

2021-2022 Green Team Final Report

The Center for EcoTechnology (CET) continued to administer the MassDEP Green Team program in the 2021-2022 school year. CET worked on several special projects this fiscal year, including the delivery of a video case study of a school recycling program, a tip sheet on cafeteria tray selection and dishwashers, and translation of several green team materials. Participation in the 2021-2022 school year was lower than prior to the COVID-19 pandemic, but a significant increase over the previous 2020-2021 school year as schools across Massachusetts returned to primarily in-person learning. In February 2022, CET surveyed Green Team teachers to learn about their plans for the school year and to identify how the program could best meet their needs. The survey received eight responses, with only one respondent indicating that their school was continuing to use a hybrid learning model. The return to in-person learning was also reflected in an increased demand for recycling and composting equipment and idle reduction materials compared to the previous year.

Participation Summary

The following table details participation in the Green Team program this school year compared to the last several years:

	2021-2022 School Year	Percentage Change from Previous Year	2020- 2021 School Year	2019- 2020 School Year	2018- 2019 School Year	2017- 2018 School Year	2016- 2017 School Year
Participating Green Teams	221	34% Increase	165	411	382	317	332
Participating Schools	201	34% Increase	150	348	346	287	300
Participating Students	41,320	57% Increase	26,378	113,921	88,166	56,538	60,325
TRFs Submitted	27	42% Increase	19	44	72	59	62

As usual, many teachers registered early in the school year and into the fall, with 139 teachers registered by the end of October 2021. New registrations slowed as the school year continued, with small spikes in registrations in November 2021 and February 2022. These spikes correspond with CET conducting additional outreach to encourage registration, including email outreach to previously registered teachers.

Outreach

CET conducted a variety of outreach activities this fiscal year, including virtual presentations, electronic communications, and calls and emails with partner organizations. Just before the start of the school year, CET emailed principals and superintendents from across the state to encourage them to ask teachers in their schools and districts to register; in the two weeks following this email outreach, 27 new teachers registered for the Green Team.

CET shared information about the Green Team with several nonprofit organizations and state government departments that work with K-12 schools, including the MassDEP Municipal Assistance Coordinator School Waste Reduction and Diversion Workgroup. CET also reached out directly to teachers that had registered their Green Teams in past years but had not yet registered in the 2021-2022 school year.

CET also included information about the Green Team in a presentation for the MassDEP Solid Waste Advisory Committee (SWAC) on October 28, 2021; while exhibiting at the MassRecycle Virtual Conference(s), March 31-April 1, 2022; and during a presentation for a Safe Routes to School team meeting on May 13, 2022

As in previous years, CET also used its own social media channels to promote the Green Team Program. In September 2021, CET encouraged Green Team registration through [Facebook](#) and [Twitter](#). The Facebook post was boosted as a paid ad, reaching over 9,800 users, and resulting in 45 link clicks and 11 shares. Sustainable Greenfield, Green Beverly, Keep Walpole Beautiful, and the Franklin County Solid Waste Management District were among those that shared the post with their networks. In November 2021, CET also shared behind-the-scenes highlights via Instagram during filming of a new Green Team Case Study featuring Robert Frost Middle School (see Special Projects section below).

Communication

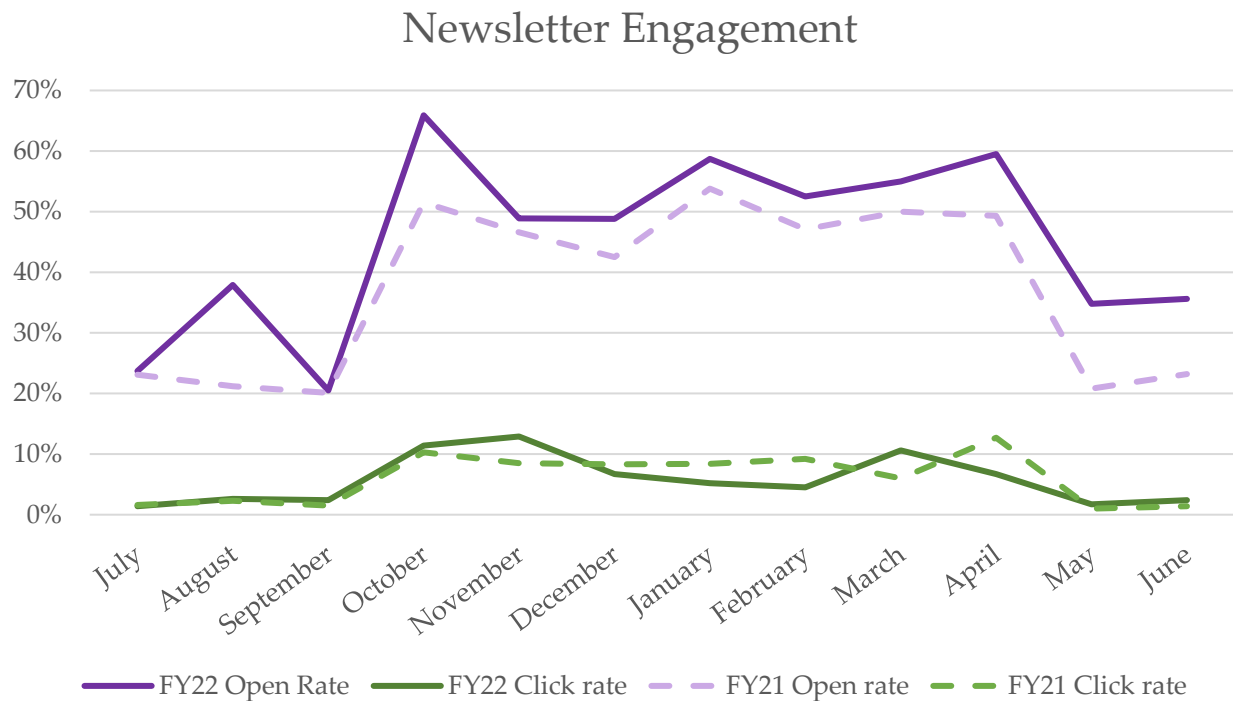
Primary communication with Green Team teachers is done via the monthly electronic newsletter. Current and previously registered Green Teams receive monthly emails containing relevant news stories, event listings, grant opportunities, competitions, and other ideas to inspire them to “green” their classrooms and schools. Monthly newsletters were sent out from July 2021 through June 2022, and the newsletter contact list had 2,345 subscribers at the end of the school year. CET also sent an e-blast during the week of Earth Day in April, when many schools are participating in Earth Day activities. The e-blast highlighted environmental education lesson plans, activities, and resources for teachers to share with their students.

The open rate and click rate for newsletters in FY22 was similar to the previous school year, which may be a result of educators’ continued increased engagement with digital content in the current stages of the COVID-19 pandemic. On average, approximately 496 people opened the newsletter each month. From October 2021 through April 2022, slightly different versions of the

newsletter were sent to teachers who were registered for the current school year than to contacts that were not currently registered. Those newsletters sent only to registered teachers had an average open rate of 45.2%. During the 2021-2022 school year, registered teachers were 17% more likely to open the newsletter than contacts that were not registered for the current school year.

The weekly e-blast sent in April had similar engagement when compared to the regular monthly newsletter, with a 39.1% open rate, a 2.5% click rate, and 902 people opening the e-blast. In general, newsletter engagement was higher between October 2021 and April 2022, and lower during the beginning and end of the school year.

Green Team Email Newsletter Metrics		
Fiscal Year	Average Open Rate	Average Click Rate
FY22	36.6%	3.7%
FY21	31.7%	4.1%
FY20	20.2%	2.4%
FY19	19.5%	2.3%



Participation and Results

During the 2021-2022 school year, the 221 Green Team registrations represented:

- 218 Teachers
- 201 Schools
- 41,320 Students

In FY22, the Green Team received registrations from 67 new teachers, representing approximately 40% of registrations. Most participants received a digital Green Team Kit containing a classroom poster, lesson plans, press release, and suggested activities; hard copy kits were mailed to teachers upon request (8 requests). A total of 27 teachers submitted response forms indicating the Green Team activities they conducted with their students, while over 2,200 students pledged to recycle and prevent pollution at home, at school, and in their communities. Green Team teachers reported a wide variety of achievements and actions their students took over the past year, including reducing food waste in cafeterias, growing school gardens, writing to local legislators to effect change, collecting textiles, and participating in climate marches.

Equipment & Materials

Recycling

The MassDEP provided recycling and composting equipment to 23 participating schools across the state to help support school waste reduction efforts. Nearly twice as many schools received equipment in 2021-2022 than during the previous school year. Equipment distributed included recycling set out bins, desk-side bins, wheeled totes, compost bins, and worms for vermicomposting. The following chart details the equipment distribution:

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018	2016-2017
Schools Receiving Equipment	23	12	38 (49 requests)	56 (60 requests)	62	59
New Programs*	6	5	24	24	32	17
Set Out Container	417	188	254	885	582	787
Recycling Desk-Side Bin	65	166	218	482	374	345
Recycling Cart	45	18	91	137	121	73
Compost Bin	4	2	21	27	52	43
Worm Vouchers	7	2	16	17	26	16

*Quantity represents all new composting and/or recycling programs.

Idling Reduction

In FY22, seven schools requested Idling Reduction (IR) materials from the Green Team. Five out of these seven requests for signs and/or materials came from schools interested in starting new idling reduction programs.

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018	2016-2017
Schools Receiving IR Materials	7	3	18 (20 requests)	17	12	11
New Programs	5	2	13	13	11	6
Idle-Free Zone Signs	12	14	42	29	34	25
5 Minute Idling Limit Signs	10	8	66	67	35	12
Idle Reduction Pledge Cards	800	0	1650	1350	800	1350
Static Sticker Windshield Decals	250	150	1800	1450	1050	250
Bumper Stickers	600	50	550	900	550	400
School Bus Dashboard Stickers	250	0	200	500	200	100
Palm Cards	800	200	3300	2500	2100	1100

Awards

Green Team members were asked to submit a list of climate change, waste reduction, and clean air activities they had completed by March 31, 2022. This deadline was extended to April 15 to encourage more responses. CET sent all 27 classes that submitted Teacher Response Forms award letters and Certificates of Recognition. Grand prize winners received either an interactive performance by environmental “edu-tainer” Jack Golden or a gift card to a local garden center. The other prize winners received bookmarks embedded with seeds to plant, compost activity books, wristbands, or pencils and key chains made from recycled materials.

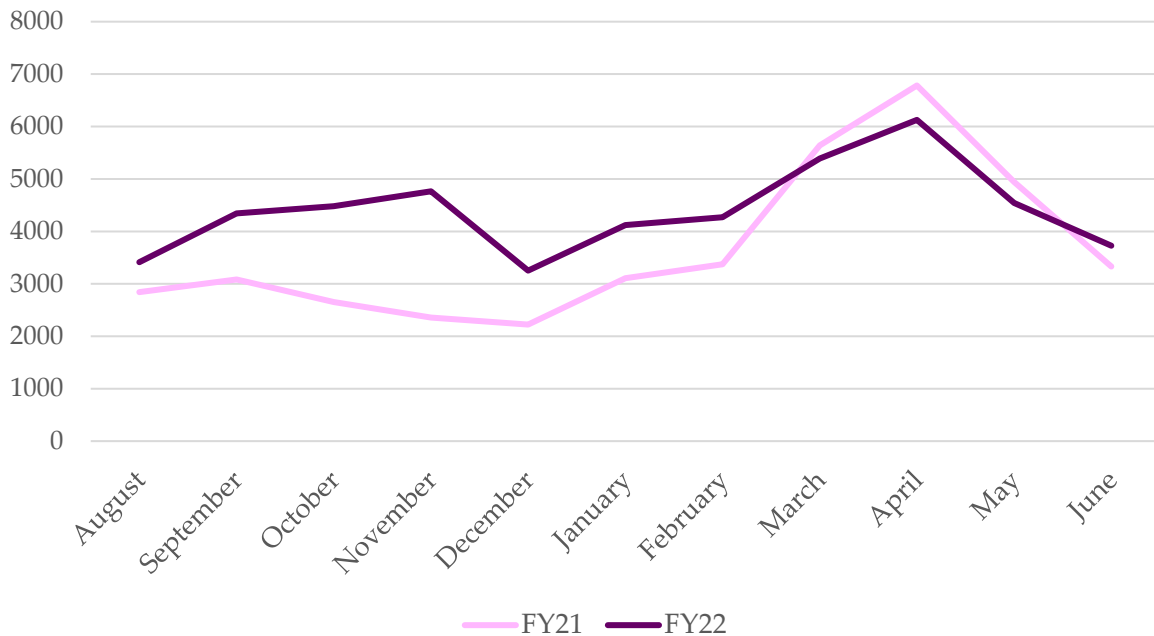
Website Metrics

Total sessions and users to the Green Team website increased by 23% and 25% respectively in FY22. Web traffic was particularly high in March and April 2022.

Green Team Website Traffic FY20-FY22:

	Total Sessions	Users	Page Views	Pages/Visit	Avg. Visit Duration	% New Visits
Total FY22	33,953	28,244	51,337	1.51	0:59	90.6%
Total FY21	27,614	22,675	42,390	1.54	1:02	90.7%
Total FY20	27,077	22,119	46,374	1.71	1:20	90.8%
Change (FY21 to FY22)	+23%	+25%	+21%	-2%	-5%	0.1%

Green Team Website Visits



Program Administration

CET staff input registrations, sent digital kits to teachers, mailed Green Team kits to teachers when requested, forwarded equipment requests to MassDEP for distribution, corresponded with program participants, maintained the database of participating schools, solicited and entered Teacher Response Forms, and prepared and delivered digital Certificates of Recognition and mailed garden center gifts cards. CET regularly updated the Green Team website, including additions to the Green Team in the Media, Green Team Spotlight, and Green Team Photo Gallery pages. In addition, CET regularly updated links throughout the website as new resources were shared through the monthly newsletter. CET also updated the participating schools list and map throughout the 2021-2022 school year and posted both to the Participating Schools page.

Special Projects

Translation of Green Team Materials

Early in the 2021-2022 school year, CET conducted research to determine what languages are most common among Massachusetts K-12 students, faculty, and staff who speak a language other than English at home. Based on these findings, CET translated an easy-to-download set of nine school-oriented signs for recycling, food scraps, trash, and share tables into six languages: Spanish, Portuguese, Simplified Chinese, Cape Verdean, and Haitian Creole. Links to the translated signage are available on the Green Team [Recycling & Composting Signage webpage](#).



Examples of translated signage for recycling, food scraps, and share tables. [Click here](#) for more.

Additionally, CET translated the existing Green Team Pledge into these same six languages. Links to the translated Green Team Pledge are available on the [Green Team Kit webpage](#). CET

highlighted the translated materials in the [June 2022 Green Team newsletter](#) and will feature these materials in the newsletter again during the 2022-2023 school year.

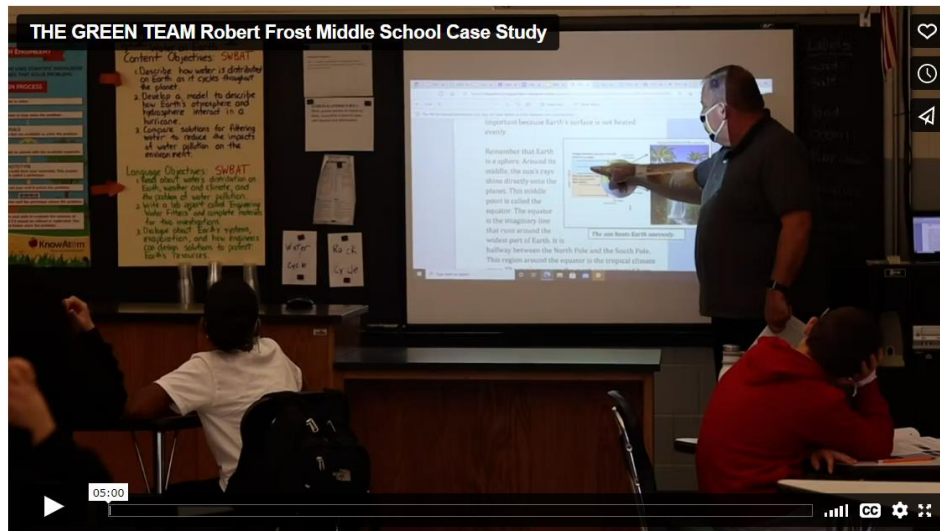


Green Team Pledge in English (left) and Haitian Creole (right). [Click here](#) to view other translations.

Case Study Video of a School Recycling Program

CET developed a [case study video](#) highlighting the comprehensive waste diversion program and the program to raise awareness about the importance of clean air through idle reduction practices at Robert Frost Middle School in Lawrence. CET posted the video to the [Video Gallery](#) page on the Green Team website. CET also promoted the video through [Facebook](#) and in the [April 2022 Green Team newsletter](#).

THE GREEN TEAM Case Study: Robert Frost Middle School



[Click here](#) to view the video case study featuring Robert Frost Middle School

Tip Sheet on Reusable, Compostable, and Disposable Cafeteria Tray Options

CET created a [new resource](#) intended to provide initial considerations to schools interested in switching away from single-use disposable trays towards a more environmentally friendly option. Included are benefits and considerations for three different lunch tray options (disposable, compostable, reusable), considerations for implementing commercial dishwashers, and examples from schools that have transitioned from disposable to reusable trays.



Reusable, Compostable, and Disposable CAFETERIA TRAY OPTIONS

This resource is intended to provide information to schools interested in single-use disposable tray alternatives. Included are benefits and considerations for three different lunch tray options, as well as best practices for commercial dishwashers.

Please [visit the corresponding webpage](#) for expanded information, additional success stories, and cost savings analyses.

REUSABLE TRAYS

BENEFITS	CONSIDERATIONS
<ul style="list-style-type: none"> Reduce harmful environmental impact related to production and disposal of single-use options Demonstrate commitment to environmental stewardship Sturdy, high-quality dishes reduce drops and messy spills Save money with lower disposal costs and ongoing purchasing needs No safety/health concerns with reusable as compared to disposable 	<ul style="list-style-type: none"> May require dishwasher appliance, installation and maintenance Up-front cost for purchasing trays and dishwashing equipment Electricity and water costs Assess labor and training needs Purchasing enough trays to cover more than one lunch period Need to store and dry trays

[Click here](#) to view the full tip sheet.

Green Team in the Media

The following schools were highlighted in local media. CET requests links such as these from Green Team teachers and support contacts across the state. These links are also posted to the following page: <http://www.thegreenteam.org/testimonial/gt-in-the-media/>.

Massachusetts: Hull Memorial Middle School

Green Team students from Hull Memorial Middle School participated in the Town of Scituate's St. Patrick's Day parade by using the 'green' theme to raise awareness about youth environmental action and commitment. The students created banners and signs promoting ways to live more sustainably. They received many cheers of solidarity from spectators.

<https://jgpr.net/2022/03/28/students-at-hulls-memorial-middle-school-promote-environmental-causes-at-scituate-st-patricks-day-parade/>

Arlington: Ottoson Middle School

As reported by the Arlington Advocate, the Ottoson Middle School Green Team in Arlington restarted the school's lunch composting program which had been on hold during the COVID-19 pandemic. The students presented their ideas to the assistant principal and made posters for the school hallways. An important part of the program is the opportunity for students to become Lunch Leaders to help their peers properly sort their waste. The Green Team contacted local businesses to encourage them to support the program with coupons that were given to Lunch Leaders for working the sorting stations. The separated food scraps are turned into finished compost for local farms instead of going for disposal.

<https://www.wickedlocal.com/story/arlington-advocate/2022/01/03/ottoson-students-relaunch-lunch-composting-program/9081259002/>

Ipswich: Ipswich Middle and High School

The Boston Globe highlighted Ipswich's Green Team's plan to expand their local food access project to other communities. In 2020 the Ipswich Middle and High School Green Team started a project called "Hello Neighbor Fridge" to improve local access to healthy fresh food during the pandemic. Weekly, team members stocked publicly accessible mini refrigerators with food for people in need to pick-up for free. Now the Green Team is looking to help other communities implement similar programs. With the help of two local nonprofit partners, they are offering to donate two mini-refrigerators and provide guidance for setting up the program. Three Sisters Garden Project and The Open Door Ipswich Community Food Pantry offered to provide produce at no cost. The Green Team also donates produce grown in the school garden. Ava Borgman, co-adult mentor of the Green Team, said the stocked fridges are almost entirely empty at the end of each week, which shows the program is meeting a need. For those who are not able to view the whole article and want to learn more, visit sustainableipswich.org or email sustainable.ipswich@gmail.com.

<https://www.bostonglobe.com/2021/12/02/metro/ipswichs-green-team-hopes-grow-neighborhood-fridges-other-communities/>

Melrose: Melrose High School

The City of Melrose recently wrote about Kate Sikkema, a senior at Melrose High School and member of BSA Troop 635. For her Eagle Scout project, Kate developed an [educational video](#) to increase awareness about wasted food composting. With contributions from fellow scouts, friends, the Melrose DPW, Zero Waste Melrose, MMTV, and Mayor Brodeur, the video describes why we should compost, what materials can be composted, and how to compost efficiently.

<https://www.cityofmelrose.org/home/news/melrose-high-school-senior-kate-sikkema-launches-composting-video-and-educational-material>

Arlington: Arlington Public Schools

Arlington Patch highlighted Arlington Public Schools in a press release about their pumpkin recycling event. Each year, Arlington Green Teams collect pumpkins just after Halloween. The schools partner with food scrap companies that haul the pumpkins to a local farm where they are made into compost. The article also points out that if the gourd or pumpkin has paint on it, it must be thrown in the trash.

<https://patch.com/massachusetts/arlington/town-arlington-pumpkin-recycling-arlington-green-teams>

Ipswich: Ipswich Middle and High School

Environmental Affairs Secretary Kathleen Theoharides recognized students at Ipswich Middle and High School for their “UseOne” campaign. As reported by *Ipswich Local News*, the Green Team received the 26th Annual Secretary’s Award for Excellence in Energy and Environmental Communication.

<http://thelocalne.ws/2021/07/29/ipswich-green-team-recognized-by-state-officials/>

Attached:

- FY22 Green Team Summary Report