

2020-2021 Green Team Final Report

The Center for EcoTechnology (CET) continued to administer the MassDEP Green Team program in the 2020-2021 school year. CET worked on several special projects this fiscal year, including the delivery of a webinar focused on at-home environmental challenges for students, development of a video on home composting, and several website upgrades. Participation in the 2020-2021 school year was lower than in recent years, which is almost certainly a result of the disruption to the school year by the COVID-19 pandemic. Many of the typical Green Team operations continued while schools across Massachusetts were operating on a hybrid schedule or were fully remote for at least part of the year. In October 2020, 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 44 responses, with 31 respondents (70%) indicating their schools were using a hybrid learning model. CET adjusted deliverables to better support teachers, administrators, and parents during remote learning, and observed many schools maintaining a culture of environmental protection in their lessons and programs.

Participation Summary

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

	2020-2021 School Year	Percentage Change	2019-2020 School Year	2018-2019 School Year	2017-2018 School Year	2016-2017 School Year	2015-2016 School Year
Participating Green Teams	165	60% Decrease	411	382	317	332	363
Participating Schools	150	57% Decrease	348	346	287	300	314
Participating Students	26,378	77% Decrease	113,921	88,166	56,538	60,325	64,716
TRFs Submitted	19	57% Decrease	44	72	59	62	66

As usual, many teachers registered early in the school year and into the fall, with 124 teachers registered by late October. The number of registrations decreased as the school year continued, with small spikes in registrations in both January and April. These spikes correspond with CET doing 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 teachers in their schools and districts to register; these emails resulted in registrations from at least 11 new teachers.

CET shared information about the Green Team with several nonprofit organizations and state government departments that work with K-12 schools. Some of these entities include the Massachusetts Department of Elementary and Secondary Education (DESE), Massachusetts Farm to School, the Massachusetts Association of Science Teachers (MAST), and the Massachusetts Environmental Education Society (MEES). CET also reached out directly to teachers that had registered their Green Teams in past years and had not registered in the 2020-2021 school year.

CET included information about the Green Team in numerous virtual presentations throughout the year, including a Safe Routes to Schools webinar (August 2020), a MassDEP School Recycling webinar (November 2020), and a Massachusetts Environmental Education Society (MEES) Conference webinar on [Composting at School and at Home](#) (March 2021). In addition, CET staff promoted the Green Team while attending other events and conferences. Examples from the 2020-2021 school year include exhibiting at the MassRecycle Virtual Conference(s) in October 2020 and April 2021.

As in previous years, CET also used its own media channels to promote the Green Team Program.

Communication

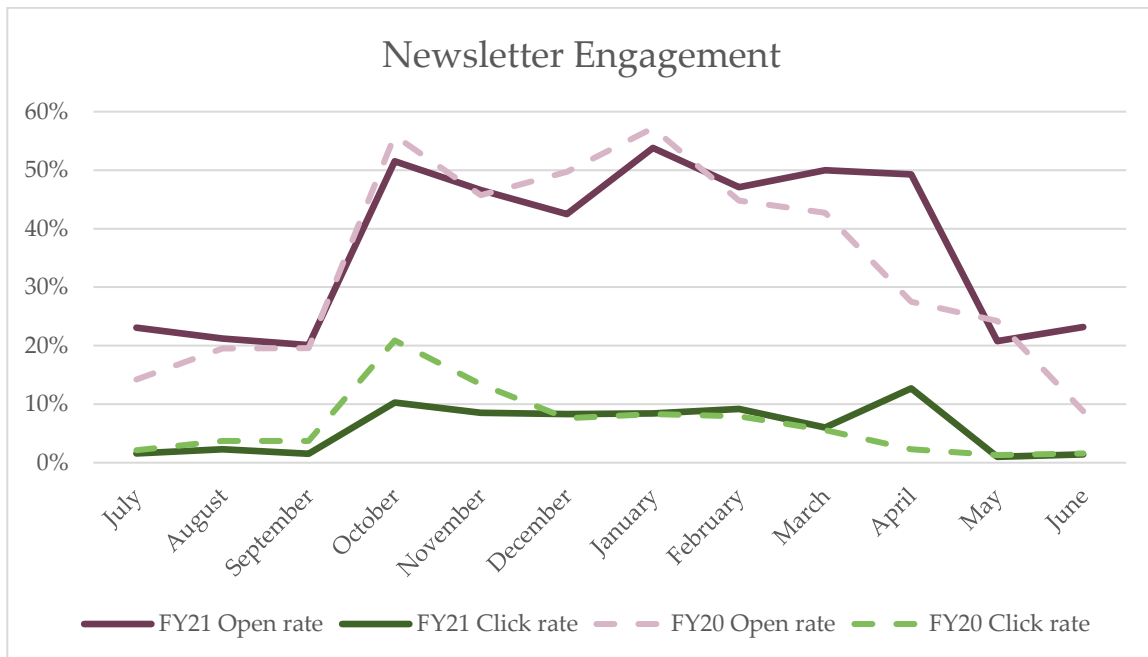
The primary communication vehicle with Green Team teachers is the monthly electronic newsletter. Current and previously registered Green Teams receive monthly emails containing relevant news stories, event listings, grant opportunities, competitions, and other ideas to inspire them to “green” their classrooms and schools. Monthly newsletters were sent out from July 2020 through June 2021, and the newsletter contact list had 2,416 subscribers at the end of the school year. CET also sent weekly e-blasts in April, when many schools are participating in Earth Day activities. Each e-blast focused on an environmental theme and highlighted a few virtual environmental education lesson plans and resources for teachers to share with their students.

The open rate and click rate for newsletters in FY21 was higher than the previous school year, which may be a result of educators’ increased engagement with digital content during the

COVID-19 pandemic. On average, approximately 545 people opened the newsletter each month. In October 2020 through April 2021, 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 40.5%. During the 2020-2021 school year, registered teachers were approximately twice as likely to open the newsletter than contacts that were not registered for the current school year.

The weekly e-blasts sent in April had slightly less engagement compared to the regular monthly newsletter, with a 18.4% open rate, a 1.1% click rate, and an average of 368 people opening the e-blasts each week. In general, newsletter engagement was higher between October 2020 and April 2021, and lower during the beginning and end of the school year.

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



Participation and Results

In the 2020-2021 school year, the 164 Green Team registrations represented:

- 163 Teachers
- 150 Schools
- 26,378 Students

In FY21, the Green Team received registrations from 67 new teachers, representing approximately 40% of registrations. The majority of 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. A total of 19 teachers submitted response forms indicating the Green Team activities they conducted with their students, while over 2,700 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 expanding school recycling programs, researching electric vehicles, collecting textiles for donation and recycling, starting compost piles at home and at school, and reducing their carbon footprint at home and at school.

Equipment & Materials

Recycling

The MassDEP provided recycling equipment to 12 participating schools across the state to help support school waste reduction efforts. 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:

	2020-2021	2019-2020	2018-2019	2017-2018	2016-2017	2015-2016
Schools Receiving Equipment	12 (12 requests)	38 (49 requests)	56 (60 requests)	62 (62 requests)	59 (59 requests)	80 (82 requests)
New Programs*	5	24	24	32	17	23
Set Out Container	188	254	885	582	787	625
Recycling Desk-Side Bin	166	218	482	374	345	467
Recycling Cart	18	91	137	121	73	177
Compost Bin	2	21	27	52	43	57
Worm Vouchers	2	16	17	26	16	18

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

Idling Reduction

In FY21, three schools requested Idling Reduction (IR) materials from the Green Team. Demand for Idling Reduction materials was lower than in recent years. This is very likely a result of virtual learning due to the COVID-19 pandemic, which reduced the amount of vehicle traffic at most schools. In FY21, two out of three requests for signs and/or materials came from schools interested in starting new idling reduction programs.

	2020-2021 School Year	2019-2020 School Year	2018- 2019 School Year	2017- 2018 School Year	2016-2017 School Year	2015- 2016 School Year
Schools Receiving IR Materials	3	18 (20 requests)	17	12	11	14
New Programs	2	13	13	11	6	10
Idle-Free Zone Signs	14	42	29	34	25	50
5 Minute Idling Limit Signs	8	66	67	35	12	23
Idle Reduction Pledge Cards	0	1650	1350	800	1350	1450
Static Sticker Windshield Decals	150	1800	1450	1050	250	1600
Bumper Stickers	50	550	900	550	400	1050
School Bus Dashboard Stickers	0	200	500	200	100	300
Palm Cards	200	3300	2500	2100	1100	2000

Awards

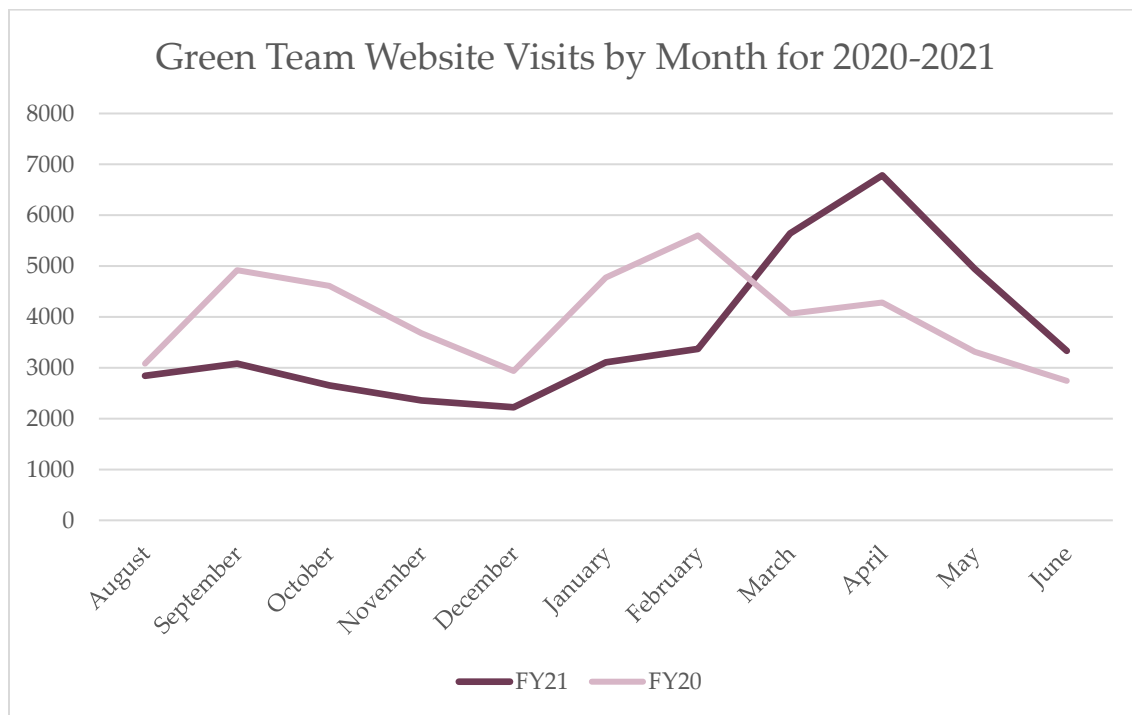
Green Team members were asked to submit a list of climate change, waste reduction, and clean air activities they had completed by March 31, 2021. This deadline was extended to April 30 to encourage more responses. CET sent all 19 classes that submitted Teacher Response Forms award letters and Certificates of Recognition. All the participating schools received a link to a remote interactive performance by environmental “edu-tainer” Jack Golden, in addition to their tangible prizes such as gift cards to local garden centers for trees and gardening supplies, bookmarks embedded with seeds to plant, and pencils and key chains made from recycled materials.

Website Metrics

Total sessions and users to the Green Team website increased by 2% and 2.5% respectively in FY21. Web traffic was lower during the first half of the school year, when the majority of schools were conducting remote learning or operating on a hybrid schedule. Web traffic was particularly high in March and April, relative to the previous year. At this time, many schools were anticipating a return to or expansion of in-person learning in the spring.

Green Team Website Traffic FY19-FY21:

	Total Sessions	Users	Page Views	Pages/Visit	Avg. Visit Duration	% New Visits
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	90.80%
Total FY19	20,943	16,730	40,294	1.93	1:39	90.70%
Change (FY20 to FY21)	+2.0%	+2.5%	-8.6%	-10.0%	-22.5%	+0.1%



Program Administration

In FY21, 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 mailed Certificates of Recognition and 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 map throughout the 2020-2021 school year and posted it to the Participating Schools page.

Special Projects

The FY21 work plan also included three special projects:

- **Upgrades to the Green Team Website:** CET completed several upgrades to the Green Team website in FY21, as outlined below.
 - [Recycling and Composting Signage](#) – CET developed an easy-to-download set of school-oriented signage for recycling, food scraps, trash, share tables, and liquids, and drafted written content for a new webpage where the signage is featured. This webpage includes best practices for engaging students in creating DIY signage and several examples showing how schools have created their own waste bin signage. CET highlighted the new signage webpage in the April 2021 newsletter.
 - [Video Gallery](#) – CET created a Video Gallery webpage to display all Green Team case study, webinar, and instructional videos in one place, in addition to the locations throughout the website where these videos were already featured. This new webpage is easily accessible from the homepage and through the Green Team Spotlight menu. In addition to the new signage page, CET also highlighted the Video Gallery in the April 2021 newsletter.
 - [Field Trips and Presentations](#) – CET conducted research to identify a list of in-person and virtual field trip and presentation opportunities for environmental education in Massachusetts. This information was posted to a new webpage on the Green Team website and will be periodically reviewed for necessary updates or additions.
- **Case Study Video of a School Recycling Program:** In FY20, CET planned a case study video highlighting the comprehensive waste diversion program at Robert Frost Middle

School in Lawrence. Due to the COVID-19 pandemic, the filming and video production were postponed in FY20 and throughout FY21, while the school was operating remotely. CET plans to complete this case study video in FY22.

In spring 2021, CET coordinated with MassDEP to develop a substitute video concept focusing on composting at home, titled [Compost for the Earth \(The Compost Song\)](#). The video was created using footage from CET and MassDEP employees and their families and friends, as well as an original song written and performed by MassDEP's Ann McGovern. CET posted the video to the new Video Gallery page and the existing Food Waste Reduction page on the Green Team website. CET also promoted the video through Facebook and is highlighting it in the August 2021 Green Team newsletter.

- **At-Home Environmental Challenges Webinar:** in October 2020, CET surveyed Green Team teachers to determine what webinar topics were of interest. Based on survey results, MassDEP and CET decided to deliver a webinar focused on [At-Home Environmental Challenges](#) for students. This webinar was presented live on February 24, 2021 and was also recorded. CET posted the recording to the new Video Gallery page on the Green Team website and shared it through the Green Team newsletter.

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: All Green Team schools

22News featured an article about the GREEN TEAM 2020-2021 prize winners and their projects. The article highlighted the impressive number of students and schools who participated despite the COVID-19 pandemic, and emphasized the hard work they did to reduce pollution and protect the environment.

<https://www.wvlp.com/news/massachusetts/state-green-team-award-recognizes-student-efforts-in-environmental-stewardship/>

Arlington: Arlington High School

YourArlington.com recently published a blog post on textile recycling, written by Julia Wallace, a student at Arlington High School. Julia is the spring 2021 intern for the Arlington Department of Public Works (DPW). The post highlights worrisome stats surrounding textile waste, outlines what kinds of textiles can be recycled, and urges folks to donate textiles instead of sending them for disposal.

<https://www.yourarlington.com/easyblog/entry/15-environment/3007-textiles-052521.html>

Sheffield: Mount Everett Regional High School

The Berkshire Eagle recently highlighted Isabella Cardinali Kemp, a student from Mount Everett Regional High School in an article about the creation of a virtual event on sustainability. Isabella is a senior who is passionate about reducing food waste, composting, and recycling. Her passion fueled her to put together the virtual event, “Sustainable Speaker Series – Our Relationship to Land and Water: Conversations with Local and National Sustainability Leaders.”

https://www.berkshireeagle.com/news/local/mount-everett-students-with-a-passion-for-environment-shape-series-that-debuts-friday/article_1da1efc4-77b4-11eb-bf4c-ef308209835e.htmlhttps://www.berkshireeagle.com/news/local/mount-everett-students-with-a-passion-for-environment-shape-series-that-debuts-friday/article_1da1efc4-77b4-11eb-bf4c-ef308209835e.html

Leominster: Johnny Appleseed Elementary School

The Leominster Champion featured an article on the fifth-grade class at Johnny Appleseed Elementary School. Students were recognized for their outstanding environmental actions as members of THE GREEN TEAM.

<https://www.leominsterchamp.com/news/20200909/fifth-graders-at-johnny-appleseed-elementary-win-green-team-award>

Cohasset: Cohasset High School

Wicked Local Cohasset featured an article on the Cohasset High School Green Team and their accomplishments this past year. The school’s Green Team has grown in their first three years to 65 students and they continue to make a noticeable impact on the school. This year, the school received a grant from the Cohasset Education Foundation to purchase composting, recycling, and trash receptacles for the cafeteria. The school also decided to trade Styrofoam trays for a compostable alternative, and now much of the waste from lunchtime is being composted. The school was recognized for their efforts by receiving a GREEN TEAM award and attending a virtual Recycling Show.

<https://cohasset.wickedlocal.com/news/20200813/cohasset-class-honored-in-green-team-awards>

Andover: Phillips Academy

Homenewshere featured a story on Nicole Jo and Arnav Bhakta, students from Phillips Academy, who created the non-profit Stem4Free to help rescue wasted, consumable food in their communities and around the world. Students were inspired to create the non-profit when they saw their fellow students throwing out large amounts of uneaten food in their cafeteria. When the boarding school closed in March, students returned to their homes in cities across the world and started Stem4Free to rescue food in their communities. The nonprofit has since expanded to over 10 branches, including in California, India, and Hong Kong, and rescued over 40,000 meals!

[http://homenewshere.com/tewksbury town crier/news/article_90d90110-c168-11ea-8291-13610f19b52f.html](http://homenewshere.com/tewksbury-town-crier/news/article_90d90110-c168-11ea-8291-13610f19b52f.html)

Attached:

- FY21 Green Team Summary Report