accessible district-wide recycling and composting programs, providing comprehensive education for Zero Waste to the MCPS community, and developing district policies to support ZERO by FIFTY goals. The plan offers these top priorities for the district:

1. Evaluate immediate capacity for implementation of the MCPS ZERO by FIFTY Zero Waste Plan, and identify strategies to increase capacity in the years ahead
2. Rethink district-wide materials acquisition to prioritize source reduction and environmentally preferable purchasing (EPP)
3. Implement comprehensive and standardized district-wide recycling and composting programs
4. Transition to using durable food serviceware in MCPS cafeterias
5. Implement programs to reduce wasted food in MCPS
6. Prioritize comprehensive and ongoing whole-district education for the Zero Waste plan

Practical considerations for this plan are included in supporting appendices, written with committee input and informed by supplemental research. Appendices detail the planning process, considerations for district capacity and support, implementation strategies, first steps to take while operating with limited resources, and relevant case studies.

Together, these documents offer an outline for an earnest and concerted MCPS Zero Waste effort. Alone, they will accomplish little. If they are used by MCPS as a goal, a template, and a starting point for Missoula's collective journey toward Zero Waste, the district will continue to be an innovator in the community as it becomes Montana's first Zero Waste school district.

Background and Context

Adopted by City Council in February 2016, the Missoula Zero Waste Resolution set a goal for Missoula to become Zero Waste by reducing per-capita landfilled waste by 90 percent by 2050.[1] Interim targets include 30 percent reduction by 2025, 40 percent by 2030, and 60 percent by 2040. A city-wide ZERO by FIFTY Zero Waste plan is nearing completion.

In the spring of 2017, Missoula Mayor John Engen convened a meeting with MCPS Superintendent Mark Thane and the ZERO by FIFTY leadership team to discuss aligning MCPS with the City's Zero Waste goal. Home ReSource then began working with Superintendent Thane to coordinate a MCPS Zero Waste planning effort. Starting in October 2017, Home ReSource, in partnership with MCPS, hosted an Energy Corps service member who was charged with coordinating the planning effort using the ZERO by FIFTY framework.

Working from a set of recommendations for a Zero Waste MCPS drafted by Home ReSource, students, teachers, faculty, and staff on the MCPS Zero Waste Steering Committee provided input, identified barriers, and brainstormed solutions to inform this plan.

The City of Missoula ZERO by FIFTY Framework

The following two excerpts from the City's ZERO by FIFTY plan[2] provide a useful and relevant framework for a MCPS Zero Waste initiative.

Guiding principles

1. Rethink: Wasted materials = resources
   This plan is informed by two assumptions: waste is not inevitable, and wasting resources is an unsustainable contemporary cultural norm. The vast majority of materials discarded in U.S. landfills every day are simply misplaced resources.[3] The success of ZERO by FIFTY will rely on the extent to which current and future Missoulians' perceptions of materials can be cognitively reframed from "waste"-in-waiting to "resources" that have significant value in a circular economy.
2. Maintain equity
   This plan is informed by the belief that achieving Zero Waste is a community effort. Involving all Missoulians in ZERO by FIFTY will require equitable implementation of Zero Waste strategies in a manner that eliminates barriers to participation, encourages ownership of a shared vision, and causes no extraordinary burden on any particular group. The City of Missoula recognizes that some of the actions necessary to achieve community Zero Waste goals recommended in this plan require additional costs to implement and maintain. While Zero Waste services and actions are largely positive for Missoula, extra costs can be an unintended burden, especially for low and fixed-income households and other vulnerable Missoulians. Recognizing this important tension will be a guiding consideration in ZERO by FIFTY implementation, and every effort will be made to mitigate those negative externalities.
3. Prioritize upstream and midstream solutions
   This plan is informed by the awareness that we cannot recycle our way to Zero Waste.[4] Upstream solutions are source reduction strategies that equate to using fewer resources through selection of durable, long-lasting goods and those made with minimal toxicity and minimal volume of material.

Midstream solutions include reuse, repair, refurbishing, repurposing, and other strategies that retain or increase the value of existing value-added goods and materials.

4. Incorporate transparency and accountability
   ZERO by FIFTY is rooted in Missoula's values, and in recognition that our community is better when government policy and service is a reflection of, and is informed and shaped by, constituents, stakeholders, and staff from both the public and private sectors in an open and inclusive process and venue. This transparency underpinned the process to the ZERO by FIFTY plan development and will continue as a foundation moving forward with implementation. Accountability is the natural complement to transparency, especially as the City and partners move ZERO by FIFTY from strategy planning to execution. Accountability provides a measure of performance, and demonstrates a commitment to providing context and background to how and why decisions are being made. Accountability is also a commitment to sharing accomplishments and acknowledging lessons learned to provide an iterative, flexible process and strategy that ensures resiliency and success. Transparency and accountability maintain and grow confidence in government and ensure essential collaboration and public engagement.

Four paths to Zero Waste

1. *Access*: Missoulians will adopt and normalize Zero Waste behaviors with the increase of convenient, affordable Zero Waste services and programs.
2. *Infrastructure*: Missoula's Zero Waste economy will be supported by a network of local facilities and businesses that together provide the framework for sustainable materials management.
3. *Education*: Missoulians who understand the benefits of Zero Waste and how to get there drive the community toward achieving its Zero Waste goal.
4. *Policy*: The City's careful use of incentives, policies, safeguards, and restrictions will ensure continuous community progress toward its Zero Waste goal.

MCPS ZERO by FIFTY Zero Waste Plan: Four Pathways to Zero Waste

A. Access

Successful Zero Waste systems, services, and programs are accessible to everyone. Those include source reduction, reuse, recycling, and composting. Ensuring user-friendly, universal access to these systems, services, and programs throughout the district is essential to provide opportunities for all members of the MCPS community to realize a Zero Waste MCPS.

Objective A1: Create universal access to Zero Waste systems, services, and programs

Action A1.1: Implement Zero Waste systems, services, and programs in all MCPS administrative buildings, school buildings, and district facilities

Objective A2: Increase opportunities for the MCPS community to engage in source reduction, reuse, recycling, and composting

Action A2.1: Create and install visually-consistent and user-friendly Zero Waste Stations (at a minimum, a recycling bin paired with every trash can); determine most appropriate collections streams (e.g., bottles & cans, paper, food scraps & compostable food serviceware, and landfill) for

appropriate user areas (e.g., offices, classrooms, cafeterias, kitchens, auditoriums, bathrooms, athletic facilities, playgrounds, and parking lots); and ensure consistency in colors and messaging

Action A2.2: Encourage the proliferation of Zero Waste classrooms, inspired by the model developed by Kim Johnson in her fifth grade classroom at Franklin Elementary

Action A2.3: Implement materials reuse systems for classrooms, offices, coffee carts, and other appropriate locations

Action A2.4: Develop a strategy to transition to Zero Waste MCPS events, including athletics, forensics, music, theater, and other school and public events

B. Infrastructure

Effective infrastructure is necessary to support Zero Waste programs. These largely behind-the-scenes systems and services allow for the proper diversion of materials streams and the transformation of processes and behaviors toward Zero Waste.

Objective B1: Implement comprehensive and standardized district-wide composting and recycling programs

Action B1.1: Determine most appropriate recyclables collection program (e.g., all-in-one, source-separated, or other program); co-locate recycling collection receptacles with every trash dumpster and establish necessary collection services at all locations; assess and optimize current internal collection systems that aggregate materials from classrooms, hallways, offices, and elsewhere; and add separate cardboard-only dumpsters at appropriate locations to maximize source separation and retain maximum value of materials

Action B1.2: Determine most appropriate compost collection program (e.g., on-site composting, compost collection service, or other program); develop district-wide collection infrastructure; and establish necessary collection services for compostable materials with initial emphasis on cafeterias and the Central Kitchen

Objective B2: Modify food service operations to create systems that reduce wasted food and food-related packaging

Action B2.1: Redesign school cafeterias and lunch stations to make lunch choices more appealing to students and to reduce wasted food (e.g., salad bars, sandwich stations, and improved advertising for prepared meals)

Action B2.2: Transition from disposable to durable food serviceware in elementary and middle schools, and plan for a future transition for high schools

Action B2.3: Purchase and use compostable food serviceware for events and circumstances in which durables are not a viable option, and consider widespread implementation of compostable food serviceware as an alternative or "bridge" to durables

Action B2.4: Create and/or expand food share programs for students' uneaten fruits and packaged food items in all MCPS cafeterias to redirect uneaten food to other students

Action B2.5: Explore options to donate surplus cafeteria food and food share leftovers to a local nonprofit, potentially through the Missoula Food Bank's Food Circle program

Action B2.6: Ensure that operational systems are in place to direct scraps from food preparation, inedible post-consumer food, and compostable food serviceware to compost and/or animal feed

C. Education

Education of MCPS staff, students, and community members before, during, and after the implementation of Zero Waste programs is key to their success. Establishing a school-to-home-to-community connection between the MCPS Zero Waste initiative and the City's ZERO by FIFTY effort will support Missoula's collective Zero Waste goal.

Objective C1: Educate the MCPS community about Zero Waste in general and ZERO by FIFTY in particular

Action C1.1: Ensure comprehensive training is provided to all MCPS staff on the implementation, use, and maintenance of Zero Waste systems, and offer continuing education credits to faculty for attending sustainability trainings

Action C1.2: Establish clear, consistent messaging for the MCPS Zero Waste initiative that aligns with ZERO by FIFTY, and recognize that consistency in messaging and infrastructure will mutually benefit these efforts

Action C1.3: Develop a comprehensive, multi-faceted public communications strategy informing the entire MCPS community about the Zero Waste initiative, strategies for implementation, and metrics to track progress while seeking opportunities to engage students as peer educators

Objective C2: Support transdisciplinary Zero Waste education

Action C2.1: Identify and explore connections between Zero Waste programs and STEM learning, as well as the International Baccalaureate and Advanced Placement programs

Action C2.2: Through the Teaching and Learning Department, integrate Zero Waste education into curriculum at all MCPS schools, possibly through grade-specific sustainability units that support current educational standards; participate in educational sustainability programs such as the Home ReSource Zero Waste Ambassadors Program (ZWAP!) and the National Wildlife Federation's Eco-Schools USA Program; and consider student-led waste audits at appropriate locations throughout MCPS schools and facilities to identify areas with high waste reduction potential

D. Policy

To become Montana's first Zero Waste school district, MCPS may need to adopt additional district policies and procedures. New policies for the management of materials will support the Zero Waste initiative while creating new efficiencies across district operations.

Objective D1: Launch a district-wide Zero Waste and/or Sustainability Initiative

Action D1.1: Make a public commitment to Zero Waste and/or Sustainability supported by a Board of Trustees-approved Zero Waste and/or Sustainability mission statement

Action D1.2: Update staff contracts, union contracts, and job requirements to support and implement the MCPS Zero Waste plan

Action D1.3: Ensure faculty support for student-led environmental clubs and organizations at each school

Objective D2: Reevaluate district-wide acquisition and use of materials

Action D2.1: Identify successful models of environmentally preferable purchasing (EPP) policies for K-12 districts; adopt a district-wide EPP policy to include considerations of waste avoidance as well as human and environmental health in the search for products and services; and explore options for a transition to a paperless system in partnership with the City of Missoula

Action D2.2: Research best practices around the intersection of recess, lunch, and food waste, and recommend appropriate changes for elementary and middle schools

Action D2.3: Consider encouraging the use of reusable school supplies and removing disposable items from student school supply lists

Action D2.4: Continue efforts to reduce reliance on packaged foods served in school cafeterias; increase Farm to School efforts; and consider phasing out sales of bottled water in vending machines

Objective D3: Adopt a district-wide policy for construction and demolition (C&D) debris from building projects

Action D3.1: Recognize that C&D debris, often representing valuable resources, is one of the largest contributors to landfilled materials

Action D3.2: Evaluate current C&D materials management systems and identify new partnerships to reduce landfilled C&D materials

Action D3.3: Propose policy changes and identify new procedures to ensure maximum use of these materials (e.g., policies that prioritize deconstruction and limit demolition)

Action D3.4: Consider adopting policies to ensure that Zero Waste systems and infrastructure needs are intentionally incorporated into designs for new construction

Top Priorities for MCPS

1. Evaluate immediate capacity for implementation of the MCPS ZERO by FIFTY Zero Waste Plan, and identify strategies to increase capacity in the years ahead
   The degree to which recommended objectives can be successfully achieved is largely dependent on the district's staffing and financial capacities. Identify and pursue objectives that can be achieved in the short-term with limited capacity (see Appendix V). When possible, develop a staffed position to ensure full implementation of this plan and commit sufficient financial resources as appropriate.
2. Rethink district-wide materials acquisition to prioritize source reduction and environmentally preferable purchasing (EPP)
   Examine current practices for materials acquisition in MCPS, including cafeteria purchases and school, office, and cleaning supplies, and adjust practices to reduce MCPS' demand for materials in terms of both quantity and toxicity.
3. Implement comprehensive and standardized district-wide recycling and composting programs
   Install Zero Waste systems, establish Zero Waste services, and develop Zero Waste programs in all MCPS buildings and facilities to maximize recycling and composting.
4. Transition to using durable food serviceware in MCPS cafeterias
   Phase out purchases of disposable food serviceware, acquire durable alternatives, and create new systems for the use of durables.
5. Implement programs to reduce wasted food in MCPS
   Recognizing intersections between surplus food and food insecurity, create and/or expand food share programs, explore options to donate surplus cafeteria food and food share leftovers to a local nonprofit, and compost all residual food waste.
6. Prioritize comprehensive and ongoing whole-district education for the Zero Waste plan
   Affirming the importance of individual buy-in to the Zero Waste plan, offer diverse educational opportunities to MCPS students, faculty, staff, and community members on Zero Waste systems, services, and programs to equip them to participate fully.

See Appendix IV for potential implementation strategies for these top priorities.

[1] Missoula City Council (2016), Resolution No. 8044: A resolution supporting the creation of a zero waste plan and setting waste reduction goals for the City of Missoula, *City of Missoula*, Web.
[2] City of Missoula (2017), ZERO by FIFTY… Missoula's pathway to zero waste, *City of Missoula*, Web.
[3] Goldstein, J., and C. Electris (2011), More jobs, less pollution: Growing the recycling economy in the U.S., *Tellus Institute*, Web.
[4] Margolis, J. (2018), Mountains of U.S. recycling pile up as China restricts imports, *USA Today*, Web.

June 2018

MCPS ZERO by FIFTY Zero Waste Plan

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Index of Appendices

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I. Introduction to Zero Waste

A. What is Zero Waste?

The Zero Waste International Alliance (ZWIA) is the source of the only peer-reviewed, internationally-accepted definition of Zero Waste.[1] The City of Missoula embraced this definition upon adoption of the Missoula Zero Waste Resolution in February 2016:

> *"Zero Waste is a goal that is ethical, economical, efficient, and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health."*

B. Why Zero Waste?

MCPS can expect more students, more demand for and use of materials, and higher costs for landfill disposal into the future.

- Total enrollment may grow 5.2% by 2023, with nearly 12% growth in middle and high schools[2]
- Nationwide trends indicate that the cost of landfill disposal will continue to increase in the future[3]

U.S. public schools generate significant quantities of waste, much of which can be avoided through source reduction or diverted through recycling and composting programs.

- Public schools are often among the largest waste generators in any given city, county, or state[4]
- Average K-12 schools can generate 0.52 lb. per-capita of wasted material daily.[5] Montanans generate 57-93% more waste per-capita than the national average.[6,7] Calculations estimate that *MCPS generated 755+ tons of waste* from daily operations alone in the 2017-2018 school year.
- Major contributors to landfilled school materials are organics (51%), paper (21-31%), and plastic (12-14%).[8,9] Though many schools have recycling programs, contaminants alone can account for more than 40% of recycling collections.[10]
- Waste assessments have found that 78-86% of school materials can be recycled or composted[11,12]

School districts are uniquely positioned to benefit from Zero Waste initiatives.

- Districts can reduce landfill disposal costs by implementing Zero Waste programs[13] (see Appendices III.B. and VI.B.5)
- Zero Waste programs generate new opportunities for hands-on STEM learning across grades[14] (see Appendix VI.B.1)
- When implemented at the district level, Zero Waste initiatives provide consistency and congruency throughout students' careers[15]

MCPS can create significant and lasting community change by moving toward Zero Waste.

- MCPS can create a school-to-home-to-community connection between its Zero Waste plan and the City of Missoula ZERO by FIFTY plan to support congruency with community Zero Waste goals[16]
- MCPS can help foster a culture shift toward sustainability: sustainability can be achieved if the world's leading institutions—education, the media, business, governments, traditions, and social movements—"reorient cultures toward sustainability"[17]

II. MCPS Zero Waste Planning

A. MCPS High School Student Listening Sessions

Overview and highlights

In early 2017, Home ReSource led student listening sessions at a Willard Alternative High School Program class as well as at Sentinel and Hellgate high schools in partnership with student environmental clubs. The sessions introduced students to the Zero Waste initiative and solicited their feedback. Over 50 students participated, offering thoughtful, creative, and practical considerations for a Zero Waste MCPS.

What we heard

***Access*: Students recognize that Zero Waste systems must be consistently easy to understand and use to support maximum participation. Students' observations are prudent:**

- Presently, it's easier to throw stuff away than to recycle or compost it
- Students play an important role as participants in the MCPS Zero Waste initiative

***Infrastructure*: Students envision broad Zero Waste infrastructure changes to their schools. Student priorities include creating user-friendly Zero Waste Stations and reducing waste in school cafeterias:**

- Create and implement consistent, user-friendly Zero Waste Stations. Pair trash cans with recycling and compost bins, and shift to using smaller trash cans.
- Develop composting systems
- Use reusable food serviceware instead of disposables in cafeterias
- Reduce use of packaged foods in cafeterias

***Education*: Students recognize that education is crucial to the Zero Waste initiative. Students must be educated on the appropriate use of Zero Waste systems; they can then become educators for the larger MCPS community. Student-focused education can include:**

- Providing whole-school education (the how, what, and where of Zero Waste)
- Creating school-wide educational programs to encourage the development of Zero Waste habits
- Encouraging students and staff to rethink personal attitudes, habits, and actions for the consumption and disposal of materials

Students brainstormed potential components of a Zero Waste education campaign:

- Starting in elementary schools (in terms of education and practice) may be an appropriate strategy for large-scale implementation of the Zero Waste plan

- Students can support a MCPS Zero Waste education campaign:
    - Peer-to-peer education (public service announcements, presentations, mentoring, educational events, and club activities)
    - Peer-to-community education to model to the community that Zero Waste works
    - Students can enforce and/or monitor Zero Waste Stations, especially in cafeterias
    - Student clubs can play an active role in supporting the Zero Waste plan

***Policy*: Students are outspoken in their interest to help rethink and redesign their school district. Students are hopeful that they can support the Zero Waste plan by:**

- Speaking at school board meetings and working with the administration
- Encouraging MCPS to buy products from environmentally-conscious companies

Student-generated recommendations (underlined text below) aligned with the *Top Priorities for MCPS* offered in the Zero Waste plan:

- ✓ Rethink district-wide materials acquisition to prioritize source reduction and environmentally-preferable purchasing (EPP)
- ✓ Implement comprehensive and standardized district-wide recycling and composting programs
- ✓ Transition to using durable food serviceware in MCPS cafeterias
- ✓ Reduce wasted food in MCPS schools
- ✓ Prioritize comprehensive and ongoing whole-district education for the Zero Waste initiative

Student Quotations

- "Implementing Zero Waste in MCPS will encourage the larger community to follow suit."
- "It is important because it is a huge part of our community that could be an example for others."
- "I care about reducing waste because I live on this planet!"
- "Students play a crucial role because they are the future."
- "Change starts with us!"
- "[I care] because my future matters."
- [We need] "a different attitude towards waste and responsibility among students."
- The MCPS community can work together "to achieve a better environment within our schools."
- Students can play a role by "thinking about habits and actions of consuming and disposing of materials."
- Students can "model to the community that waste reduction works."
- *"Kids are more likely to become caring, responsible adults if they start practicing behaviors like recycling as kids."—Parent of Franklin Elementary student at Franklin Family Fun Night 2018*

Key Takeaway—Students are inspired to help create a Zero Waste MCPS

MCPS ZERO by FIFTY Zero Waste Plan: Student Listening Session Responses

Do you care about reducing waste in MCPS? Why or why not?	What would a Zero Waste MCPS look like to you?	What role do you see students playing in moving MCPS towards Zero Waste?	What challenges, beliefs, or behaviors will we need to overcome on the way to Zero Waste?
People who don't care may just not know the harms of waste (C)	Use reusable dishware and silverware instead of disposables in cafeterias (B)	Participating in Zero Waste systems (A)	**CHALLENGES**
Will create new habits and a larger paradigm shift (C)	Reduce use of packaged foods in school cafeterias (B)	Enforcing or monitoring Zero Waste Stations (C)	It is easier to throw stuff away rather than to recycle or compost it (A)
"Implementing Zero Waste in MCPS will encourage the larger community to follow suit" (C)	Consistent and user-friendly Zero Waste Stations (B)	Thinking about personal habits and actions for the consumption and disposal of materials (C)	We have to go out of our way to not produce waste (A)
A Zero Waste MCPS is unlikely-can't guarantee student buy-in (C)	Smaller trash cans, larger recycling bins, paired trash/ recycling bins (B)	Creating Zero Waste habits (e.g., bringing own coffee cups, banning straws) (C)	Lack of awareness of the Zero Waste effort (C)
We care about the environment	Composting system and bins (B)	Peer-to-peer education (PSAs, presentations, mentoring, clubs) (C)	Individual attitudes: laziness, lack of motivation, not caring (C)
MCPS creates a lot of waste-it's not good!	Reduce classroom paper consumption (B)	Peer-to-community education to give students a voice in the community (C)	**BELIEFS**
	Clean schools and school facilities (B)	Student clubs (recycling, gardening, etc.) (C)	My trash doesn't matter, I'm just one person (C)
	School-wide initiatives/ reminders to encourage Zero Waste practices (C)	Model to the community that Zero Waste works (C)	Thinking that what you do doesn't make an impact (C)
	New attitudes towards waste and responsibility among students (C)	Being involved in the steering committee (D)	Thinking that recycling is for hippies (C)
	Recycling education: how, what, & where (C)	Speaking at school board meetings & working with administration (D)	**BEHAVIORS**
CHART KEY (A)—Access (B)—Infrastructure (C)—Education (D)—Policy	Start in elementary schools (in terms of education and practice) (C)		Littering, especially in parking lots and fields (C)
	Buy products from environmentally-conscious companies; purchase recycled, recyclable, and reusable materials (D)		Changing habits (C)
	End the sale of plastic water bottles (D)		
	Everyone working together to achieve a better environment within our schools (D)		
	Provide incentives for recycling and reusing		

B. MCPS Zero Waste Steering Committee

Overview and highlights

Home ReSource convened the first meeting of the MCPS Zero Waste Steering Committee in February 2018. The committee engaged representative MCPS stakeholders in the Zero Waste planning process. Over the course of four meetings, the committee offered feedback on the draft Zero Waste plan, identified anticipated barriers, and proposed relevant strategies for implementation of the plan. Four high school students participated in the committee, and at least one student was able to attend each meeting. Below is a roster of committee members for reference.

DISTRICT AFFILIATION	NAME
Board of Trustees	Grace Decker
	Mike Smith
	Ann Wake
Administration	Hatton Littman
	Mark Thane
Facilities Operations	Bill Fischer
	Terry Phelan
Franklin Elementary	Kim Johnson
Hellgate High	Kimberlee Carlson
	Brian Connelly
	Katie Wyskiver
Lewis and Clark Elementary	Susan Anderson
Paxson Elementary	Rocio Muhs
Sentinel High	Ben Cummins
Student	Zoe Beck
	Wren Cilimburg
	Ming Harris-Weidner
	Sydney Schmidt
Willard Alternative High	Stephanie Wing
Multiple schools	Lorie Lochridge

WHAT COULD GET IN THE WAY OF A ZERO WASTE MCPS?			
District and Administration	**Cost**	**Staffing**	**Education and Training**
Willingness to change systems	Transition to paperless classrooms	Job descriptions	Conveying information in a relevant, timely way
Longevity of new systems	Comparisons of options, so decisions are based on facts, not opinions (e.g., using cloth instead of paper towels)	Including teacher unions in the process	Training all people over time
Designing for Zero Waste	Compost services		Recognition- how do we celebrate progress?
Setting realistic goals	Zero Waste stations		Parents and families
Developing new "bridge" strategies	Staffing		
Who will measure progress and maintain accountability	Infrastructure		
Data collection (options, costs, staffing requirements, time requirements)	Procurement channels to allow for secondhand purchases		
Zero Waste station cost and placement	Increased cost of sustainable materials		
Budget line items			
Zero Waste in the context of other MCPS priorities			
Purchasing "waste"- district catalog, where purchases can be made from			
Outside barriers- available recycling services			

WHAT COULD GET IN THE WAY OF A ZERO WASTE MCPS?				
Operations and Maintenance	**Food & Nutrition Services/ Cafeterias**	**Schools**	**Classrooms**	**Special, Extra-Curricular, and Sporting Events**
Ensuring safety	Federal meal requirements	School culture- motivation	Aversion to technology (lack of P.D.)	Communication with outside teams and organizations
Storage capacity	Phasing out packaging	Lack of education- parents and families	Student access to technology	Sports- uniform purchases every few years
Continuity over the summer	Cost of composting	Dealing with medical supplies	Cost for Zero Waste classroom options	
Handling e-waste	Compost collection and transportation logistics	Storage (bins, space, etc.)	Non-recyclable/ compostable materials	
	Limitations of materials accepted at Garden City Compost	School schedules (especially around lunch)	Student motivation	
	Compost odor	School culture- teachers	Classroom culture- students	
	Food delivery system	Vending machine breakage	Dealing with art materials like paint or soiled newspaper	
	Health Department (composting)	Software- devices becoming obsolete (how to stay current?)	Using the cheapest classroom materials due to budget limitations	
	Health codes that make "unwrapped" foods harder to use	How to safely use older equipment with missing parts		
	Access to cafeteria for students	Gloves- what to use when doing cleanup		
	Lack of dishwashers	Parents and adults don't have a central meeting place like school to learn about Zero Waste		

Summary List of Top Barriers to Address for a MCPS Zero Waste Plan

- Phasing out packaging
- School culture- motivation
- Data collection (options, costs, staffing requirements, time requirements)
- Costs and budget
- Designing buildings for Zero Waste
- District catalog
- Lack of education- parents and families

Refer to Appendix IV for committee-generated recommendations for addressing the above barriers and for plan implementation writ large.

C. Assessment of Existing MCPS Waste Reduction Programs

Home ReSource created a Google Form survey in an effort to identify and compile information on ongoing waste reduction initiatives in MCPS schools and facilities. Steering committee respondents provided information on two high schools, three elementary schools, and the district administration building. Summary tables of survey responses are on the pages that follow.

Facility	Student Environmental Clubs/ Orgs	Waste Reduction Programs	Are this Facility's Waste Reduction Programs Integrated into School Curriculum?	How does this Facility Promote Source Reduction, Reuse, and/or Environmentally Preferable Purchasing?
Franklin Elementary	No	Recycling Composting Materials reuse	5th grade Sharing the Planet 6-wk unit	Done in individual classroom(s)
Hellgate High	Yes- SAVE	Recycling Composting	Not in class curriculum Informational videos are sometimes shown to the school	Offer a discount to use reusable mugs at the coffee cart. SAVE is working to get more environmentally-friendly food options at the Knight Nook
Lewis and Clark Elementary	Yes- Green Team	Recycling	Yes, via National Wildlife Federation as an ECO School	
Other district building or facility	No	Recycling Materials reuse	Job training curriculum for Special Education Program at Sentinel High (collection)	Reuse printed paper in notepads and reuse scrap paper
Paxson Elementary	No	Recycling	There is not encouragement to reduce, reuse, or even recycle at this school	
Sentinel High	Yes- ECO Club	Recycling	No	

Facility	Funding Mechanisms	Revenue Generated?	Other Information
Franklin Elementary	Good Food Store pays recycling bill	No	Custodian has turned two large garbage cans into recycle bins in the hallways
Hellgate High	Through student clubs and organizations, and through outside donations or grants	No	
Lewis and Clark Elementary	Through PTAs or PTOs	No	Would like sources to help fund recycling, as monthly expenses for the PTA are high Looking for funding for more recycling collection bins
Other district building or facility	Through student clubs and organizations	Not sure	Need better collection receptacles for cardboard. Also, it would be difficult to manage compost at the central office, as no groups currently tend gardens
Paxson Elementary	Not funded	No	
Sentinel High	Not funded	Not sure	ECO club needs more methods to get the word out

Recycling Programs

Facility	Recycling Infrastructure	Materials Recycled	Recycling Collection Details
Franklin Elementary	Classroom recycle bins Office recycle bins Outdoor dumpster for recyclables	Paper Cardboard Plastic Food wrapper plastic	5th grade students collect the recycling weekly as needed
Hellgate High	Classroom recycle bins Cafeteria recycle bins	Paper Cardboard Metal Plastic	SAVE students collect and sort classroom recycling bins. Recyclables are then picked up by a recycling collection service
Lewis and Clark Elementary	Classroom recycle bins Office recycle bins Outdoor dumpster for recyclables	Paper Cardboard Plastic	Lewis and Clark Service Club
Other district building or facility	Office recycle bins	Paper Cardboard Plastic	Sentinel Special Education Department collects recyclables monthly during the school year
Paxson Elementary	Classroom recycle bins Office recycle bins Outdoor dumpster for recyclables Lounge recycle bins	Paper Cardboard Plastic Aluminum	Republic Services provides current recycling collection. The Girl Scouts used to collect recycling within the school
Sentinel High	Classroom recycle bins	Paper Cardboard Metal Plastic	Recyclables are collected by the Key Club, ECO Club, and the Special Education Department

Composting Programs

Facility	Composting Infrastructure	Compost Collection
Franklin Elementary	Individual classroom collection bins School garden for finished compost	Missoula Compost Collection Weekly pickup
Hellgate High	Individual classroom collection bins School garden for finished compost	SAVE students recently started a student-run compost collection program
Lewis and Clark Elementary	School garden for finished compost	Previously composted

III. Capacity and Support

A. Roles and Responsibilities

MCPS is a vibrant community that is highly valued within Missoula. As one of Missoula's largest institutions, the district intersects with the lives of nearly every Missoulian. A successful Zero Waste initiative will be one in which all of the members of the MCPS community work in alignment around its goals, strategies, and programs while also working as needed with the broader Missoula community.

District administration

Strong district leadership is key to the implementation of high-performance waste reduction programs. When district leadership trickles down to principals, staff, and students, it develops a "school culture" of Zero Waste.[18]

- Adopt a Zero Waste plan and pursue the creation and adoption of policies to support this plan
- Determine budgetary and resource requirements for the implementation of Zero Waste systems
- Strengthen partnerships with waste haulers, recycling facilities, and local composting services to develop and implement systems for the collection of recyclables and compostables
- Fully support school administration, school staff, students, and community members in the implementation of Zero Waste systems
- Update staff contracts, union contracts, and job requirements to support the Zero Waste plan
- Encourage and support teachers in providing Zero Waste education to students
- Ensure faculty support for student-led environmental clubs and organizations at each school

School administration

School administrators and staff at all levels can cultivate a culture of resource conservation in MCPS schools by fully participating in Zero Waste strategies, programs, and events.

- Attend and/or lead school-wide planning meetings as needed to establish Zero Waste systems
- Communicate new Zero Waste procedures with the student body, Parent-Teacher-Organizations, and the larger school community. Make school-wide announcements as needed during and after the implementation of Zero Waste systems to support ongoing education needs.
- Encourage and support teachers in providing Zero Waste education to students

Facilities operation, maintenance, and rental staff

Facilities staff buy-in and participation is essential to the success of a district Zero Waste initiative, as these staff often work "where the rubber meets the road" in school waste reduction efforts.

- Receive training for the use and maintenance of Zero Waste systems
- Attend school-wide planning meetings as needed to establish Zero Waste systems
- Oversee and coordinate the implementation of Zero Waste infrastructure
- Ensure that waste streams remain separated as they are collected throughout buildings
- Work with kitchen staff to optimize Zero Waste infrastructure in kitchens and cafeterias
- Collaborate with kitchen staff to ensure Zero Waste infrastructure remains orderly and clean

Kitchen staff

Kitchen staff buy-in and participation is essential to the success of a district Zero Waste initiative, as these staff are positioned to help steward the largest cultural shift in behavior and practice: reducing wasted food and food-related packaging.

- Attend school-wide planning meetings as needed to establish Zero Waste systems
- Oversee and coordinate food waste reduction programs for uneaten and surplus kitchen and cafeteria food
- Work with facilities staff to optimize Zero Waste infrastructure in kitchens and cafeterias
- Collaborate with facilities staff to ensure Zero Waste infrastructure remains orderly and clean

Teachers

Teachers can provide the context that develops student understandings of what the district Zero Waste initiative is and why it matters. Teachers can be Zero Waste role models for students.

- Attend school-wide planning meetings as needed to establish Zero Waste systems
- Establish expectations and explain procedures for the use of Zero Waste systems to students, and regularly model appropriate use of these systems
- Integrate Zero Waste education into class curriculum to support current educational standards
- Explore and pursue opportunities to create Zero Waste classrooms
- Consider participating in outside educational programs to support sustainability education, particularly those that directly support the Zero Waste initiative. Local programs include the Home ReSource fifth grade Zero Waste Ambassadors Program (ZWAP!) and the National Wildlife Federation Eco-Schools USA Program.

Students

As the citizens of our schools and the community leaders of tomorrow, students must be involved in every stage of the Zero Waste initiative. Student involvement will support knowledge and understanding of a key piece of the community sustainability puzzle.

- Fully participate in Zero Waste systems at all district facilities and events and encourage parents, peers, and school staff to do the same
- Create habits to reduce the consumption and disposal of materials and to dispose of materials for maximum resource conservation and landfill diversion
- Take an active role in the Zero Waste initiative through existing school clubs and organizations or by creating student Green Teams. Students can promote sustainability projects, establish lunchtime waste monitors, conduct waste audits and analyses, create student-focused outreach and education, and communicate with staff and administrators to improve Zero Waste systems.

Parents and guardians

Students' parents and guardians reside at the critical intersection between Zero Waste schools and Zero Waste communities. Families can support this school-to-home-to-community connection through participation and committed support.

- Fully participate in Zero Waste systems at all district facilities and events and encourage students, peers, and school staff to do the same
- Offer support for implementation of the Zero Waste initiative (e.g., volunteering in school cafeterias, mentoring student Green Teams, planning Zero Waste school events, or pursuing grant funding)
- Encourage Parent-Teacher Organizations to support the Zero Waste initiative with financial and human resources
- Provide Zero Waste lunch and snack items as appropriate for students and classes

Community partners

MCPS cannot achieve its Zero Waste goal in isolation. Fostering strong relationships between different community partners, including local haulers, local businesses, and the City of Missoula, will only serve to support community and city Zero Waste goals.

- Local haulers: Strengthen partnerships with MCPS to develop and implement systems for the collection and pickup of recyclables and compostables across the district.
- City of Missoula: Offer technical, financial, or other support to help direct the district's Zero Waste efforts in the context of the City's ZERO by FIFTY plan.
- Local businesses and other community partners: Offer technical, financial, or other support for Zero Waste programs. Provide sponsorships for Zero Waste Stations, composting programs, school environmental clubs, or other such components of the Zero Waste plan.

B. Financial Considerations

District waste reduction programs are expense-savers

Landfill servicing needs can be cut by up to two-thirds with comprehensive school Zero Waste programs.[19] School financial gains from reduced landfill servicing are well-documented.[20,21,22] Even small-scale school Zero Waste initiatives, like switching to durable silverware in cafeterias, can be profit-generators.[23,24] Collaboration at the district level for Zero Waste programs maximizes program effectiveness and cost savings.[25] See Appendix VI.B.5 for supporting case studies.

Implementing the Zero Waste initiatives may incur costs

Anticipated costs for Zero Waste systems may include supplies and equipment, collection and transportation of materials, facility construction and maintenance, insurance and labor wages, utilities, and advertising. The district needs to identify budgetary requirements for implementation of the Zero Waste plan to ensure the effective allocation and use of financial resources. Funds for recycling and composting programs should be budgeted at the district and/or school level. MCPS should ensure that materials collection containers are right-sized so pick-ups happen only when necessary.

School districts can seek financial support from community partners

For additional support, Zero Waste schools can explore the possibility of revenue sharing with materials haulers to receive a percentage of sales and work with third-party organizations to sell items like toner cartridges and metals. Grant funding from businesses, organizations, communities, and states is often available to assist with waste reduction initiatives. City councils, community groups, and local volunteers may also be able to offer support in terms of both time and money (see Appendix VI.B.1).

C. Tracking and Evaluation

Successful development and implementation of the Zero Waste plan will require detailed analysis of current practices and trends regarding materials within MCPS. Such data can guide the development of new systems and provide a baseline from which to measure waste reduction post-implementation. Zero Waste systems can be continually improved and refined with ongoing evaluation.

Baseline waste stream data

Collect data on waste streams and current infrastructure throughout district buildings and facilities. Use data to inform plans to reduce, reuse, and recycle materials that are currently being discarded and to evaluate program success after the implementation of Zero Waste systems.

Performance metrics and tracking systems

Monitor and evaluate participation in Zero Waste systems. Ongoing waste audits after the implementation of Zero Waste systems can inform persisting sorting errors and sources of contamination. MCPS can evaluate the effectiveness of Zero Waste systems for waste diversion by monitoring the production of generated materials, the final destination of those materials, quantities of source reduction and landfill diversion, and purchasing practices, among other metrics.

D. Recommendation for a District Sustainability Coordinator

To fully implement the MCPS ZERO by FIFTY Zero Waste Plan, the district will likely need to develop a new staffed position, joining 90 other U.S. K-12 public school districts who employ a sustainability professional.[26] While existing staff will play an important role in the Zero Waste initiative, a new staffed position will ensure that the plan is fully and effectively implemented. A district Sustainability Coordinator can be a leader, communicator, engineer, data analyst, strategist, and educator. Below are recommendations for such a position.

Role in Zero Waste Initiative: To implement, oversee, coordinate, and evaluate the MCPS ZERO by FIFTY Zero Waste Plan.

Specific Duties

- Plan implementation
    - Coordinate planning meetings with key staff, including principals, assistant principals, custodians, teachers, and kitchen staff, to discuss new and changing roles and procedures
    - Support school administration, facilities staff, kitchen staff, and teachers in implementing Zero Waste systems
    - Coordinate waste audits for MCPS buildings and facilities before, during, and after implementation of Zero Waste systems
    - Ensure faculty support for student-led environmental clubs and organizations at each school
    - Recruit teachers, student Green Teams, cafeteria aides, and/or parent volunteers as needed to monitor Zero Waste Stations at meal times
- District education
    - Establish clear, consistent messaging for the MCPS Zero Waste initiative that complements that of Missoula's ZERO by FIFTY plan
    - Ensure comprehensive training is provided to MCPS staff on the use and maintenance of Zero Waste systems
    - Provide ongoing Zero Waste education to staff, students, and community members
    - Create targeted education campaigns as needed to reduce contamination and increase participation
    - Encourage and support teachers in providing Zero Waste education to students
- Plan evaluation
    - Monitor and evaluate Zero Waste systems and services during and after implementation
    - Seek recommendations for continued growth and evolution of Zero Waste programs
    - Regularly publicize and celebrate the successes of the Zero Waste initiative

IV. Potential Implementation Strategies

In April 2018, members of the MCPS Zero Waste Steering Committee identified anticipated barriers to the implementation of a MCPS Zero Waste plan (see Appendix II.B). At the final committee meeting, members generated lists of potential solutions and strategies to overcome these barriers in the context of each of the *Top Priorities for MCPS* outlined in the Zero Waste plan. Members of the committee offered practical and thought-provoking suggestions, summarized below.

Priority #1:

Evaluate immediate staffing and financial capacity for implementation of the MCPS Zero Waste initiative, and identify strategies to increase capacity in the years ahead

Possible implementation strategies:

- Identify existing personnel with capacity to engage in the Zero Waste initiative
- Develop community partnerships to enhance financial capacity (e.g., sponsorships from local businesses, grants, Parent-Teacher-Organizations)
- Identify ways to cooperate with the City of Missoula
- Work with haulers to identify new service options to maximize recycling
- Engage student, parent, and community volunteers to supplement existing capacity

Outputs:

- Task lists for personnel tapped to engage in the Zero Waste initiative
- Job description for Zero Waste duties of future district Sustainability Coordinator (see Appendix III.D)

Outcomes:

- Clear lines of accountability for Zero Waste personnel
- Engaged volunteers
- Actions implemented

Priority #2:

Rethink district-wide materials acquisition to prioritize source reduction and environmentally preferable purchasing (EPP)

Possible implementation strategies:

- Evaluate the district's currently-stocked products, identify those with high waste reduction potential, and identify more sustainable alternatives
- Challenge MCPS departments to set annual source reduction goals

Outputs:

- Revised district catalog

Outcomes:

- MCPS purchases and stocks recyclable and reusable products made from recycled content
- Reduced materials use

Priority #3:

Implement comprehensive and standardized district-wide composting and recycling programs

Possible implementation strategies:

- Continue current, effective waste reduction programs at MCPS schools and improve communication about these initiatives
- Ensure faculty support for student-led environmental clubs and organizations at each school
- Develop systems to track and manage Zero Waste Stations, especially in places like parking lots with infrequent collection
- Involve students in running composting or recycling programs, and support programs with outside funding (see Appendix III.A)

Outputs:

- Appropriately-placed Zero Waste Stations installed across the district

Outcomes:

- Increased access to and participation in recycling and composting
- Reduction in landfilled material
- Engaged students, faculty, and staff

Concerns:

- Impact of new programs on facilities staff
- Logistical needs for compost collection program (e.g., storage and frequency of pickups)
- Higher cost of increased recycling and compost collection services

Priority #4:

Transition to using durable food serviceware in MCPS cafeterias

Possible implementation strategies:

- Focus efforts on elementary and middle schools first, then phase changes into high schools within a few years
- Buy items in bulk and use large dispensers when appropriate for items like milk, cereal, and condiments
- Acquire durable flatware, cups, dishes, trays, and collection containers
- Plan to wash dishes at the Central Kitchen, though, ideally, every school should have a dishwasher
- If durable food serviceware becomes unviable, use compostable alternatives

Output:

- New cafeteria equipment and systems in place

Outcome:

- Reduced food-related packaging waste

Concerns:

- Durable food serviceware effort at Willard Alternative High School Program was unsuccessful (durables got thrown away and were lost from the cafeteria)

Priority #5:

Implement programs to reduce wasted food in MCPS

Possible implementation strategies:

- Redesign school cafeterias and lunch stations to make lunch choices more appealing to students (e.g., salad bars, sandwich stations, and advertising for prepared meals) (see Appendix VI.B.4)
- Create and/or expand food share programs for students' uneaten fruits and packaged food items (see Appendix VI.B.3)
- Explore options to donate surplus food and food share leftovers to a local nonprofit

Output:

- Edible food to hungry people

Outcome:

- Reduced amount of wasted food

Questions:

- What from school cafeterias can be donated to local food banks? (see Appendix VI.A)
- How much surplus food is there within MCPS cafeterias?

Priority #6:

Prioritize comprehensive and ongoing whole-district education for the Zero Waste initiative

Possible implementation strategies:

<u>For the district</u>:

- Create and publicize a Board of Trustees-approved Zero Waste or Sustainability "mission statement"
- Ensure clear and consistent signage at all Zero Waste Stations
- Provide students, faculty, and staff with basic recycling and composting education, with a focus on the importance of source separation, to create recycle-ready materials streams
- Update job descriptions and union contracts to compel staff to participate in Zero Waste programs
- Mandate Zero Waste staff trainings, and offer continuing education credits to staff for attending sustainability trainings
- Incorporate relevant sustainability curriculum and/or units into every grade (1-2 per class per year)
- Create incentives for teachers to adopt Zero Waste classroom practices
- Enlist students to help design buildings and Zero Waste Stations
- Host competitions between schools to reduce per-capita waste

<u>For faculty and staff</u>:

- Support recycling and composting education in the classroom
- Enlist students to help pull recyclables from classrooms for recycling collections
- Organize cafeteria-based education and supervision for school meal times
- Send home information about the Zero Waste initiative, as well as Zero Waste meals, snacks, and school supplies, with school supply lists
- Ask parents to make classroom snack donations package-free

<u>For students</u>:

- Engage in peer-to-peer education
- Participate in building Zero Waste Stations

- Coordinate with facilities staff to participate in recycling collection activities
- Act as Zero Waste Ambassadors in cafeterias to help students learn to recycle and compost
- Join environmental clubs helping to support the Zero Waste initiative

For parents:

- Pack students Zero Waste meals and snacks
- Purchase school supplies that align with the Zero Waste goal
- Support students and schools in inter-school waste reduction competitions

Outputs:

- District Zero Waste or Sustainability mission statement
- Clear, consistent Zero Waste Station signage
- Cleaner, more marketable recycling streams
- Sustainability units developed for every grade
- Student-led, school-based Zero Waste messaging
- Zero Waste messaging for parents and families

Outcomes:

- Increased composting and recycling
- Zero Waste behaviors become routine for students and parents

V. Options for Moving Forward with Limited Capacity

The excerpts from the MCPS ZERO by FIFTY Zero Waste plan below represent a selection of action items that can be pursued in the short-term, even with limited staffing or financial capacity.

A. Access

Action A2.1: Create visually-consistent and user-friendly Zero Waste Stations and determine most appropriate collections streams for appropriate user areas

Action A2.2: Encourage the proliferation of Zero Waste classrooms, inspired by the model developed by Kim Johnson in her fifth grade classroom at Franklin Elementary

Action A2.3: Implement materials reuse systems for classrooms, offices, coffee carts, and other appropriate locations

B. Infrastructure

Action B1.1: Determine most appropriate recyclables collection program

Action B1.2: Determine most appropriate compost collection program

Action B2.4: Create and/or expand food share programs for students' uneaten fruits and packaged food items in all MCPS cafeterias

Action B2.5: Explore options to donate surplus cafeteria food and food share leftovers to a local nonprofit

C. Education

Action C1.2: Establish clear, consistent messaging for the MCPS Zero Waste initiative that aligns with ZERO by FIFTY

Action C2.1: Identify and explore connections between Zero Waste programs and STEM learning, as well as the International Baccalaureate and Advanced Placement programs

D. Policy

Action D1.1: Make a public commitment to Zero Waste and/or Sustainability supported by a Board of Trustees-approved Sustainability mission statement

Action D1.2: Update staff contracts, union contracts, and job requirements to support and implement the MCPS Zero Waste plan

Action D1.3: Ensure faculty support for student-led environmental clubs and organizations at each school

Action D2.1: Identify successful models of EPP policies for K-12 school districts, and explore options for a transition to paperless systems in partnership with the City of Missoula

Action D2.2: Research best practices around the intersection of recess, lunch, and food waste

Action D2.4: Continue efforts to reduce reliance on packaged foods served in school cafeterias and increase Farm to School efforts

Action D3.1: Recognize that Construction and Demolition (C&D) debris, often representing valuable resources, is one of the largest contributors to landfilled materials

Action D3.2: Evaluate current C&D materials management systems

VI. Additional Resources

A. USDA Guidance for K-12 School Food Donations

United States Department of Agriculture

Food and Nutrition Service
3101 Park Center Drive
Alexandria, VA 22302-1500

DATE: February 3, 2012

MEMO CODE: SP 11-2012, CACFP 05-2012, SFSP 07-2012

SUBJECT: Guidance on the Food Donation Program in Child Nutrition Programs

TO: Regional Directors
Special Nutrition Programs
All Regions

State Directors
Child Nutrition Programs
All States

On November 18, 2011, the Consolidated and Further Continuing Appropriations Act, 2012 (P.L. 112-55) amended the Richard B. Russell National School Lunch Act (NSLA) by adding paragraph (l), the Food Donation Program at the end of Section 9. The amendment provides clear statutory authority for current Food and Nutrition Service (FNS) food recovery and donation policy in use by schools and institutions participating in the Child Nutrition Programs, the National School Lunch and School Breakfast Programs, Child and Adult Care Food Program (CACFP), and Summer Food Service Program (SFSP).

Food donation has been a longstanding policy in all Child Nutrition Programs and the current amendment to the NSLA clarifies the policy through statute. Although, FNS does not believe this amendment will require change in current food recovery practices, this memorandum provides updated and consolidated guidance on this issue; therefore, the following existing memoranda relating to this issue are rescinded: SP 29-2009, SFSP 04-2009, CACFP 07-2009, Excess Summer Meals, June 26, 2009.

The statute clarifies that any program food not consumed may be donated to eligible local food banks or charitable organizations. The amendment defines the terms "eligible local food banks or charitable organizations" to mean any food bank or charitable organization which is exempt from tax under section 501(c)(3) of the Internal Revenue Code of 1986 (26 U.S.C. 501(c)(3)). It also extends protections against civil and criminal liability for persons or organizations when making food donations to the extent provided under the Bill Emerson Good Samaritan Food Donation Act, found in section 22 of the Child Nutrition Act.

Food Donation Policy

FNS is committed to preventing hunger and to responsible stewardship of Federal dollars. Child Nutrition Program policy aims first to limit food waste and unnecessary costs. If a school, CACFP institution, or SFSP sponsor has leftover food on a frequent basis, menu planning and production practices should be adjusted to reduce leftovers.

Nevertheless, because of unforeseen circumstances, occasionally there will be leftover food. All alternatives permitted by Program regulations and State and local health and sanitation codes should be exhausted before discarding food. Options may include using leftovers in subsequent meal services, offering "sharing tables," or transferring food to other sites. (*See attached: Donation of Leftover Foods From School Cafeterias, June 11, 1996*). Where it is not feasible to reuse leftovers, excess food may be donated to a non-profit organization, such as a community food bank, homeless shelter, or other nonprofit charitable organizations.

As a result of the Department's Food Recovery and Gleaning Initiative of 1997, a "Best Practice" manual was created which highlighted measures to provide unused food to needy organizations. In addition, the "Citizen's Guide to Food Recovery" was developed as a resource guide on food recovery programs for businesses, community-based organizations, private citizens, and public officials and describes some of the food recovery activities taking place at that time and suggestions for new efforts. These publications can be found at: http://www.fns.usda.gov/fdd/gleaning/besthome.htm and http://www.usda.gov/news/pubs/gleaning/five.htm. FNS will review these resources and determine if they require updating or if additional materials are required to assist schools and local educational agencies in the donation of food.

FNS will continue to support food donation as outlined above. State agencies should direct any questions to their FNS Regional Office.

Original Signed
Cynthia Long
Director
Child Nutrition Division

Attachment

JUN 1 1 1996

SUBJECT: Donation of Leftover Food from School Cafeterias

TO: Regional Directors
Special Nutrition Programs
All Regions

We frequently receive inquiries from schools and the general public concerning the donation of extra foods prepared for the National School Lunch and School Breakfast Programs. It appears that many school food service managers believe that the program regulations prohibit them from donating leftovers to organizations which feed the needy.

As you know, schools may claim reimbursement for only one lunch served per child per day, and schools are expected to plan and prepare sufficient amounts of food to achieve this goal. When the food actually prepared exceeds the amount needed for the reimbursable meal service, schools may dispose of the extra food as they wish as long as they comply with applicable State and local health standards. Thus, schools may donate leftover foods to appropriate nonprofit institutions such as soup kitchens or homeless shelters provided this practice is not prohibited by State or local laws or regulations. The Department of Agriculture strongly encourages them to consider this option whenever it is feasible. This policy is in keeping with Secretary Glickman's active promotion of local gleaning and donation programs to feed the poor and homeless.

Please remind your States of this longstanding policy and request that they ensure that their local schools are aware of this option.

Alberta C. Frost

ALBERTA C. FROST
Director
Child Nutrition Division

B. Zero Waste Schools: Relevant Case Studies

1. School-City Zero Waste Partnership: Oceanside Unified School District, CA[27,28]

Program Overview

- The City of Oceanside, CA adopted a Zero Waste plan in 2012.[29] The City began a partnership with Oceanside Unified School District (OUSD) to get the schools on the Road to Zero Waste and support the City's goals.
- OUSD worked with the city to create a pilot Zero Waste program at Palmquist Elementary in 2012. The pilot program inspired the district to formally adopt a Zero Waste Resolution in 2014.
- OUSD became the first school district in the nation to commit to Zero Waste goals. The district aims to achieve 90 percent diversion from landfills by 2020.

Program Implementation

- The City is strategically and systematically implementing the Zero Waste program in OUSD schools to create Zero Waste behaviors in all students and staff. It has provided over $50,000 in services and resources annually to OUSD's Zero Waste initiative.
- The City provides necessary recycling infrastructure, including recycling bins, dumpsters, and educational materials. The City recently approved $100,000 of funding to purchase permanent recycling and landfill containers for two high schools.
- With the support of the City, OUSD implements Zero Waste systems, services, and programs in schools over the course of semester. Implementation includes preparatory meetings with key staff, school-wide waste audits, presentations of audit results, individual classroom education, trainings for facilities and cafeteria staff, placement of recycling infrastructure, and post roll-out analyses.

Measures of Success

- The OUSD Zero Waste initiative has reached 15 of the district's 23 schools, saving OUSD nearly $80,000 annually in landfill servicing fees. All schools will be on the Road to Zero Waste by 2020.
- Where implemented, the Zero Waste program can increase school recycling rates from 10% to 70%. On average, participating schools save $7,500 in landfill fees annually.
- The information gathered during the waste audit process has informed the district's purchasing and procedural policies, as well as purchases made by the Nutrition Services Department
- The district's high schools have begun hosting Zero Waste football games to demonstrate their commitment to Zero Waste
- The Zero Waste initiative has enhanced STEM learning and developed green career pathways. The district's education program includes annual Zero Waste assemblies and the sharing of sample lesson plans and Zero Waste school announcements to school staff
- OUSD's recycling rate has become directly connected to that of the City. Students' increased participation in OUSD's Zero Waste systems supports increased community participation in Oceanside's Zero Waste systems.

- ***"Through the school-to-home-to-community connection, these youngest members of our community play an integral role in meeting our community-wide Zero Waste goals."—Jenna Roripaugh, Environmental Specialist with the City of Oceanside***

2. Durable Cafeteria Food Serviceware: Minnetonka Middle Schools, MN[30]

Program Overview

- Two Minnetonka middle schools received a grant from the Minnesota Pollution Control Agency to switch from disposable to reusable food serviceware and to improve cafeteria waste sorting stations
- The program aimed "to address the most significant source of non-recyclable, non-compostable waste from school cafeterias: disposable plastic flatware and Styrofoam bowls"

Program Implementation

- A team of staff and volunteers from both schools held five planning meetings
- A team collected baseline data during the planning stage
- The schools purchased durable utensils and bowls, custom-made waste sorting stations, and racks and carts for moving and washing the new durable items
- The project included education for over 2,000 students, staff, and visitors on the new system. The principal introduced the change to students on the first day of school during an orientation at the start of each lunch period
- Adult lunchtime monitors were used for the first week of implementation, and parent teams continued monitoring stations periodically throughout the year

Measures of Success

- In the first year, the schools saved $3,000 combined by buying the reusable utensils and bowls and prevented the disposal of 6,000 lb. of solid waste
- Instead of buying 700,000 plastic utensils, the schools purchased 12,000 metal reusable utensils. The schools purchased a few hundred replacement durable items, as "there was more loss" of these items "than staff anticipated."
- Annual per-student costs for food serviceware dropped from $6.89 to $4.83, a 30% reduction
- In the first three years of use, the schools anticipated savings totaling $23,000
- Changes to staff routines were "easily accommodated." On average, staff handling time at lunch increased by twenty minutes and 3.5 loads of dishes, but time savings were achieved by no longer needing to stock, open, and manage packages of disposable items.
- ***"A return to reusable utensils in schools can be good for the bottom line and the environment. Moreover, the case study shows that common concerns about reusables—that on-site water and electricity use will undercut environmental benefits—are unfounded."***

"Tips for Successful Implementation

1. Anticipate loss. Do all you can to prevent loss, but still anticipate and budget for 40-50% utensil loss in the first year and for about 20% loss in future years.

2. Buy heavy duty utensils. A key way to prevent loss is to buy *the most durable* reusable utensils practicable. After seeing many of the initially purchased less expensive, light weight utensils end up bent into 'fork art' the schools shifted to buying heavy gauge stainless, which helped reduce loss.
3. Buy best-quality bowls, and test them. Some of the bowls had to be 'tossed' when they blistered from the chemicals and heat during dishwashing.
4. Set up sorting stations for success. Design stations so that the correct behavior is the easiest behavior. Putting the utensil buckets at [the] front end of the sorting line will reduce loss. At first, staff allowed student[s] to scrape plates with utensils and drop them off at the end of the line. At the end of this project, the cafeteria managers said 'we will look at getting the sorting carts set up so they can take care of the utensils first.'
5. Educate and monitor. Plan for education and station monitoring throughout the year, not just in the first week. Education and monitoring can be done by principal, cafeteria, or facilities staff, other students, parents, or teachers. The key to the education is to make it fresh and noticeable. A posted sign, for example, will work when it is first posted, but it will 'wear off' when it is no longer novel.
6. Reward the right behavior. While the schools didn't try this, social psychology [suggests] that intermittent reward[s] should foster good sorting behavior. Give out a surprise, occasional prize, or praise, to students when sorting is done well. A meaningful intermittent reward is a powerful shaper of behavior in such situations."

3. School Food Share and Food Donation Programs: Oakland Unified School District, CA[31]

Program Overview

- During the 2013-2014 school year, the nonprofit organization Food Shift teamed up with Oakland Unified School District to explore solutions to food waste in schools. With additional outside grant funding and technical assistance, the district conducted and documented a school food donation pilot program.
- Food share tables allow students to share their unwanted, still sealed, or unbitten food items. Other students can select these items during school mealtimes or snack times.

Program Implementation

- Food handling procedures for the leftovers must be determined ahead of time in accordance with district, county, and state regulations
- Typically, program implementation costs are low. Incurred costs can include additional refrigeration equipment and storage containers.
- All relevant staff need to be engaged and trained for meal service and snack times. There may be up-front labor costs when establishing a food donation program, but these can be minimized by incorporating tasks into existing work. Custodians will often find lighter trash loads after food share programs are implemented, and volunteers and students can help monitor cafeteria sorting stations.
- Food share stations should be set up in prominent locations in the cafeteria, clearly labelled with information about their purpose and use
- Schools can donate surplus school food from food share tables and from school kitchens to local nonprofits

Measures of Success

- All school cafeterias in California's Oakland Unified School District now have food share tables
- ***"Introducing a food donation program within schools and school districts provides the opportunity to collect and redistribute surplus food to those who need it, and provides a great prospect for positively influencing the health, nutrition, and subsequent learning potential of students."***

4. Rethinking the School Lunch Experience

Prioritizing Student Choice in School Lunches

- As part of its School Lunch Initiative, Berkeley Unified School District redesigned lunchtime food options. Each school now has salad bars, fresh fruits and vegetables, and buffet-style service. Participation rates in the school lunch programs have subsequently increased, allowing schools to receive more federal reimbursement funds.[32]
- After working with school food systems for over a decade, The Center for Ecoliteracy found that, "When students can choose portion sizes, entrees, sauces, dressings, or toppings for themselves [...] they make better choices and waste less food."[33]

Redesigning the Eating Environment

- South Carolina's Richland One School District realized $321,000 in school lunch program revenues by restricting on-campus vending machines[34]
- Berkeley schools now use a swipe card system for school lunches. All of the students use swipe cards to pay for their lunches. This helps reduce stigma for students eating free and reduced-price meals.[35]
- Students "want to eat food in a place that makes them feel as if they are cared for." Berkeley's Martin Luther King Jr. Middle School designed its cafeteria for beauty. The cafeteria has reclaimed wood, decorative tiles, appealing waste sorting bins, natural lighting, and a nearby herb garden.[36]
- ***"To underestimate the impact of the eating environment on student enthusiasm for school lunch is to overlook an area that is often as important as the food itself."[37]***

Strategies to Build Participation in School Lunch Programs[38]

1. "Build on the success of salad bars. Self-serve salad bars have proven to be a popular choice with all ages. Consider dedicating an area at secondary sites for a customizable entrée bar – sandwiches, entrée salads, burritos, or tacos are all great options.
2. Implement a system to avoid long wait times. 'We pre-portion all of the ingredients and move students through in less than a minute,' explains Scott Soiseth of Turlock Unified, where they've introduced build-your-own sandwich and burrito bars.
3. Think outside the traditional serving line. Naomi Shadwell, Nutrition Services Director for Oceanside Unified, used USDA Equipment Assistance grant funds to purchase Duke and Multiteria carts for their burrito bars at five secondary sites. Alternatively, is there an underutilized classroom or storage area on one of your sites? Engage the principal about converting it to a special serving area for

customized lunch options. They may be excited to serve as a pilot site for something new to the district.

4. Balance labor and food costs. Many of the items that are ideal for customizable lunch options are available through USDA Foods, which can keep food costs low. Think deli meat and cheese or chicken, beef, beans, tortillas and rice. This may help offset any additional labor needs.
5. Borrow a technique from your local deli. Rather than waiting until the lunch rush, implement a paper or online order form that lets students submit their orders in advance, like at the local deli. When the lunch bell rings, students' selections are ready to go, maximizing their time to eat and socialize while boosting your customer satisfaction."

5. Cost-Saving Potential of School Zero Waste Programs

Schools save Money with Reduced Landfill Servicing

- Landfill servicing needs can be cut by up to two-thirds with comprehensive waste reduction programs like Boulder, Colorado's Eco-Cycle Green Star Schools (31 schools representing 14,000 students and staff)[39]
- Reduced landfill servicing saves schools and districts thousands. In California, the rural Oak Grove Elementary School (enrollment: 300) saves $1,400 annually,[40] and schools in Oceanside Unified School District (enrollment: 20,600) save $7,500 annually;[41] in Florida's Pasco County School District (enrollment: 70,600), landfill costs have shrunk from $600,000 to $300,000.[42]

Recycling Programs can be Profit-Generators

- Selling scrap metal and old equipment has earned $50,000 for Florida's Pasco County schools[43]
- Recycling is profitable for 90% of Minnesota public K-12 schools, and savings will continue to grow as recycling rates continue to increase[44]

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