



Food Services Sustainability Roadmap

June 2023



Acknowledgments

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Plan Development Process

The goal of this process was to incorporate input from a wide range of community stakeholders to create a plan that was both comprehensive and feasible. Furthermore, this involvement helps ensure the implementation and long term maintenance of the plan for the school district.

The project involved 4 key phases of work:

1. Data Gathering & Analysis

Information Gathering from Community

Stakeholders including:

- Lake Washington School District administrators
- LWSD Nutrition Services manager
- City of Kirkland officials
- City of Redmond officials
- King County Green Schools Program director
- LWSD Custodial Services manager
- Waste Management professionals
- LWSD Sustainability Committee
- Parent Sustainability chairs
- Washougal School District staff
- Seattle School District staff
- Cafeteria Culture
- Plastic Free Restaurants
- Zero Waste Washington
- McKinstry Co
- Wilder Environmental Consulting

Data Analysis of:

- Waste management services
- Kitchen composting and recycling
- Cafeteria composting and recycling
- Reusables (utensils, trays)
- Dishwashers
- Bins
- Instructional signage



2. On Site Visit & Monthly Update Meetings

- Conducted multi day on site visit to Lake Washington School District
- Conducted monthly update meetings with representatives from Lake Washington School District, City of Kirkland and City of Redmond

3. Draft & Feedback

- DRAFT of Roadmap presented April 4, 2023
- Received feedback and comments from LWSD administrators, City of Kirkland officials, City of Redmond officials, King County Green Schools Program and other key stakeholders.

4. Final Report/Community Meeting

- FINAL Roadmap June 13, 2023
- FSSR community presentation/Launch



Table of Contents

7 Executive Summary

10 FSSR - Why

14 Current Practices

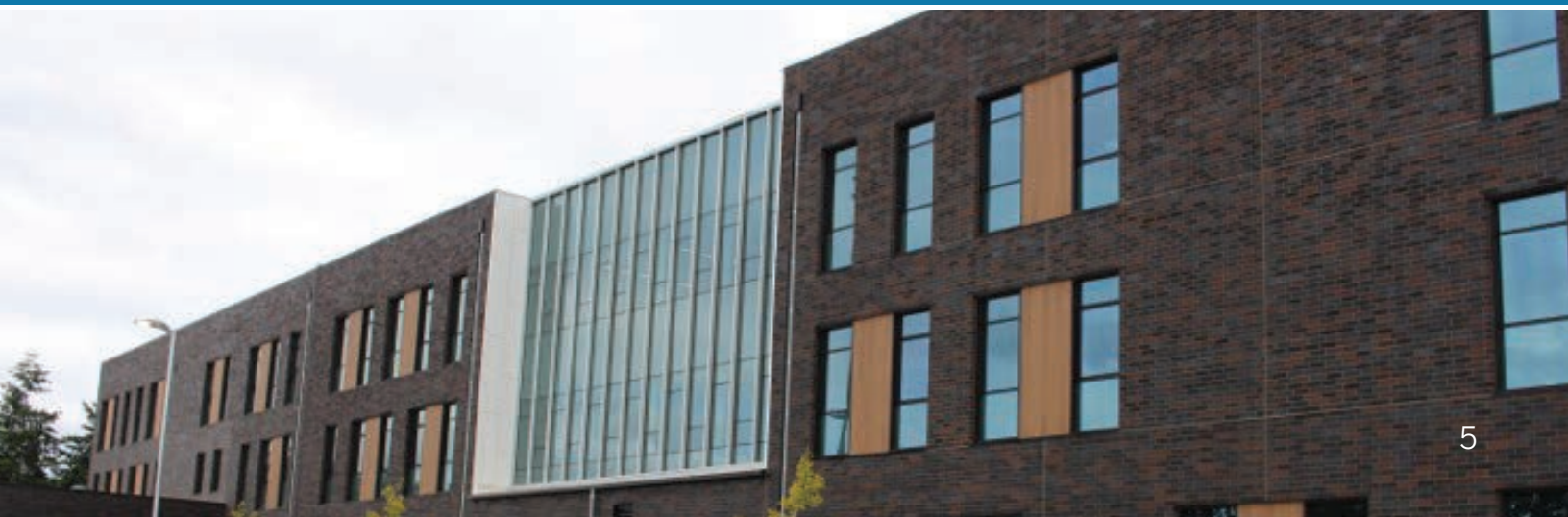
20 FSSR Action Steps

43 Other Recommendations

45 Implementation Models

47 Conclusion

49 Resources







Executive Summary

Executive Summary

The Lake Washington School District Food Services Sustainability Roadmap (FSSR) is a district-wide, coordinated, systematic approach to reducing food waste, increasing organic material diversion rates and improving food sustainability efforts at every level of the school district.

Key elements of the FSSR:

- Identify 5 major goals
- Provide strategies for achieving each goal
- Outline clear action steps for key LWSD stakeholders
- Define protocols for all 50 LWSD schools

5 Goals of FSSR

1. District coordination of food sustainability efforts
2. Standardization of food sustainability protocols
3. Reduction of food waste
4. Reduce single-use items
5. Educate, train, monitor and maintain

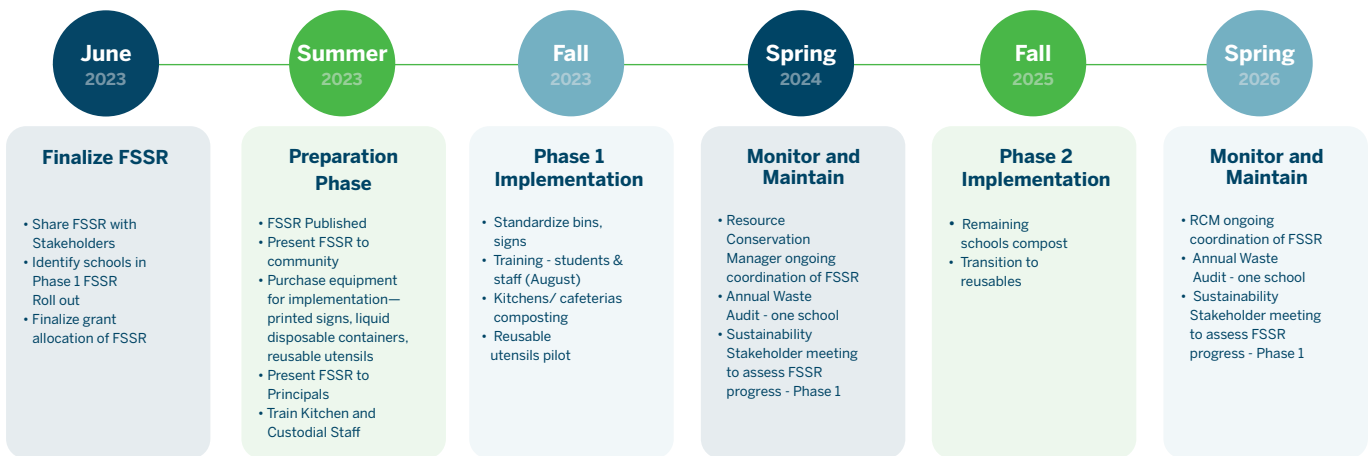


Executive Summary

FSSR Phases, Goals, Strategies, and Actions

Phase 1 Fall 2023	Phase 2 Fall 2024	Goals	Strategies	Actions
All kitchens implement composting protocols		District Coordination	Define clear roles & responsibilities for stakeholders	<ul style="list-style-type: none"> Define stakeholder roles in LWSD Outline coordination of roles Identify key roles (LWSD RCM)
Schools producing 8+ cubic yards of waste implement standardized recycling/composting programs in cafeterias	Schools producing 4+ cubic yards of waste implement standardized recycling/composting programs in cafeterias	Standard Protocols	Utilize standardized protocols and equipment within LWSD	<ul style="list-style-type: none"> Define food waste protocols Provide standard signs and bins Train staff, custodians & students)
Five schools pilot reusable utensils (forks/spoons)	Expand reusables in as many schools as feasible	Reduce Food Waste	Implement district wide food waste reduction programs	<ul style="list-style-type: none"> Recycling/composting programs Food share/donation programs Waste tracking programs
Annual waste audit	Annual waste audit	Reduce Single Use Items	Transition to reusable utensils & serveware	<ul style="list-style-type: none"> Pilot reusable utensils - Phase1 Transition to reusable utensils as feasible
Annual district stakeholder meeting to assess food sustainability efforts	Annual district stakeholder meeting to assess food sustainability efforts	Educate, Train, Monitor & Maintain	Engage in food sustainability education and ongoing assessment of food waste reduction	<ul style="list-style-type: none"> Annual staff training 3x/year student training Annual waste audit (1 school/yr) Annual food sustainability meeting

LWSD FSSR Timeline Roll Out



This Roadmap creates a comprehensive plan for LWSD not only to reinstate recycling and composting programs that existed prior to Covid-19 disruptions, but to significantly expand its food sustainability practices. In addition, this roadmap represents the district’s effort to comply with recent legislation concerning organics management in Washington state by improving its food services sustainability protocols. Finally, the implementation of this roadmap demonstrates LWSD’s commitment to prioritizing environmental stewardship for the larger community, including students, families and community partners.



FSSR - Why

Why Reduce Food Waste?

It's the Law

State legislation passed in 2021 and 2022 regulates the use of single-use plastics and requires composting of organic materials in the state of Washington starting in January 2024. These laws apply to school cafeterias and food services and indicate a clear statewide trend towards food sustainability regulatory actions. School districts must incorporate these measures into their long-term sustainability efforts.

The **Washington State 2022 Organics Management Law** stipulates that any site creating more than four cubic yards of organic waste per week will be required to implement a composting program by January 2025. Any site creating more than eight cubic yards of organic waste per week will be required to start by January 2024. Beginning in 2026, compliance will be required by all businesses, including schools, that produce four cubic yards of solid waste per week.

This **Law** directly impacts the LWSD. Table 1 summarizes which schools are estimated to meet the legal requirements for composting in January 2024 and 2025.

LWSD Schools: Organic Waste			
Schools creating 8 cu yds/week JANUARY 2024		Schools creating 4 cu yds/week JANUARY 2025	
Finn Hill	Evergreen	Sandburg	Twain
Inglewood	Timberline	McAuliffe	Franklin
Juanita HS	Redmond HS	Eastlake HS	Rose Hill EI
Kamiakin	Clara Barton	Smith	Kirkland MS
Lake Wash HS	SSC	Einstein	Lakeview
Redmond MS	Redmond EI	ICS/ Comm	Dickinson
Rose Hill MS	Juanita EI	Wilder	Mann
	Ella Baker	Alcott	Tesla STEM
		Carson	Kirk
		Mead	Rosa Parks

Estimates of cubic yards of organic materials are based on data from King County Waste Characterization Study¹ and Lake Washington High School Waste Audit conducted March, 2023.² A conservative estimate of 30% of total waste was calculated to be organic waste.

¹ Estimates of cubic yards of organic materials are based on data from King County Waste Characterization study <https://kingcounty.gov/~media/depts/dnrp/solid-waste/about/documents/waste-characterization-study-2019.ashx?la=en>
² Lake Washington High School Waste Audit conducted March, 2023. Estimates of Organic Waste are based on results of a waste audit conducted at Lake Washington High School in March, 2023 identifying 50% of cafeteria waste and 61% of kitchen waste as compostable (<https://www.facebook.com/lwhspsa/videos/731913152008735/>).

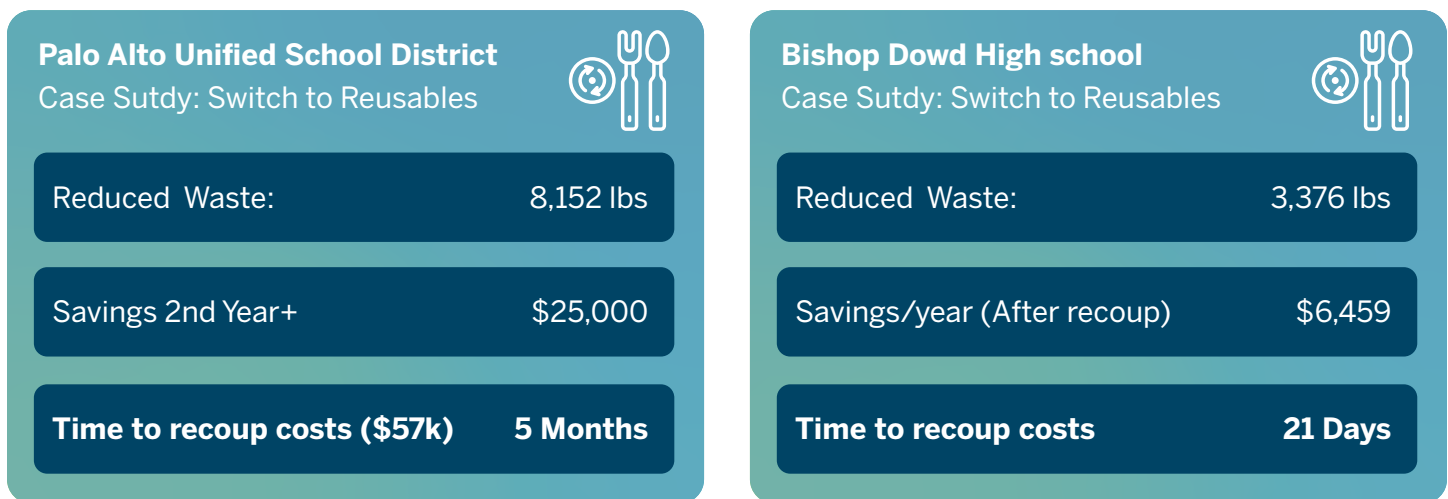
Why Reduce Food Waste?

It Saves Money

Case studies of school districts implementing changes to food services practices in order to reduce waste and improve recycling and composting diversion rates underscore that these changes can be made without long-term negative impacts on a district's budget.

Improvements in diversion rates away from landfill toward recycling and composting have resulted in savings for school districts with reductions in hauling costs. Furthermore, recommended protocols such as purchasing reusable service items and updating custodial equipment related to food sustainability practices have shown to reduce long term costs for school districts, despite initial added costs particularly in the first year of new programs.

Case studies from two school districts that made the switch to reusables show the potential long terms savings³



Furthermore, purchasing reusable service items will reduce the impact of both supply chain shortages and price volatility on the district's budget.

External funding sources also exist that can potentially subsidize costs of implementing different aspects of the FSSR recommendations. City funds from both Kirkland and Redmond are available with existing local and state grants, as well as potential grants from Center for Environmental Health and Plastic Free Restaurants.

3 https://ceh.org/wp-content/uploads/2021/05/CS_BODHS_01.27.16a.pdf

Why Reduce Food Waste?

It is Better for the Environment

Based on a [World Wildlife Fund 2019 study](#), students throw away out about **39 pounds of food per person per year and 19 gallons of milk**. This is equivalent to 15% to 25% of the food they take from the cafeteria. This amounts to approximately 530,000 tons of food waste per year from schools across the country. The most commonly disposed foods are vegetables, fruits and milk.



Implementing sustainable food practices in schools can help reduce overall food waste generated, lessen environmental impact, and address food insecurity challenges in every school district. School cafeteria composting can divert food scraps and other organic waste from landfills, where they would produce larger amounts of methane than when composted. By composting this waste instead, schools can reduce their carbon footprint and help mitigate climate change.

Furthermore, district wide food sustainability efforts can be used as an educational tool to teach students about the environmental benefits of reducing waste, recycling organic material, and composting and can help foster a culture of sustainability and environmental stewardship.

Redirecting unwanted food to food share tables and food donation banks also reduces waste and helps address food insecurity challenges for community members.





Current Practices

Current Practices

LWSD includes 50 campuses and serves over 30,000 students:

20 schools = City of Kirkland

13 schools = City of Sammamish

10 schools = City of Redmond (Zip: 98052)

7 schools = unincorporated City of Redmond (Zip: 98053)



LWSD is advanced with respect to its overall sustainability practices in comparison to school districts nationally. The district has had a Resource Conservation Management program for over a decade and has saved at least \$18.7M through energy efficiency efforts. Pre-pandemic, school recycling and composting programs were well established in the large majority of schools. The curriculum includes climate education across multiple grade levels and often involves service learning. Most schools have an active Green Team, and the district supports these teams with a stipend for the advisors. Within LWSD, responsibility for overall sustainability planning resides with the Office of Support Services.

Several important internal teams and external partners work with LWSD as it relates to food services sustainability, including LWSD administration (Business and Support Services), which includes Custodial Services, Nutrition Services (Sodexo), Resource Conservation Services from McKinstry Co, King County Green Schools Program, City of Kirkland, City of Redmond, and City of Sammamish. The FSSR aims to facilitate coordination between these different departments and agencies to improve food sustainability within LWSD.

Nutrition Services

LWSD Nutrition Services currently purchases all supplies related to food service, including disposable items. LWSD purchases all equipment, including dishwashers. LWSD Nutrition Services oversees all kitchen staff and kitchen protocols. LWSD oversees all custodial responsibilities.

Current Practices

Waste Management Services

City of Kirkland and City of Redmond have similar contracts with Waste Management (WM). Recycling and composting are included within the regular waste hauling rates. Schools do not pay extra for recycling and composting. The City of Kirkland and Redmond provide exterior bins at no additional charge to each of the schools within each city. Sammamish and Redmond unincorporated (20 schools total) pay additional rates for recycling and composting.

King County Green Schools Program

King County Green Schools Program (KCGSP) is an important resource for LWSD and has been an active partner with the district in a wide range of sustainability efforts. KCGSP specifically offers resources and support to establish or improve composting programs and food waste reduction practices. 66% of schools in LWSD have active Green Teams supported by KCGSP. The FSSR builds upon the resources and practices KCGSP has been providing for LWSD. To maintain continuity with work already started in LWSD, the KCGSP signage and bin color will be used as the district standard.

Pre-pandemic LWSD food sustainability practices

- 100% participation in composting in Redmond schools (10 campuses)
- 100% recycling participation in LWSD (50 campuses)
- 75% composting rate for LWSD¹
- 20-75% diversion rates

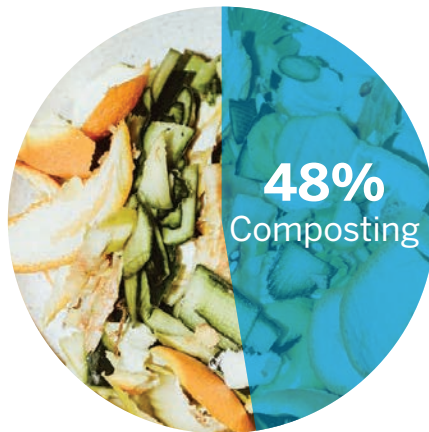
1 <https://www.lwsd.org/programs-and-services/sustainability>

Current Practices

Post-pandemic LWSD food sustainability practices (Spring 2023)

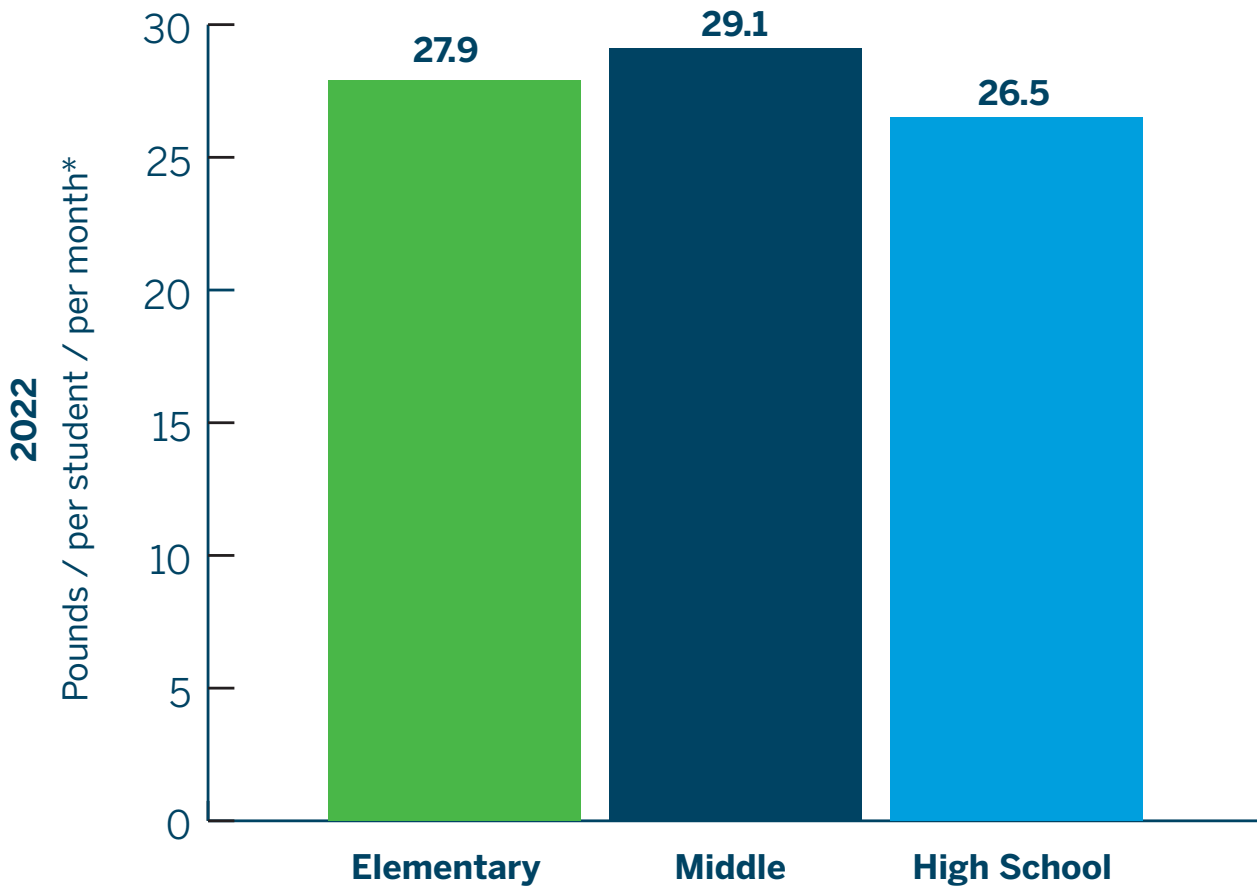
Current Sustainability Practices: % of Schools in LWSD

Based on 2022-2023 data gathered from LWSD.



Current Practices

Waste Management Diversion Rates



**Total lbs per month is landfill, compost and recycling. Wide range of diversion rates reflects differences by schools in size, space and resources to implement food waste disposal programs.*



Current Practices

Reusable Utensils Data

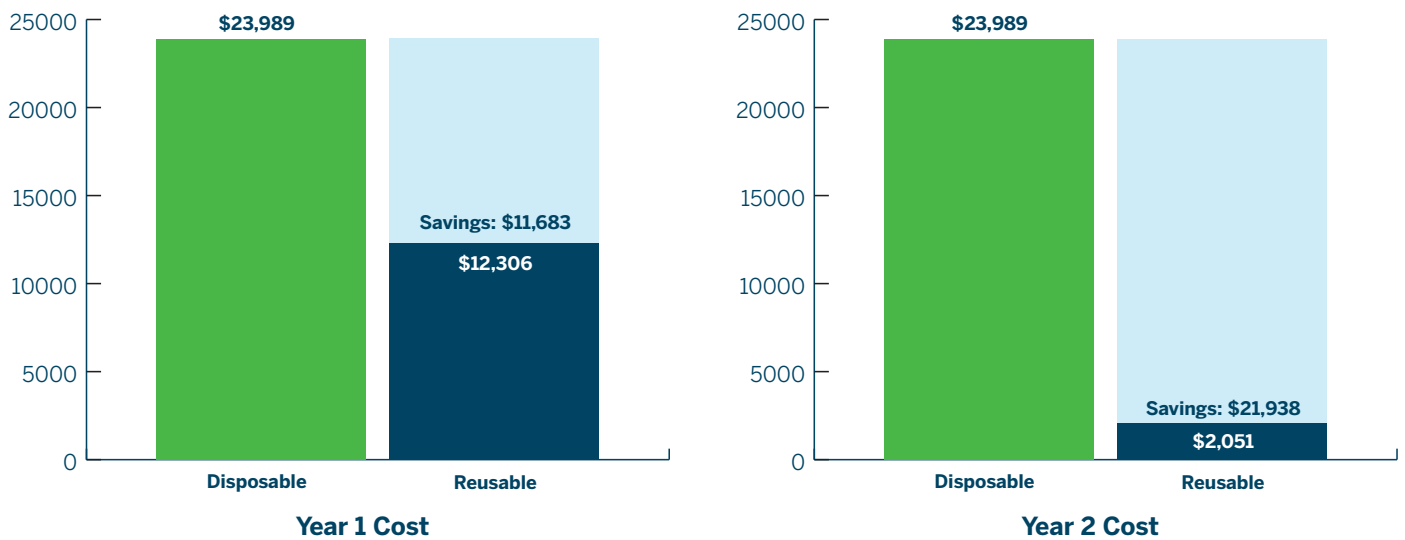
LWSD currently has 5 schools using reusable, stainless steel utensils. Preliminary information gathered from the first several months of use will be used to inform future pilot studies in Fall 2023.

Price Comparison for Reusable vs Disposable Utensils



Data provided from LWSD Nutrition Services

Utensil Cost Comparison



Assumptions

- Daily meals based on Nutrition Services invoices from 9/22 and 10/22 = 6,231.
- Disposable cost annually = cost of plastic x # meals x 175 (days per school year).
- YR1 assumes 50% retainment, YR2 assumes 75% retainment.
- Additional labor, water and cleaning supplies not included in cost analysis. Costs would be deducted from difference.



Food Services Sustainability Roadmap (FSSR): Action Steps

FSSR GOAL #1: District Coordination of Food Sustainability Efforts

Action steps:

- Establish a multi-tiered, collaborative approach to food sustainability
- Define clear stakeholder roles and responsibilities
- Facilitate coordination among different stakeholders
- Create annual food sustainability meeting and assessment



Stakeholder Roles and Guidelines



Stakeholder Roles and Guidelines



LWSD Administration: Executive Director of Support Services

- Prioritize food sustainability efforts for the district
 - Publish FSSR on website
 - Include and inform key stakeholders (e.g., principals and custodians)
 - Schedule district wide food sustainability meetings (as part of roll out)
 - Create district wide food sustainability recognition/awards
- Set clear sustainability expectations for suppliers, custodial staff, and building administration related to food waste
- Maintain and expand Resource Conservation Manager role to oversee food waste monitoring (comparable to energy monitoring)
- Establish food sustainability commitment with Nutrition Services
 - Set expectations related to food sourcing, purchasing, waste monitoring, and reusables
 - Consider contractual incentives to reduce food waste (Sodexo's corporate stated goal is 50% reduction in food waste by 2025)
 - Encourage transition to reusable utensils and service ware items
- Establish funding to ensure required equipment and resources are available in all district schools
- Build individual school leadership commitment with principals
- Coordinate with Resource Conservation Manager (RCM), Nutrition Services, King County Green School Program, and city partners
- Facilitate training and education of food sustainability protocols for suppliers, custodial staff, and school staff

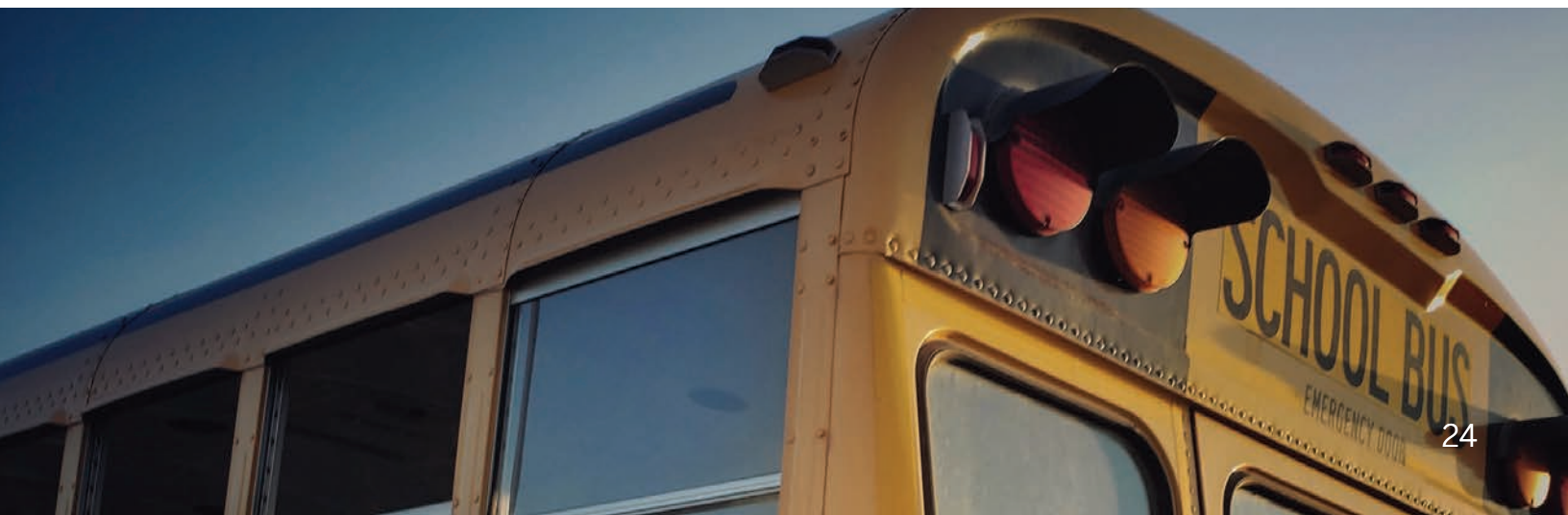


Stakeholder Roles and Guidelines



Resource Conservation Manager

- Primary contact person for food sustainability in LWSD
- Coordinate with LWSD administration, King County Green Schools Program, and City of Kirkland/Redmond to guide LWSD efforts
- Assess waste management data quarterly to track progress and identify issues
- Attend quarterly meetings with LWSD administration to discuss food sustainability
- Attend annual district meeting on food sustainability in LWSD
 - Summarize and present data about progress of schools
- Coordinate stakeholder training with office of support services and King County Green Schools Program



Stakeholder Roles and Guidelines



King County Green Schools Program

- Continue to provide resources and support for food waste reduction programs
 - KCGSP standard used for indoor recycling and organics collection bins and signs
- Facilitate staff and student training
 - On site support if possible for new schools
 - September, January, and April are targeted training months
 - Continue to work with RCM to monitor food waste protocols in LWSD
- Attend LWSD food sustainability meetings each year to provide guidance and suggestions for improvement
- Provide support as needed for annual food waste audit (single school each year)
 - Coordinated by RCM of LWSD



Stakeholder Roles and Guidelines



Building Administration

- Set clear expectations for school staff, custodians, and students for food sustainability responsibilities
 - Food sustainability protocols should be included in start of school year training
 - School events should follow food sustainability protocols
- Support school staff, custodians, and students in their food sustainability efforts
- Facilitate training and education of food sustainability practices
 - Student training up to three times annually, example: First week of school, week after winter break, week after spring break



Stakeholder Roles and Guidelines



Nutrition Services/Kitchen Staff

- Support LWSD goals for food sustainability in planning, purchasing, preparing, serving, and disposal of food in all school kitchens
- When purchasing for the LWSD, it is important to choose compostable items that are accepted by Cedar Grove (or other composting hauler). Use these links to check before purchasing compostable items: [Cedar Grove Approved List](#) and [King Country Green School Program Best Practices Guide](#)
- Train all kitchen staff about food sustainability practices—and add training to on-boarding of new kitchen staff employees
- Work with district administration, resource conservation management, and custodians to ensure kitchen practices are consistent across schools (recycling, composting, and landfill sorting in all kitchens)
- Participate in one school waste audit annually



Stakeholder Roles and Guidelines



Custodial Services

- Maintain standard procedures using King County Green School standard
 - Manage containers using the proper equipment, such as tilt trucks and tandem dollies
 - Line containers with the appropriate bags
 - Green certified compostable liners for compost
 - Clear liners for recycle and landfill
 - When purchasing for the LWSD, it is important to choose compostable items that are accepted by Cedar Grove (or other composting hauler). Use these links to check before purchasing compostable items: [Cedar Grove Approved List](#) and [King Country Green School Program Best Practices Guide](#)
 - Landfill waste placed in black liners hides many recyclables lurking in the trash. Using clear liners allows staff and volunteers to see contamination in the trash and work with specific areas in the building to correct these issues
 - Not using a liner is also an option for recycling and compost. This is more labor intensive but cuts down on plastic waste
- Coordinate with City and Resource Conservation Manager to make sure outdoor dumpsters are optimal size
- Clarification about monitoring of food disposal centers in the cafeteria
 - Custodial staff is not responsible for monitoring indoor cafeteria containers for contamination during lunch
 - If contamination is noticed, contamination should be reported to the designated sustainability coordinator at each school
- Understand clear guidelines for handling contamination
 - RCM and city officials should help determine these guidelines and communicate them during staff training sessions



Stakeholder Roles and Guidelines



Staff/Teachers

- Lead by example in classrooms, cafeterias and staff lounge
- Make sure classroom bins (recycling and landfill) have signage
- Support students in food sustainability efforts
- Educate students about why food sustainability practices are important and what steps they can take to reduce food waste



Stakeholder Roles and Guidelines



Students

- Participate in Green Teams and incorporate food sustainability activities
- Volunteer as lunch room sorting monitors
- Participate in School-to-School Mentorship program
- Take responsibility for the landfill waste and compostable materials they use



Stakeholder Roles and Guidelines



Parents/LWSD PTSA

- Lead by example with food waste reduction awareness
- Ensure Parent Sustainability Chairs at each school in LWSD are familiar with FSSR and can answer questions
- Continue to provide support as needed for food sustainability programs
 - Volunteer support in cafeteria monitoring during training weeks
 - Volunteer food donation weekly pick up and drop off at Hopelink
 - Assist with Food Waste Audits
- Parent hosted school events should follow FSSR guidelines as well with recycling and composting efforts



Stakeholder Roles and Guidelines



City of Kirkland/City of Redmond/Sammamish

- Coordination with Waste Management/Cedar Grove/Lenz
- Coordination with Resource Conservation Managers for LWSD
- Provide monthly data on organics/recycling/landfill to Resource Conservation Manager, including volume, fees, and contamination, if any
- Confirm with garbage hauler and compost processor any accepted compostable products, ensure composting is occurring
- Establish contamination rules and communicate to Resource Conservation Manager
- Facilitate training of the school district on food sustainability/recycling/composting
- Ensure waste management will take away any purchased compostables
- Help school district with food sustainability/recycling/composting training
- Coordinate with Composting Hauler/WM - help obtain a letter of agreement/commitment to accept recyclables/compostables purchased



FSSR GOAL #2: Standardization of food sustainability protocols: Kitchen Practices

ACTION STEPS:

Define district wide, systematic set of food sustainability protocols in school kitchens and cafeterias

KEY ELEMENTS:

- Standardize kitchen procedures district wide
- Educate/Train kitchen staff
- Measure, monitor, and meet milestones

GOALS:

- Reduce Food Waste (less edible food to landfill)
- Increase Organics Management (more composting)

STANDARD PROCEDURES:

- Kitchens should have bins/stations with information signage in the kitchen or very close by depending on space availability. Examples below:
 - Blue Recycling Bin and [sign](#)
 - Grey Landfill Bin and [sign](#)
 - This sign is for cafeteria landfill. There will be additional landfill items in school kitchens related to packaging of food, etc
 - Yellow/Green Compost Bin and [sign](#)
 - Composting sign is for cafeteria. Kitchen composting should follow City of Kirkland guidelines [sign](#), or City of Redmond guidelines [sign](#).



Kitchen Practices

EDUCATE/TRAIN

- Visible guides in all kitchens
 - If there are staff changes in location or substitutes, all information is available
- Conduct training for kitchen staff prior to start of new school year
- Include waste/recycling/compost training for new hires
- Nutrition Services to provide training of FSSR protocols to kitchen staff

MONITORING

- Choose a food waste monitoring system:
 - Pilot Sodexo Waste Watch in two to three schools
 - Clear food waste bucket/Scale Measurement (pick a 1 day/week, weigh and send to RCM)
 - Other apps/options for measuring food waste
- Quarterly meeting of LWSD, Nutrition Services, Custodial Services, and Resource Conservation Manager to review data
- Conduct waste audits annually.



Cafeteria Practices

GOALS

- Reduce Food Waste
- Increase Composting
- Continuity of practice for LWSD students K-12

STANDARD PROCEDURES

- Each cafeteria should have at least two stations for sorting food/waste/recycling after each meal
- Each school will receive a packet of King County Green School Program signs/sticker labels
 - Signs should be attached to along the wall or attached to the bins if the bins are not attached to a cafeteria wall
 - Stickers should be affixed to the appropriate bins directly

Each station should have the following bins/stations, in the following order:

- 1. Food Share/Donation**
- 2. Reusables Washing Bin/Table**
- 3. Orange liquid disposal buckets/containers**
- 4. Blue Recycling Bin**
- 5. Grey Landfill Bin**
- 6. Yellow/Green Organics/Composting Bin**
- 7. Plate/Tray Cart/Table**



Cafeteria Practices

1. Food Share **sign** and Food Donation Station **sign**

- Each cafeteria should participate in the district's existing food share and food donation program
- Department of Public Health - Seattle & King County requires an annual form to be completed and submitted by district Nutrition Services staff for each school facility
- Students will first drop off any items for either Food Share or Food Donation
- These stations should be clearly labeled: **Food Share Sign**, **Food Donation Sign**
- Share table bins, containers, or collection areas must be at least six inches off the floor
- School share tables should be limited to unopened school meal components (no homemade foods), unopened commercially packaged foods and whole fruits in non-edible peels
- Each food share table must have a designated person in charge and that person must have a food worker card. Each food table must be monitored to make sure only accepted items are placed on the table
- Share Table: The King County Green Schools Program also is available to assist schools to set up Share Tables and donation programs according to these considerations. King County Green School Program Food Sharing **Fact Sheet**
- Food for food share and food donation programs should be stored in designated refrigerators (NOT in Nutrition Services delegated spaces)
- Funding exists from City of Kirkland and City of Redmond for refrigerators for schools ready to implement these programs
- For Food Share, parent volunteers can organize to pick up food donation and transport to drop off sites
- It is understood that each school food sharing program may be different depending on number of lunch periods, food service staffing, types of foods shared, and available equipment and financial resources

2. Reusables Washing Bin/Table

- Students place reusable utensils onto a wheeled tray or table (depending on resources at the school) at the beginning of the sorting line to prevent accidental loss of utensils in landfill, recycling or compost

Cafeteria Practices

3. Orange liquid disposal buckets/containers sign/sticker

- 5 Pour away containers and 50 orange liquid buckets were purchased for LWSD
- Students pour unfinished liquids into the bucket
- This keeps the other bins lighter in weight and less messy
- This is a vital step in reducing contamination of recyclable materials & organic composting

4. Blue Recycling Bin sign/sticker

- Students place all accepted and empty recyclable items into the recycling bin: Metal (aluminum and steel) containers, plastic containers (including plastic bottles), milk cartons, and glass bottles and jars
- Each recycling bin has a sign above it illustrating recyclable items
 - If bin is not against a wall, attach to sign holder. See King Country Green School Program site for instructions
- Students can make 3D signs to further illustrate acceptable items (Any 3D signs should be consistent with the KCGSP signs and should not replace the standard signs provided)

5. Grey Landfill Bin sign/sticker

- Students place non-recyclable, non-compostable items (e.g., chip bags) in the waste bin

6. Yellow/Green Organics/Composting Bin sign/sticker

- Students scrape food from reusable trays/plate, and place napkins and all other compostable items into the compost bin
- The compost bin is last in the sequence because all other waste should have been discarded and students should be able to scrape all remaining food waste off of their tray or plate

7. Plate/Tray Cart/Table

- Last stop is the table/tray used to collect plates, baskets, reusable trays when all other waste has been disposed of

Cafeteria Practices

GENERAL CAFETERIA GUIDELINES:

- If food waste disposal stations must be moved to clean the floor, the stations should be put back in the same place in the same order. Wall-posted signage can be the visual markers of where bins are always to be located
- Sorting stations should be conveniently located
- Stations should remain in the same place every day and bins should never be separated
- DO NOT place any landfill bins in the cafeteria away from the sorting station, as this will encourage disposal without sorting
- Consistency is important; if you have multiple stations, they should have identical signage and operation

EDUCATION/TRAINING

- School wide training should occur up to three times per year including start of year
- During these training times, monitors (green teams, parent volunteers, or staff) should oversee waste stations in cafeterias
- Waste Management and Cedar Grove offer training sessions for schools
- King County Green Schools Program offers **training sessions**

MEASURING/MONITORING/MEETING MILESTONES

- CLEAR acceptable levels of contamination should be established in collaboration with custodial staff, waste management, and resource conservation manager
- Custodians should report contamination issues immediately to designated sustainability coordinator at each school (and document with pictures if possible)
- Measurement of waste reduction should be monitored by Waste Management hauling and city administrators and data conveyed monthly to the resource conservation manager.

FSSR GOAL #3: Reduction of Food Waste

KEY ELEMENTS:

- Systematic implementation of kitchen and cafeteria protocols**
- Utilization of LWSO food share and food donation programs**
- Food waste tracking in kitchens and schools**

ACTION STEPS:

- Set specific goals for food waste reduction and composting**
- Implement protocols in all kitchens and cafeterias to reduce food waste**
- Reinstate food share and food donation programs**
- Track waste diversion to assess effectiveness of protocols**

The LWSO Food Services Sustainability Roadmap outlines a consistent set of practices to implement at each of its 50 school campuses with these primary goals.

- Reduce food waste in kitchens by 25% by 2025¹
- Reduce food waste in cafeterias by 50% by 2025
- Reach 100% participation in kitchen & cafeteria composting by 2025
- Divert 20% of edible food waste from landfill by 2025²
- Reduce organic waste in landfill stream by 75% by 2030

See Kitchen and Cafeteria Protocols for Recycling, Composting, and Food Waste Reduction Strategies

1 Adapted from Sodexo company-wide goal.
2 Propose 2022-2023 as baseline

FSSR GOAL #4: Reduce Single Use Items

ACTION STEPS:

- ❑ Define strategies for reducing single use items in kitchens and cafeterias
- ❑ Implement phased approach transition to reusables in school cafeterias to the greatest extent feasible

GOALS:

- ❑ Reduce single use, disposable service items by 50% by 2025
- ❑ Reduce single use, disposable service items by 80% by 2030

Reusables in LWSD 2022-2023

Five LWSD schools (10%) are using reusable utensils and 74% of schools have reusable service ware (trays, baskets, and plates). Observational data from three schools with reusable utensils collected February-March 2023 suggest a potential for savings of up to 25% with a shift away from purchasing disposable plastic utensils. Pilot studies will be conducted in the 2023-2024 academic year with additional schools to further assess the long term savings potential, while taking into account the additional cost of labor, water, and supplies.



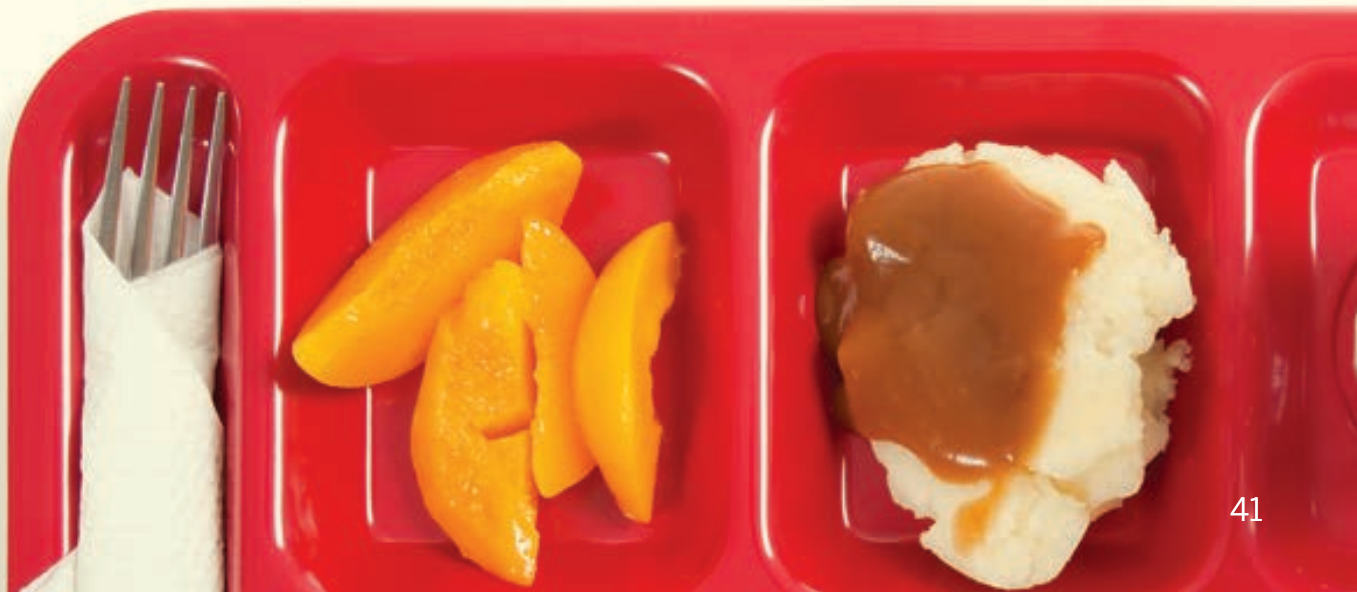
Reduce Single Use Items

Reusables/Durables recommendations:

- Switch from single use plastic utensils to metal reusable utensils
- Switch from paper plates to red reusable serving boats with compostable liners or reusable clamshell containers
- Limit use of straws
- Switch away from compostable trays to reusable trays
 - Plastic compartment trays where food is placed directly on the tray are not ideal. Stainless steel trays are preferred or flat plastic trays used to carry food in containers
- Consider condiment dispensers with small stainless steel condiment dish
- Consideration of stainless steel milk dispensers should wait until composting and recycling are well (re)established
 - Milk cartons are currently recycled by Waste Management in the cities of Kirkland and Redmond (although there is indication this status might change)
 - If schools that have fully reimplemented composting, recycling, and reusable utensils and are eager to pilot milk dispensers, there is a grant available through the WA State Dairy Association
 - We do not recommend that this step be a focus for the district at this time

Reusables Funding Sources

- Plastic Free Restaurants will subsidize cost differential for plastic utensils
- City of Kirkland/City of Redmond/State Department of Ecology grants may be available



FSSR GOAL #5: Educate, Train, Monitor & Maintain

ACTION STEPS:

Educate

- Implement food sustainability education campaigns**
 - Green Team projects**
 - District wide food donation projects**
 - Waste Free lunch days**

Train

- Incorporate training of food waste reduction protocols throughout the school year**
 - Schedule cafeteria protocol training weeks (up to three times annually)**
 - Invite Cedar Grove and Lenz to give onsite training to students**

Monitor

- Track food waste reduction in both kitchens and cafeterias**
- Quarterly check-in with RCM about food waste reduction protocols**
- Conduct annual waste audit (single school each year coordinated by RCM)**

Maintain

- Standardizing recycling and composting procedures will ensure the longevity of these practices. Continuity will be created from K-12 that will ensure practices become the standard of behavior across the district. Clearly defining protocols will also help ensure efforts will be not be dependent on any specific staff member, parent or student to implement the strategies.**



Other Recommendations

Other Recommendations

- Organics collection in non-cafeteria locations
 - Classrooms
 - Staff Lounges
 - Culinary arts classrooms
- Breakfast protocols should be the same as lunch protocols when possible
- High School vending machine areas should have similar bins and signage (except liquids container should only be in cafeteria)
- Food Donation Program Details
 - If possible, separate refrigerators should be purchased (one at central kitchen if feasible) for storage of food donation items
 - Parent volunteers can pick up and drop off food donation items
 - Operation Sack Lunch, Hopelink, local homeless shelters, and church soup kitchens are possible partners for the food donation program
- Food Sustainability Curriculum Integration
 - Garbology Studies
 - Waste Audits
 - Social Justice and Food Insecurity
- Documentation Updates
 - Contracts with all vendors (including Sodexo) should include food sustainability targets and timelines





Implementation Models

Implementation Models

Preparation Phase: Summer 2023

- Present FSSR to community
- Purchase equipment for implementation—printed signs, liquid disposal containers, reusable utensils
- Present FSSR to principals
- Train kitchen and custodial staff

Phase 1: Fall 2023 N=25 Schools

- Standardize bins, signage and training for all 50 campuses
- Kitchen Protocols: All schools without kitchen composting should implement kitchen protocols (N=18)
- Cafeteria Protocols: All schools creating eight cubic yards of organic waste/week implement cafeteria protocols (N=7)
- Reusables: Additional schools to pilot reusable utensils
- Food Waste Audit: One school selected for food waste audit
- Food Sustainability annual meeting to assess program progress

Phase 2: Fall 2024 N=25 Schools

- Continue to standardize bins, signage, and training for all 50 campuses
- Cafeteria Protocols: All remaining schools should implement cafeteria protocols
- Reusables: Additional school sites transition to reusable utensils as feasible
- Food Waste Audit: One school selected for food waste audit
- Food Sustainability annual meeting to assess program progress





Conclusion

Conclusion

The Lake Washington School District Food Services Sustainability Roadmap was created in partnership among the City of Kirkland, City of Redmond, and Lake Washington school district administration to address food sustainability and waste reduction strategies. The grant partners listed above and the Washington State Department of Ecology worked together in innovative ways, including to purchase needed supplies in support of this roadmap such as cafeteria and kitchen signs, liquid disposal containers, and reusable utensils.

The resulting FSSR can be used to inform decision-making and guide procedures to:

- Facilitate the coordination of food sustainability efforts within LWSD and its partners
- Standardize food waste reduction practices throughout LWSD
- Improve and expand recycling and composting practices on all 50 LWSD campuses
- Reinvigorate food share and food donation programs post-pandemic
- Transition from single use items to reusable utensils and serviceware
- Achieve compliance with upcoming composting requirements in Washington state

Implementing strategies outlined in the FSSR will support LWSD in its efforts to achieve the food sustainability and waste reduction goals established by both the district and Washington state:

- Diverting organic matter away from landfills
- Reducing edible food in organic waste
- Reducing overall food waste
- Decreasing dependence on single use serviceware items

Input and guidance from many key stakeholders within the LWSD community were incorporated into this Food Services Sustainability Roadmap. The resulting plan encompasses a district-wide, coordinated, and systematic approach to reducing food waste, increasing organic material diversion rates and improving food sustainability efforts. In implementing this roadmap, Lake Washington school district and its city partners will be positioned as leaders in food sustainability and organic waste management within the public school sector.



Resources

Links

Department of Public Health Seattle & King County Food Donation Information Sheet

<https://kingcounty.gov/~media/depts/dnrp/solid-waste/greenschools/documents/food-sharing-fact-sheet.ashx?la=en>

City of Kirkland Sustainability Master Plan

<https://www.kirklandwa.gov/Government/Departments/Sustainability-Center/Sustainability-Master-Plan>

LWSD Sustainability

<https://www.lwsd.org/programs-and-services/sustainability>

LWSD Parent sustainability committee

<https://www.lwptsa.net/advocacy/sustainability/>

King County Green School Program

<https://kingcounty.gov/depts/dnrp/solid-waste/programs/greenschools.aspx>

King County Green School Signs Digital Files

[Compost](#)

[School Food Share](#)

[Food Donation](#)

[Landfill](#)

[Liquid](#)

[Recycle: Cafeteria](#)

[Recycle: Kitchen](#)

[Compost: Food Scraps \(From City of Kirkland\)](#)

[Kitchen Compost \(From City of Redmond\)](#)

Cafeteria Culture

<https://www.cafeteriaculture.org/>

Center for Environmental Health

<https://ceh.org/>

Examples of informational videos for training

<https://www.stopwaste.org/at-school/resource-library/school-sorting-videos>

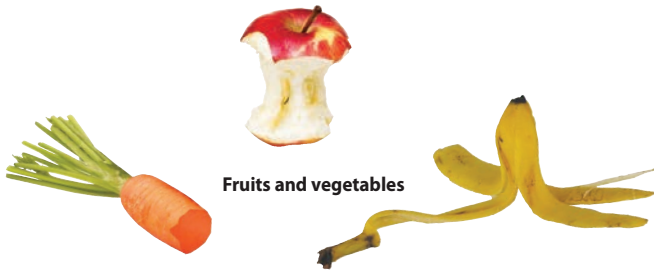
Subsidy for Reusables from Plastic Free Restaurants

<https://docs.google.com/forms/d/e/1FAIpQLScC6NxDINrRA4mU1A8B9SDkWyKA7H9jxzDygPI5ygVYNIbmg/viewform>

Dairy Grant

<https://wadairy.wpengine.com/start-strong-program/>

Food scraps + other compostable materials



Fruits and vegetables



Breads, pastas, cheeses, fish, meats

- NO** foam
- NO** plastic
- NO** glass
- NO** straws
- NO** metal
- NO** tissues



Paper towels, napkins, pizza boxes,
other food-soiled paper

 **King County**
Department of
Natural Resources and Parks
Solid Waste Division

Nov 2016DK

SCHOOL FOOD SHARE



Lake Washington School District



FOR DONATION ONLY
Do NOT take fruit from this bin



Apples and pears only

Lake Washington School District



Garbage



Bottle caps



Candy and gum wrappers, chip bags



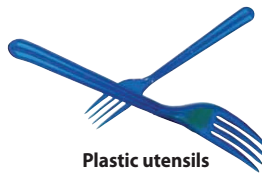
Condiment packages



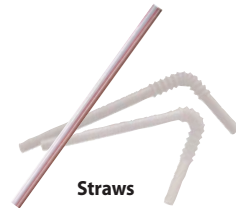
Foam containers



Foil lids from plastic cups



Plastic utensils



Straws



Plastic baggies



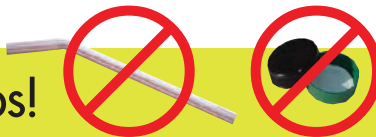
Tissues

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Solid Waste Division
Aug 2016DK

Pour Out Leftover Liquids Here



No straws or caps!



Throw straws and caps in the trash!

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Natural Resources and Parks
Solid Waste Division



Recycle

Recicla
재활용하세요
Перерабатывай

Prevent Waste!

- Use durable, refillable bottles
- Pack lunches from home in refillable containers
- Take what you can eat, and eat and drink what you take



**Must be
EMPTY!**
**NO liquids
or food**

King County
Department of
Natural Resources and Parks
Solid Waste Division



Aluminum cans



Glass bottles



Juice boxes
and milk cartons



Plastic bottles
and cups



Paper bags



NO paper coffee cups



NO candy, gum,
or snack wrappers



NO straws, bottle caps, or lids



NO napkins,
paper towels, or tissues



NO plastic bags



NO plastic utensils

For Kitchens



Recycle Plastic Jugs, Glass Jars and Tin Cans



Rinsed or empty containers only.
No lids, but labels are OK.



Throw out hard to clean containers.

WHAT TO PUT IN YOUR FOOD SCRAP CART

ALL FOOD WASTE *Alimentos*



- ✓ Produce
- ✓ Dairy
- ✓ Grains
- ✓ Meat + fish
- ✓ Bones + shells
- ✓ Frutas y verduras
- ✓ Productos lácteos y queso
- ✓ Pasta, pan, cereales y arroz
- ✓ Carne y pescado
- ✓ Huesos

FOOD-SOILED PAPER *Papeles con manchas de comida*



uncoated
sin recubrimiento

waxed cardboard
cartón encerado

PLANTS + YARD TRIMMINGS *Desechos de jardín*



no pots
no macetas



remove rubber bands
sin bandas de goma



under 4' long, 4" in diameter
menos de 4 pies x 4 pulg.



APPROVED COMPOSTABLE BAGS *Bolsas compostables*



See cedar-grove.com for all approved compostable bags.

WHAT NOT TO PUT IN

These items cannot be removed from compost. Do not put these in your food scrap cart.

NO PLASTIC BAGS *No bolsas de plástico*



Only approved compostable bags can be placed in your food scrap cart. See cedar-grove.com.

NO PLASTIC *No plástico*



NO GLASS *No vidrio*



NO PET WASTE / DIAPERS *No pañales / desperdicios de animales domésticos*





Food + Compostables Comida + Compostables

Food Scraps Restos de comida



Uncoated Paper Papel/cartón



For a list of approved compostable products visit / Para ver una lista de productos compostables aprobados visite:
cedar-grove.com/compostable/accepted-items

Yard Waste & Floral Trimmings Residuos de jardín



Remember...

Place material loose in cart or in a compostable bag. List of approved bags at cedar-grove.com/compostable/accepted-items

Outdoor carts must stay outside and be accessible for collection. Call 425-556-2897 for a clean cart.



Recuerde...

Poner los desechos en una bolsa compostable o sin bolsa. Lista de bolsas aprobadas en cedar-grove.com/compostable/accepted-items

Los contenedores deben permanecer afuera y en un lugar accesible para la recolección. Llame al 425-556-2897 para pedir un contenedor limpio.

NO! Garbage, plastic bags, utensils or straws, gloves, liquids, grease or cooking oil.
Basura, bolsas de plástico, guantes, líquidos, grasa o aceite de cocinar.

NO!

redmond.gov/foodplus • 425-556-2897 • foodplus@redmond.gov
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无歧视声明可在本市的网站 redmond.gov/TitleVI 上查阅。
El aviso contra la discriminación está disponible en redmond.gov/TitleVI.



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Photo by: Elizabeth Cecil