

Walter, Penny

Subject: FW: Email - Communication - Alisa Rogers - 2024 and 2025 Prioritized Budget Options - CK 430-72 x 1700-1
Attachments: under 5mb file_SASF Final Report_Rogers ELS_2023.docx

From: Web NoReply <web-noreply@Saskatoon.ca>

Sent: Saturday, September 9, 2023 12:00 PM

To: City Council <City.Council@Saskatoon.ca>

Subject: Email - Communication - Alisa Rogers - 2024 and 2025 Prioritized Budget Options - CK 430-72 x 1700-1

--- Replies to this email will go to [REDACTED]

Submitted on Saturday, September 9, 2023 - 11:58

Submitted by [REDACTED]

Submitted values are:

I have read and understand the above statements.: Yes

I do not want my comments placed on a public agenda. They will be shared with members of Council through their online repository.: No

I only want my comments shared with the Mayor or my Ward Councillor.: No

Date: Friday, September 08, 2023

To: His Worship the Mayor and Members of City Council

Pronouns: She/her/hers

First Name: Alisa

Last Name: Rogers

Phonetic spelling of first and/or last name: Ah-lee-sah

Phone Number : [REDACTED]

Email: [REDACTED]

Address: [REDACTED] Morgan Avenue

Neighbourhood: [Holliston](#)

City: Saskatoon

Province: Saskatchewan

Postal Code: [REDACTED]

Name of the organization or agency you are representing (if applicable): Saskatoon Public Schools (teacher)

What do you wish to do ?: Submit Comments

What meeting do you wish to speak/submit comments ? (if known):: Governance and Priorities Committee - 2024 and 2025 Prioritized Budget Options

What agenda item do you wish to comment on ?: Agenda item 8.3.1. #11 - End Student Action for a Sustainable Future program contribution.

Comments:

The Student Action for a Sustainable Future (SASF) program is transformative and award-winning. The program has served over 3,400 students, 146 teachers, and 72 schools in its 10-year legacy. I am one of those teachers, and my 33 grade 8 students engaged meaningfully in the program last year. Their projects enacted considerable changes to environmental action in our building. We saved significant amounts of power for the school division in just one building; resulting in financial savings much needed in our public schools. Our final report on the project savings is attached for your interest and review.

This unique curriculum connected program provides strong data driven and science-based learning for students on climate change. Through its innovative inquiry-based approach it is the only program of its kind in Saskatoon that supports students to take action to reduce greenhouse gas emissions at school, home, and in their community through projects they design. Students in this program are highly engaged, propose and implement real world solutions, and build tangible skills. Students leave the program to become environmental and civic leaders equipped with the tools to educate and make impactful changes in their communities.

The SASF program has overwhelming benefits that are well worth the continued support and investment by the City of Saskatoon. I encourage the City to continue the legacy of the SASF program for future students and educators through adequate funding.

Thank you for your consideration.

Alisa Rogers

Grade 8 Teacher

Saskatoon Public Schools

Will you be submitting a video to be vetted prior to council meeting?: No



Student Action for a Sustainable Future

at Ernest Lindner

Synopsis of projects

Thirty-one students worked to reduce greenhouse gas contributors and balance biodiversity Hampton Village community. Two groups reduced food waste with sustainable solutions like classroom composts and snack bins. Their goal is to divert waste to compost and enrich classrooms with snack options. The classroom composts the food waste groups create is then used by the biodiversity group, who are this year's stewards of the Gardens of Hampton Village community corner in Al Anderson park. This group aims to increase community pollinators and prairie-native plant species, supporting a sustainable ecosystem in our community park. Also aiming to improve the environment around our school is the Idle No More group, campaigning for drivers to turn off their vehicles for any amount of time parked at school. They posted two signs in drop off zones with QR links to information about environmental and cost savings associated with reduced idling. One group took on a water reduction challenge at home, changing their habits and educating their families to conserve personal water use. Finally, a group committed to reduce energy waste at school. These students installed charging timers on devices and circulated a petition to turn the school freezer off.

Estimated Savings

Biodiversity – future gains in biodiversity balance through introduction of leaf cutter bees and bee hotels, bird houses, planting native grasses and clover, and maintaining a pollinator-friendly garden plot.

Energy Audit – Smart TV consumption down an estimated \$5.00 dollars per day total (1.26 each) = \$1008.00 over a 200-day school year.

Idle No More – Possible savings of over 800 vehicles from idling and over 400 minutes of idling time in a school year of 200 days. 1% change in number of vehicles idling (51% to 50%) and 1 minute change in average daily idling time.

Food Waste – Pre audit weighed 18 pounds of food waste from the senior wings' garbage. The post audit, 4 months later, gathered only 5.06 pounds. According to their data, there was 12.94 pounds of food waste savings! The junior wings overall waste savings equaled 5.2 pounds!

Water Reduction – Pre audit average per household, daily = 60 gallons. Post audit per household daily average = 25.9. Averaged savings of 34 gallons per household per day.



Biodiversity in Hampton Village

This group continues to work toward increasing biodiversity in the Hampton community. They have seedlings for wildflowers, native prairie grasses, and vegetables growing in our classroom. Native grasses and plants started include Hairy Golden Aster, Canada Wild Rye, Sorghastrum, Switchgrass, Blue Grama, Sand drop, Rice grass, Tufted Hair, Little Bluestem, Green needle, Golden Rod, and Purple Prairie Clover. They are also growing mint, bell pepper, tomatoes, peas, chives, green beans, cucumber, and coriander. These species are bee safe and support and attract pollinators and strengthen the biodiversity of the park. We also run a classroom compost for the wings food waste to help fertilize the garden plot in May and June (compost comes in from 7 classrooms and any food prep done by the upper elementary resource classroom). The Gardens of Hampton Village Community Corner, in Al Anderson Park will be the main location of the pollinator garden. Bird houses and solitary bee houses have been prepared for the school-community park and a group schedule created to supervise and maintain them. We will begin incubating bees in May or early June and when daytime temperatures are consistently 21°C, we will release them into their first bee house (leaf cutter bees purchased at Dutch Growers).



Hampton Community Garden, west side of Al Anderson Park. Student / Community plot.

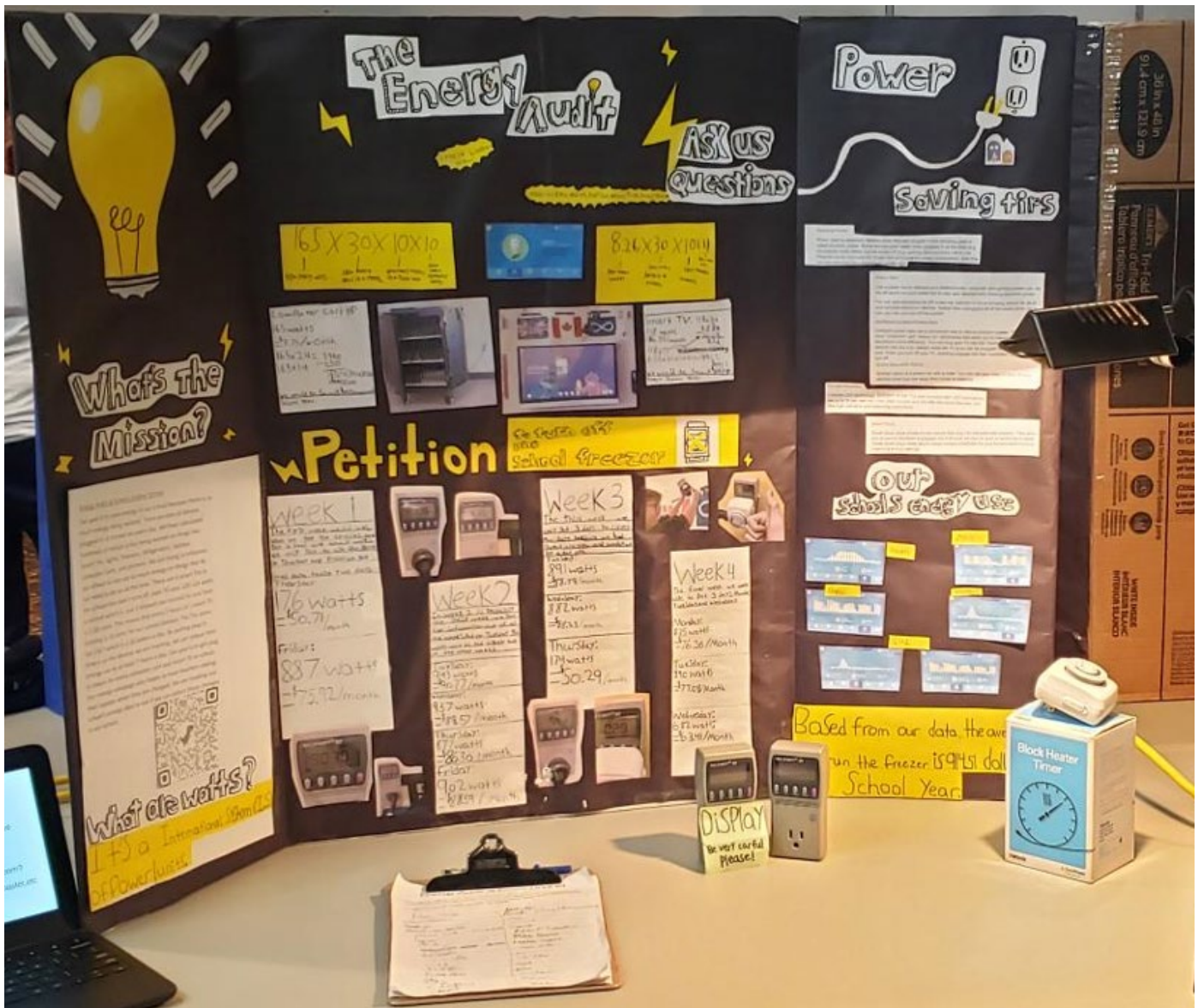


Student seedlings prepared for community garden planting.



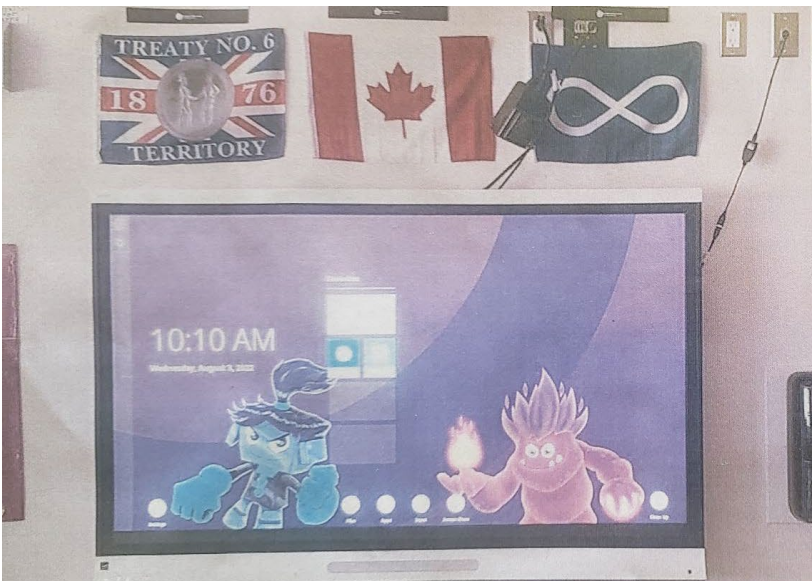
Energy Audit at Ernest Lindner School

Students in this group observed the need to save energy in our school because there are a lot of unnecessary appliances and technology energy expended 24 hours a day for most of the school year. They calculated thousands of dollars a year being wasted on things like: Smart TVs, lights, freezers, refrigerators, laptops, computer carts, and printers. There are 4 smart TVs in the school that don't turn off ever: each TV uses 120-124 watts a second which is 1 kilowatt per second for one hour. This is equal to \$0.18 cents an hour. The TVs alone cost an estimated \$4.32 dollars each, every day. Multiplying this by 200 days in one school year is equal to a cost of \$864.00 each. This could cost the school division \$3456.00 for all four TVs each school year. By putting plug in timers on the devices we are tracking, we can reduce their energy use by 17 hours a day. Our goal is to get plug in timers for every computer cart and Smart TV at school. We have timers on all Smart TVs currently. They now run only from 8:00 A.M – 3:00 P.M. This brings their consumption down to an estimated \$5.00 dollars per day total (1.26 each) and \$1008.00 over the school year. Our energy campaign also hopes to unplug one of the school freezers. Tracking the consumption of the school freezers was the most shocking result of the energy audit. They checked one freezer every day for four weeks. Their results are calculated in the week by week images below. They estimate that shutting down one freezer could equal savings of around \$915.00 per school year. Their petition to have the freezer turned off has 234 signatures so far!

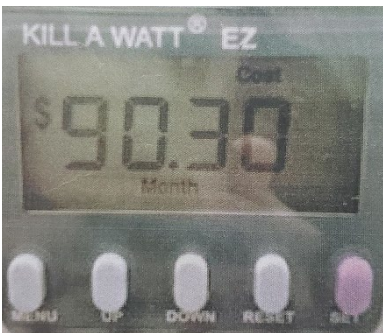




Computer Cart HP:
 165 watts
 = \$3.73/month
 $165 \times 24 = 3960$
 $165 \times 14 = 2310$
 $\frac{165.0 \times 30 \times 10 \times 10}{1000} = 4950.00$
 We would be saving \$4950 over every School year.



Smart TV; 118x24
 118 watts $\frac{28312}{1000} = 28.312$
 = \$6.35/month $\frac{2006}{1000} = 2.006$
 $118 \times 17 = 2006$
 $8.26 \times 30 \times 10 \times 4 = 991.2$
 $\frac{247.8}{1000} = 0.2478$
 We would be saving \$247.8 every School Year.



Energy Audit at Ernest Lindner

Petition to Shut Down One Freezer

Please sign our petition to turn off one of the freezers at our school. Our school and St. Lorenzo School use two large freezers. Each freezer uses approximately **\$90.00** each month. **That's \$1,800.00 each school year!** These freezers are mostly empty all year. We are looking for support to turn off a freezer and share one instead.

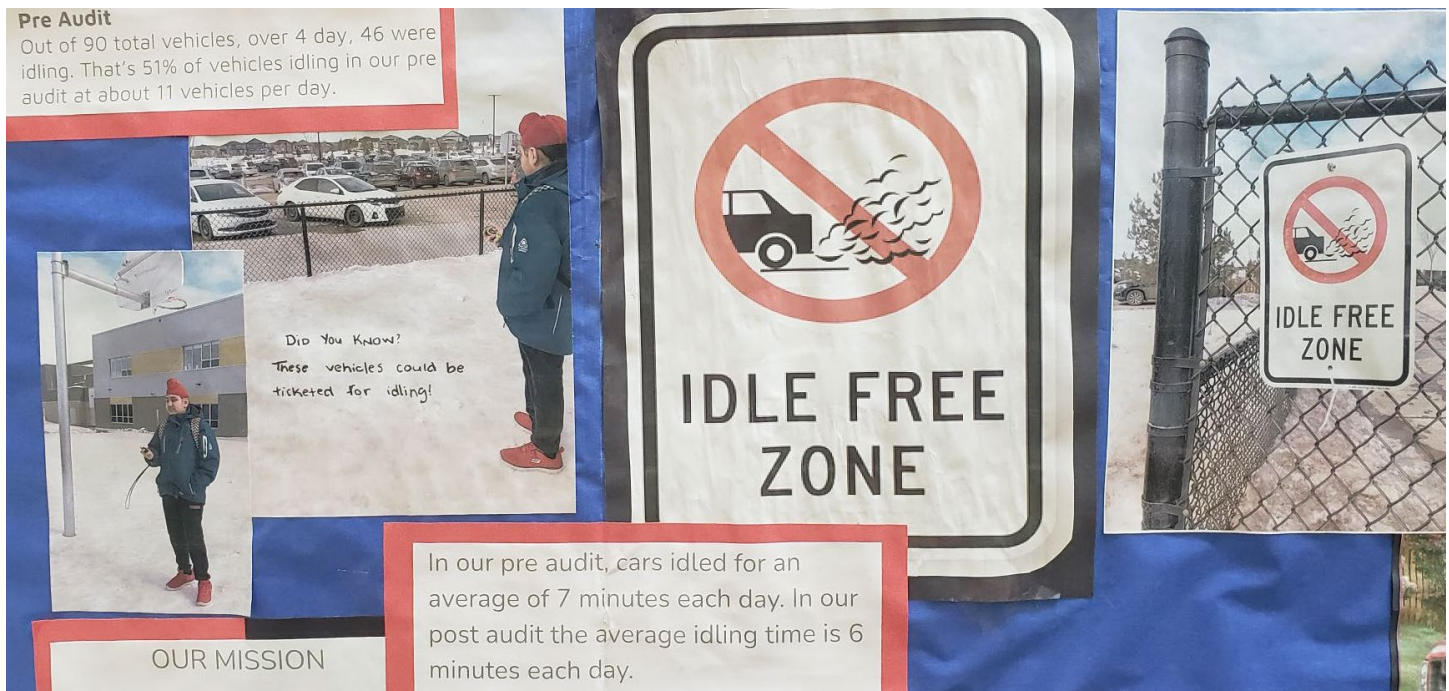
This small compromise could save the schools \$900.00.

helen illidge *tom*



Idle No More at Ernest Lindner School

This group of students set out to convince people to stop idling. They spent one week timing and tracking idling vehicles without any intervention. Then they put up 'Idle No More' signage in our school drop off zone and spoke with students about idling as they waited for rides after school. They tracked again for one week and calculated about a 1% change. This June they are planning a walk or bike to school campaign as well. A QR-code attached to the signs leads drivers to their website to learn about idling and why it is best to stop. We used their most consistent data days for their pre audit, which worked out to be 4 days at around 3:00 p.m. There were 90 total vehicles and 46 of those vehicles were idling. That is 51% of vehicles idling with an average of 11 vehicles idling for after school pick up every day. The total time that those 46 cars idled over 4 afternoons was 30:81 minutes. This is an average of 7 minutes idling time per vehicle, per afternoon. Over a school year with 200 days that would mean more than 2200 vehicles are idling for over 1400 minutes in the afternoon alone! That is potentially 4400 vehicles for 2800 minutes per school year. The equivalent of 2 full 24 hr. days of idling! The post audit followed the same routine. After discussing idling with peers, visibly timing idling drivers, educating during our school science fair, and posting signs, the group estimated a 1% change. They calculated an average of 9 vehicles idling per afternoon over 4 days. 75 vehicles were tracked in total, 38 of them idling. This means that 50% of vehicles are still idling. The total time over 4 afternoons was 27:05 minutes which is 6 minutes per day. So far, they have seen a change of about one minute less idling per afternoon. Despite the small change, this could still mean possible savings of over 800 vehicles from idling and over 400 minutes of idling time in a school year of 200 days.



Food Waste in Upper Elementary Classes at Ernest Lindner

This group focused their project on grades 5 – 8 at our school. This is approximately 360 students and 16 teachers challenged to reduce food waste. Their goal is to have food bins in every single classroom, encourage classroom composting, and educate about food waste. Twice a week they continue to check classroom snack bins and distribute or dispose of leftover snacks in a planet friendly way. Part of their food waste campaign included classroom presentations and snack bin trials, as well as a waste audit. Their pre audit weighed 18 pounds of food waste from the senior wings' garbage. The post audit, 4 months later, gathered only 5.06 pounds. That is 12.94 pounds of food waste savings!

Food Waste in Early Elementary Classes at Ernest Lindner

The other food waste group carried out their waste audit in grades Kindergarten – 4. This is approximately 440 students. Part of their food waste campaign included classroom presentations and snack bin trials, as well as a waste audit and improved recycling options for juice boxes. They found that juice boxes were not recycled at our school and created a bin for any recyclable drink container. The money they raise is going towards their grade 8 grad fundraising. So far, they have raised \$21.00 dollars. Their total waste weight was 28.2 pounds in the pre audit and food waste weight was not isolated for measurement. In the post audit, total waste equaled 23 pounds. Food waste was 7.5 pounds of the post audit waste. Overall waste weight savings was 5.2 pounds!

WING D: Pre & Post Audit

Item	Weight (lbs)
orange peels	28.2
apple core	1.0
blackberries	1.0
sandwiches	1.0
banana peels	1.0
bread sticks	1.0
cheese dips	1.0
pizza	1.0
chips	1.0
raspberries	1.0
cucumber	1.0
carrot	1.0
tomato	1.0
hotdog	1.0
tea bag	1.0
coffee grounds	1.0
cheese	1.0

Item	Weight (lbs)
orange peels	2.42
apple core	1.0
sandwiches	1.0
banana peels	1.0
tomato	1.0
coffee grounds	1.0
orange peels	1.0
starburst pieces	1.0
croissant	1.0
biscuits	1.0
lollipop	1.0
banana	1.0
chicken bone	1.0
yougurt	1.0
gogo squeez	1.0
rice pudding	1.0

Starting Weight: 8.6lbs
Ending Weight: 2.42lbs
How much the food waste went down by: 6.18lbs

WING C: Pre & Post Audit

Item	Weight (lbs)
Apple core	9.4
banana&peels	5.0
orange&peels	12.0
seaweed	1.0
sandwiches	5.0
grapes	12.0

Item	Weight (lbs)
Apple cores	2.64
Banana&peels	2.0
orange&peels	2.0
seaweed	2.0
sandwiches	2.0
grapes	2.0
crackers	2.0
chips	2.0
lunchables	2.0
pizza product	2.0
bread slices	2.0
meat slices	2.0
popcorn	2.0
kitkat piece	2.0
oreos	2.0
pudding	2.0

Starting Weight: 9.4lbs Ending Weight: 2.64lbs
How much the food waste went down by: 6.76lbs



Saving Water at Home

This group tracked their household normal water use for one week. After education and making changes at home, they tracked another week and found exciting changes. Examples of changes they made include taking shorter showers, turning the tap off while brushing your teeth, checking for any leaks in the tap or toilets with their parents and fixing them. They educated our grade 4 care partners about these changes as well as our school community during our environmental science fair. By their estimate, they were able to save 34.17 gallons each, per day, by making water conscious choices.

How to do the calculations

so lots of people don't get how to use your meter but we told you how! so after you get 3 readings from your meter (from day one and five days later then another five days later 1, 2, 3) so Reading 2, subtracted by reading one. That's how much you used in 5 days. Then finally to see your change

you take your reading 3 subtracted by reading 2. Here's one of ours!

Reading 1 = 957.808
 Reading 2 = 978.957
 Reading 3 = 983.658 (21,000,149!)

$R2 - R1 = +21.149$
 $R3 - R2 = 4.701$ we saved 16.448 gallons!

Gallons H₂O:

Blake	Ava	Maya
Pre	Pre	Pre
83.8	75.8	86.7
73.6	33.3	29.2
81.7	75.2	50.2
63.4	21.2	56.8
74.0	30.9	63.7
376.5	230.4	288.6
av. 75.3	47.88	57.72
16.56	25.92	35.3
Post	Post	Post
22.9	50.5	41.1
13.7	32.7	18.3
14.1	14.3	44.2
14.7	17.8	40.7
17.4	14.3	32.2
82.8	129.6	176.5

gallons SAVED

daily Average total use:

$$\frac{60.1}{\text{PRE}} \text{ vs. } \frac{25.93}{\text{POST}} = 34.17 \text{ gallons/day}$$

Conclusion

Overall, I believe the grade 8s did an incredible job educating our school about sustainability, making change in their own lives, and starting initiatives at school. Hopefully I can do this project again! I have also learned so much along the way and had a great time doing so. Experience has taught me to narrow down the amount of projects ongoing, and also to keep better track of measurable data. The projects were meaningful to the students, though, and that is what drove so many of the changes and savings we saw happen throughout the year. It is exciting to watch many of the groups carry on their initiatives with little guidance from me. The ownership they have taken over their projects, and the pride they have taken in the changes we've measured, has helped them grow *immeasurably*.

-Alisa Rogers