



About the DC Reduce First Challenge – Lunch Edition

Moving toward the [Sustainable DC](#) target of zero waste by 2032 will require a change in emphasis of school recycling programs to focus on the first of the 3 R's – Reduce!¹ The DC Reduce First Challenge – Lunch Edition is the first ever challenge, open to all DC schools, focused on reducing food waste.

During the challenge, schools will conduct simple surveys to count whole uneaten and unopened food items per student lunch, and then take actions to reduce wasted items. The challenge is designed to address waste generated *after* lunch is served (post-consumer waste) rather than waste generated in the kitchen *before* lunch is served (pre-consumer waste).

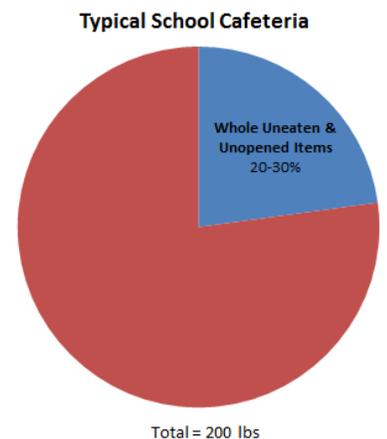
Why Focus on Lunch Waste?

DC Schools Generate A Lot of Food Waste: Based on school waste audits conducted by DGS, an average of 55 percent of the waste generated in DCPS cafeterias and kitchens is edible food waste. About 20-30 percent of the cafeteria waste is whole uneaten and unopened items.²

Food Waste is a Big Problem: Food waste is not only a recent hot topic issue, it is also a serious problem with wide-ranging environmental, social and economic consequences. Food waste in the United States is estimated at roughly 30 to 40 percent of the food supply.³ The value of that wasted food is approximately \$161 billion a year.⁴ In September 2015, the USDA & EPA set a first-ever national food waste reduction goal calling for a 50 percent reduction in food waste by 2030.⁵

Nutrition Loss: Healthy eating is essential for student nutrition and learning. Wasted food means wasted nutrients. Under-nutrition of students can negatively affect overall health, cognitive development and school performance.⁶

DCPS Recycles! Needs Your Data: The DCPS Recycles! team does not yet have answers for what reduction models work best in our schools. In order to recommend DC-wide solutions to lunch waste, we need your data and creative solutions.



¹ Sustainable DC. <http://www.sustainabledc.org/>.

² School waste audits conducted by the DC Department of General Services.

³ United States Department of Agriculture (USDA). February 2014. <http://www.usda.gov/oce/foodwaste/faqs.htm>.

⁴ Same as above.

⁵ USDA. Sept 2015. <http://www.usda.gov/wps/portal/usda/usdahome?contentid=2015/09/0257.xml>.

⁶ Centers for Disease Control and Prevention. August 2015. <http://www.cdc.gov/healthyschools/nutrition/facts.htm>.

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Awards & Recognition

Schools that participate in all four weeks of the challenge will be recognized. Certificates will be awarded for Best Performance, Most Replicable Solution, and Most Learning.

-  **Best Performance** – An objective category based on percent reduction from the baseline. The metric is the number of wasted whole uneaten and unopened items per student lunch per week.
-  **Most Replicable Solution** – A subjective category to award the most effective and replicable waste reduction solution.
-  **Most Learning** – A subjective category to award the school that demonstrates the most learning from participating in the challenge, regardless of whether or not a reduction in waste was achieved.

Deadlines

- Week 1 – Submit your baseline by **Friday, February 19th**
- Week 2 – Submit an update by **Friday, February 26th**
- Week 3 – Submit an update by **Friday, March 4th**
- Week 4 – Submit your final results by **Friday, March 11th**
- Make-Up Week – Submit missed deliverables by **Friday, March 18th**

* Note: DCPS has no school for students on February 12, 15, and 22.

February 2016							March 2016						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6	28	29	1	2	3	4	5
7	8	9	10	11	12	13	6	7	8	9	10	11	12
14	15	16	17	18	19	20	13	14	15	16	17	18	19
21	22	23	24	25	26	27	20	21	22	23	24	25	26
28	29	1	2	3	4	5	27	28	29	30	31		
6	7	8	9	10	11	12							



Challenge Instructions

Week 1 – Understand the Problem: Establish your Baseline

Data Submission Form due at the end of Week 1:

<http://goo.gl/forms/2GvFsq9nq5>

Establishing your baseline is crucial to the challenge. In order to know how much waste you reduce, you must know how much waste you start with. Your baseline will be based on surveys from three (3) days during Week 1.

Step 1: Assign Roles Assign **staff, teachers &/or students** that will remind students to place their whole uneaten & unopened food items in the designated collection container (not in the usual waste bins) and to count and record the items at the end of the lunch period. Also, inform and coordinate with your **custodial staff** and **food services staff** during the challenge.

Step 2: Choose your Sample Size: The metric used to measure progress is the number of whole uneaten & unopened food items per student lunch. Determine your sample size by choosing the number of student lunches that you will survey. Example sample sizes are one lunch table, one class, one grade level, one lunch period, or even multiple lunch periods. **The sample size is up to you! The sample size can be different each day. While a higher sample size is ideal, smaller sample sizes will not be penalized because of the normalized (per student-lunch) metric.**

Step 3: Set Up. Set up a table and/or container (i.e. a milk crate) next to your waste bins where students can place their whole uneaten & unopened items after they are done eating lunch. An example of a sign you can use to designate where students should put the items is provided (page 7).

Step 4: Collect & Count. For three (3) days during Week 1, collect and count the number of whole uneaten & unopened food items after lunch. Use the Daily Worksheet provided (page 5).

Step 5: Summarize & Submit. Summarize the data from the 3 days using the Weekly Summary Worksheet (page 6). Submit your baseline to DGS by completing the Data Submission Form: <http://goo.gl/forms/2GvFsq9nq5>.

What is the metric for success?

The metric used to measure progress is the number of whole uneaten & unopened food items per student lunch. Determine your sample size by choosing the number of student lunches that you will survey. Example sample sizes are one lunch table, one class, one grade level, one lunch period, or even multiple lunch periods. The sample size is up to you!



Photo courtesy of Nancy Deming with Oakland Unified School District

What leftover food should be counted?

Only whole uneaten & unopened food items, such as:

- Whole fruits (apples, bananas, oranges...)
- Uneaten vegetable & fruit cups
- Unopened milk cartons
- Unopened yogurts
- Unopened items brought from home, etc.

*DO NOT COUNT condiment packets - they are not a meal component & will skew the data. Can count separately.

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Challenge Instructions (continued)

Week 2 & Week 3 – Take Action: Test a Hypothesis

Actions Submission Form due at the end of Week 2 & Week 3:

<http://goo.gl/forms/zPIRDPb1Ex>

During Weeks 2 and 3, use your baseline data to come up with a hypothesis. Propose a strategy or strategies you think will reduce the number of whole uneaten and unopened items per student lunch. Then, take action during Weeks 2 and 3. You will test your hypothesis by collecting data again in Week 4. You can use this opportunity to apply science concepts with your students, such as conducting an experiment and how to write and test hypotheses.

For ideas on how to reduce food waste, review the resources provided below. Also, use your creativity to come up with your own ideas!

At the end of Week 2 and Week 3, submit updates to DGS on your hypotheses and actions taken by completing the Actions Submission Form: <http://goo.gl/forms/zPIRDPb1Ex>.

Week 4 – Report Results

Data Submission Form due at the end of Week 4:

<http://goo.gl/forms/2GvFsq9nq5>

During Week 4, test your hypothesis by once again collecting and counting the number of whole uneaten and unopened items per student lunch for 3 days. Repeat Steps 1 through 5 used to establish your baseline during Week 1.

Be honest with your results. Even if your average does not go down, simply conducting the surveys teaches students about eating healthy food and reducing their waste. Moreover, your school's data is invaluable to DGS in learning about and quantifying school cafeteria waste as well as establishing standard protocols for share tables and donations.

Submit your results to DGS by completing the Data Submission Form: <http://goo.gl/forms/2GvFsq9nq5>.

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**DC Reduce First Challenge
Whole Uneaten & Unopened Items
Weekly Summary Worksheet**

Circle One:	Baseline Week (Week 1)			Final Week (Week 4)
	Day 1	Day 2	Day 3	Week's Total (Day 1 + Day 2 + Day 3)
Number (#) of Whole Uneaten & Unopened Items				A
Number (#) of Student Lunches in Sample				B

=

Number of Whole Uneaten & Unopened Items per Student Lunch	= A / B
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DGS would also like to track data for typical items found across D.C. schools. This data will help us inform appropriate protocols for school share tables and donations.

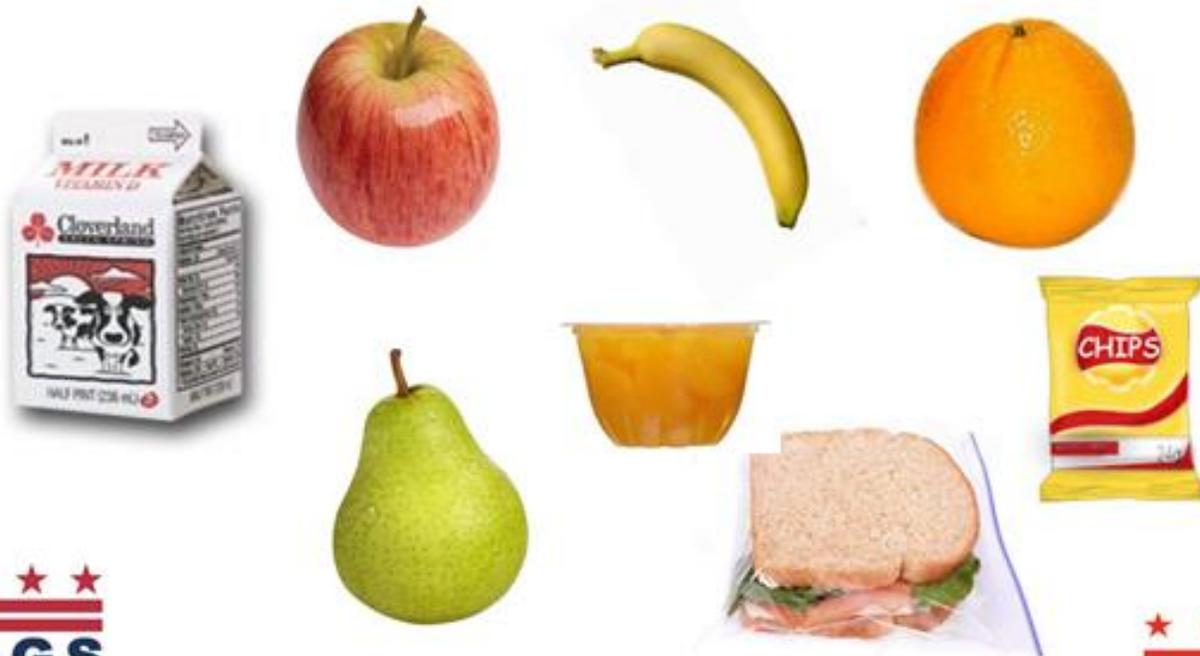
	Day 1	Day 2	Day 3	Week's Total # of Typical Items (Day 1 + Day 2 + Day 3)
Unopened Milk Cartons				
Whole Fruit: Apples				
Whole Fruit: Bananas				
Whole Fruit: Oranges				
Whole Fruit (Other): _____				

Submit your data to DGS at <http://goo.gl/forms/2GvFsq9nq5>.



Example Signage for Collection

WHOLE UNEATEN & UNOPENED ITEMS

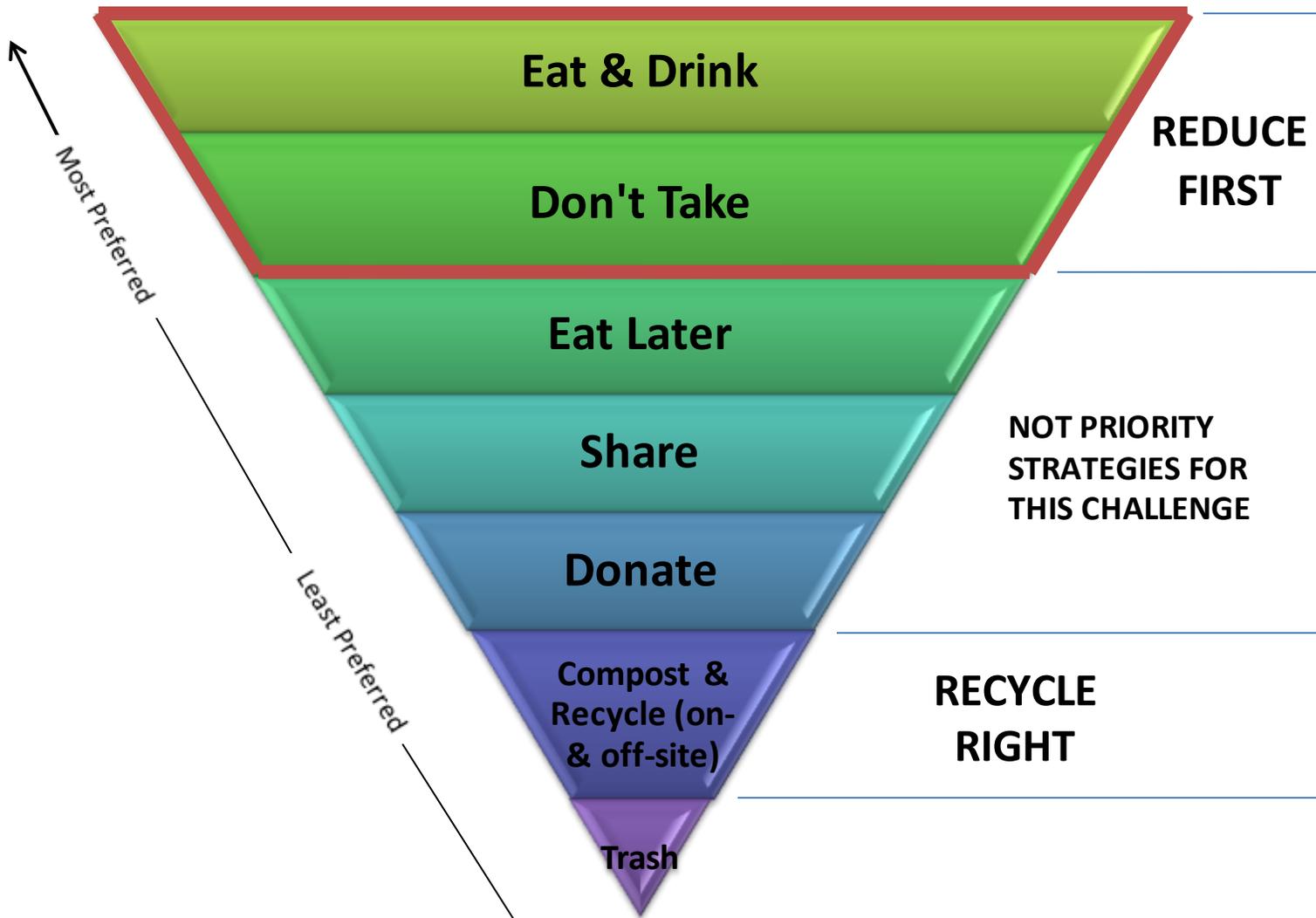


***DO NOT COUNT** condiment packets. They are not a meal component & will skew the data. You can count them separately (optional).



How to Reduce Lunch Waste?

When developing an action plan to reduce whole uneaten and unopened food waste generated during lunch, choose strategies based on the hierarchy below.



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Reduce First (Priority) Strategies

Eat & Drink The biggest waste is that students are not eating their nutritious meals. A strategy may be as simple as having an adult **sit down with students during lunch** and **encouraging them to eat food**. Other simple strategies include **re-naming menu items** with fun, clever names or **writing a song** about drinking milk.

Don't Take For school lunches: This strategy applies to middle and high schools ONLY. Unlike in elementary school when students must take what is served to them, middle and high school students have more choice. Students in middle and high school can **refuse to take milk or foods they do not want to eat** as long as their plate meets meal requirements. *An explanation of the National School Lunch Program's offer versus serve (OVS) meal requirements is below (page 10).* **Important note:** If you select this strategy, you must **inquire with your kitchen manager first** about the OVS program.

For lunches brought from home: Encourage students who bring their lunches to bring their uneaten items back home. Talk to guardians about having a discussion with their student about how their lunches can be modified to reduce food waste.

More (Non-Priority) Strategies

There are food waste reduction strategies that may not be implementable during the challenge because they may require more substantial changes by food services or school administrators. These include **changing recipes** (i.e. through taste tests) or **changing school schedules** (i.e. adding time for lunch or eating lunch after recess instead of before). For example, DC Central Kitchen and Walker Jones Education campus had student taste tests and Fresh Feature Fridays when students voted on their favorite recipes. Read more: <http://sustainableagriculture.net/blog/dc-school-farm-to-school/>.

There are also strategies to *use* the whole uneaten and unopened food that a student is served but decides not to eat. These include allowing students to keep items from lunch to **eat later** in the day; setting up a **share table** for students to make unwanted food available to other students during lunch; and **donating** leftover food to the community. These are not considered priority strategies because (1) they *use* but do not *reduce* food waste generated during lunch, (2) they do not ensure that the nutritional needs of each student are met during lunch, and (3) the standard food safety protocols necessary for DGS to promote these behaviors do not exist yet for schools.

While these are not *priority* strategies for the Challenge, you can still chose to work on these strategies during the Challenge and we encourage you to share your best practices, ideas and experiences with DGS.



Offer Versus Serve (OVS) Meal Requirements Explained

- In DCPS, OVS applies to middle and high schools ONLY -

Offer Versus Serve (OVS) is a program designed by the U.S. Department of Agriculture (USDA) to allow students to choose the foods they want to eat, thereby reducing food waste.⁷ In DCPS, OVS only applies to middle and high schools. Below are the guidelines on what constitutes a “reimbursable lunch” under the OVS program as well as tips for how to use those guidelines to reduce food waste during the Challenge.

Offer Versus Serve: Guidance for the National School Lunch Program and the School Breakfast Program

The meal pattern for lunches consists of five food components:

1. Fruits
2. Vegetables
3. Grains
4. Meats/meat alternates (m/ma)
5. Fluid milk

Elect:

- At least 3 of 5 food components **AND**
- For the fruit and vegetable components:
 - One of the choices selected must be at least a ½ cup serving of the fruits or vegetables component **OR** a ½ cup total serving of both fruit and vegetable.

*If only three components are selected, and two of these are fruit and vegetable, the student may only select the ½ cup portion for the fruit **OR** vegetable. For the other two components, the student must select at least the minimum daily required serving* of the components for them to be counted. *(for [grades] 6-8, ¾ cup and for 9-12, 1 cup)*



Source: Food and Nutrition Service of the U.S. Department of Agriculture.

Tips for using OVS in Reduce First Challenge:

- **Students are not required to take milk IF** they are taking three other food components from serving line. **Example:** Meatball sub (meat + grain) and an orange (fruit) fulfills the three required components that students are required to take.
- **Students must take a fruit or vegetable, but they are not required to take both IF** they have two of the three other components (milk, meat, and grain). **Example:** Hamburger on bun (meat + grain) and potato wedges (vegetable) constitutes three of the five components.
- **Students who eat at the salad bar can decline a milk and/or fruit IF** they have a serving of both meat and grain with the vegetable component of their salads. **Example:** Students must take at least one serving of vegetables and two additional components such as turkey (meat) and a muffin (grain).

⁷ “Offer Versus Serve: Guidance for the National School Lunch Program and the School Breakfast Program.” Food and Nutrition Service. U.S. Department of Agriculture. Effective beginning school year 2015-2016. http://www.fns.usda.gov/sites/default/files/cn/SP41_2015a.pdf.



Smarter Lunchroom Movement

The [Smarter Lunchroom Movement](#) started in 2009 to create sustainable research-based change to promote healthful eating in school lunchrooms. The movement is based on research by the Cornell Center for Behavioral Economics in Child Nutrition Program and is funded by the USDA ERS/FNS.⁸ The [Smarter Lunchrooms Self-Assessment Scorecard](#) contains various strategies to encourage healthful eating, which consequently decreases food waste.⁹

Below is a sampling of strategies from Smarter Lunchrooms which may decrease lunch waste:

Target Specific Items

- Give daily fruit or vegetable creative, age-appropriate names

Signage, Priming & Communication

- Place signs promoting featured menu items in other areas of the school such as the main office, library or gymnasium.
- Dining space is branded to reflect student body or school (i.e. school lunchroom is named for school mascot or local hero/celebrity)

Staff, Teacher, Administrator Involvement

- Teachers and administrators dine in the lunchroom with students
- Staff is encouraged to model healthful eating behaviors to students (i.e. dining in the lunchroom with students, encouraging students to try new foods, etc.)

Student Involvement

- Let students self-serve
- Student groups are involved in the development of creative & descriptive names for menu items
- Student groups are involved in creation of artwork promoting menu items
- Student groups are involved in modeling healthful eating behaviors to others (i.e. mentors, high school students eating in the middle school lunchroom).
- Students, teachers, and/or administrators announce targeted items in daily announcements.

Recognition & Support of School Food

- A local celebrity (Mayor, sports hero, media personality) is invited to share lunch with students.

Scheduling Changes

- Schedule recess before lunch can reduce plate waste by as much as 30%.
- Extend lunch periods from 20 to 30 minutes reduced plate waste by nearly one-third.

Source: Smarter Lunchrooms Self-Assessment Scorecard

⁸ Smarter Lunchrooms Movement. Accessed January 2016. <http://smarterlunchrooms.org/>

⁹ Smarter Lunchrooms Self-Assessment Scorecard. Accessed January 2016.

http://smarterlunchrooms.org/sites/default/files/lunchroom_self-assessmt_score_card.final_4-3-14.pdf

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Resources

- **Offer Versus Serve:** Guidance for the National School Lunch Program and the School Breakfast Program. Food and Nutrition Service. U.S. Department of Agriculture. Effective beginning school year 2015-2016:
http://www.fns.usda.gov/sites/default/files/cn/SP41_2015a.pdf
- **Smarter Lunchroom Movement:** <http://smarterlunchrooms.org>
Smarter Lunchrooms Self-Assessment Scorecard:
http://smarterlunchrooms.org/sites/default/files/lunchroom_self-assessmt_score_card.final_4-3-14.pdf
- **USDA Reducing Food Waste: What Schools Can Do Today:**
<https://www.flickr.com/photos/usdagov/15032644782/sizes//>
- **USDA K-12 Resources for Food Waste:**
http://www.usda.gov/oce/foodwaste/resources/K12_schools.html
- **Share Your Story Nationally:** Schools across the country are taking steps to reduce food waste through the U.S. Food Waste Challenge, run by the USDA and EPA. To register your school in the U.S. Food Waste Challenge, complete and [submit this form](#). Note: The D.C. Reduce First Challenge is *not* affiliated with the U.S. Food Waste Challenge.

Contact Us! Beth Gingold, Schools Conservation Coordinator
D.C. Department of General Services, beth.gingold@dc.gov, 202-727-3587