



2018-2019 Green Team Final Report

The Center for EcoTechnology (CET) continued to administer the MassDEP Green Team program in the 2018-2019 school year. CET worked on several special projects this fiscal year, including developing a case study video featuring Hingham High School and upgrading the search function for the Green Team website. Participation in the 2018-2019 school year was higher than the previous five years, driven by increased outreach to teachers through tabling at events, fostering strong partnerships with organizations with overlapping interests, and regular outreach to previously registered teachers.

Participation Summary

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

	2018-2019 School Year	Percentage Change	2017-2018 School Year	2016-2017 School Year	2015-2016 School Year	2014-2015 School Year
Participating Green Teams	382	17% Increase	317	332	363	319
Participating Schools	346	17% Increase	287	300	314	278
Participating Students	88,166	35% Increase	56,538	60,325	64,716	64,927
TRFs Submitted	72	18% Increase	59	62	66	65

As usual, many teachers registered early in the school year, with 145 teachers registered by late September. Registrations continued at a significantly higher rate than usual through October, November, and December. This period corresponds with CET doing significant outreach to encourage registration, including extra email outreach to previously registered teachers and tabling at three conferences. In March and April, CET conducted additional outreach to encourage teachers to submit Teacher Response Forms (TRF). This outreach resulted in receiving TRFs from 72 teachers (or 19% of registrants), which is a larger number of TRFs than received in any of the previous four years.

Outreach

CET conducted a variety of outreach activities this fiscal year, including a mix of in-person tabling, 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 18 new teachers. CET also shared information about the Green Team with several nonprofit organizations and state departments that work with K-12 schools. Some of these entities, such as



MassDESE and MassDOT, promoted The Green Team in their newsletter and/or website. CET also reached out to teachers that had registered their Green Teams in past years and had not registered in the 2018-2019 school year.

In previous years, CET reserved and staffed a table on behalf of the Green Team at one annual conference: the Massachusetts Environmental Education Society Conference in March. In the 2018-2019 school year, CET researched other conferences that seemed like promising opportunities to reach new teachers, and tabled at two additional conferences: the Massachusetts Science Education Leadership Association Conference and the Mass Farm & Sea to School Conference. These conferences successfully reached new teachers, resulting in nearly 30 registrations.

CET included information about the Green Team in presentations at a MassDEP SWAC Meeting, Western Massachusetts Municipal Recycling Coordinators meeting, and Greater Quabbin Food Alliance meeting. In addition, CET staff promoted the Green Team while attending other events and conferences. Some examples from the 2018-2019 school year include the 2nd Annual Massachusetts Food System Forum, the 2019 MassRecycle Summit and Trade Show, and the New England Food Show. CET fellows also included Green Team materials when tabling at environmental events throughout the year, such as the Berkshire Living the Change Expo, Amherst Sustainability Festival, and Hancock Shaker Village STEM Challenge Night.

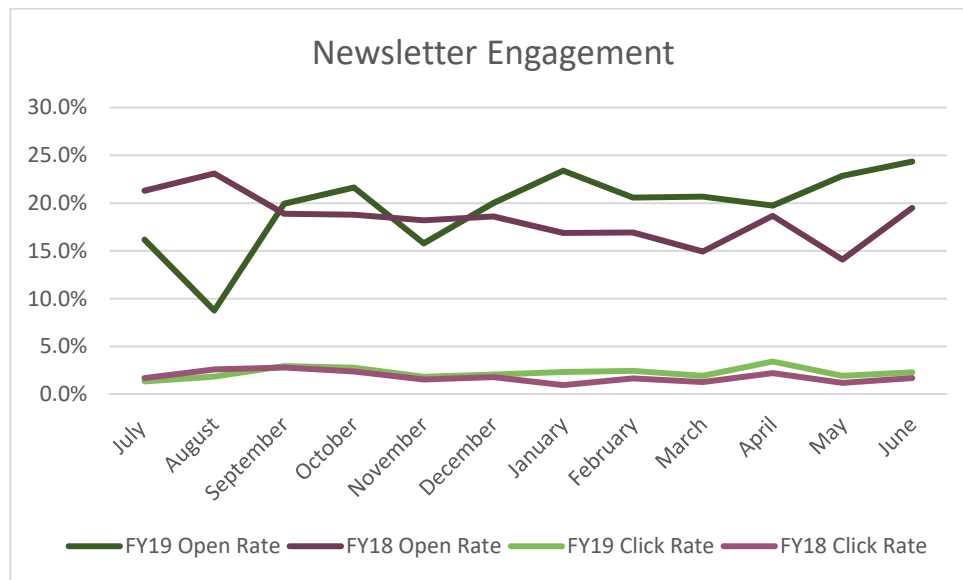
CET promoted the Green Team in a radio interview with NPR's affiliate station on Cape Cod. In addition, CET used its own medial channels to promote the Green Team, including the CET Go Green Blog and EcoBuilding Bargains e-blast newsletter.

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 inspirations to "green" their classrooms and schools. Monthly newsletters were sent out from July through June. The newsletter contact list had 2,756 subscribers at the end of the school year.

The open rate and click rate for newsletters in FY19 was higher than the previous school year. On average, about 525 people opened the newsletter each month. In October through April, 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 52%. During the 2018-2019 school year, registered teachers were about four times more likely to open the newsletter than contacts that were not registered for the current school year.

Green Team Email Newsletter Metrics		
Fiscal Year	Average Open Rate	Average Click Rate
FY19	19.5%	2.3%
FY18	18.4%	1.8%



Participation and Results

In the 2018-2019 school year, the 381 Green Team registrations represented:

- 375 Teachers
- 346 Schools
- 88,166 Students

In FY19, the Green Team received registrations from over 214 new teachers, representing approximately 56% of registrations. All participants received a Green Team Kit containing a classroom poster, lesson plans, press release, and suggested activities. A total of 72 teachers submitted response forms indicating the Green Team activities they conducted with their students, and over 4,350 students pledged to recycle and prevent pollution at home, at school, and in their communities. The range of achievements reported from Green Team teachers is impressive. Teachers shared how students are taking the initiative to help run their school's recycling and composting programs, as well as a wide variety of other environmental activities. Students are learning that they have the power to change things for the better through their own behavior, and feel a sense of pride, community, and accomplishment.



Equipment & Materials

Recycling

MassDEP provided recycling equipment to 55 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 distribution:

	2018-2019 School Year	2017-2018 School Year	2016-2017 School Year	2015-2016 School Year	2014-2015 School Year
Schools Receiving Equipment	56 (60 requests)	62 (62 requests)	59 (59 requests)	80 (82 requests)	74 (74 requests)
New Programs*	24	32	17	23	20
Set Out Container	885	582	787	625	785
Recycling Desk Side Bin	482	374	345	467	255
Recycling Cart	137	121	73	177	202
Compost Bin	27	52	43	57	37
Worm Vouchers	17	26	16	18	9

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

Idling Reduction

In FY19, seventeen schools requested and received Idling Reduction (IR) materials from the Green Team:

	2018-2019 School Year	2017-2018 School Year	2016-2017 School Year	2015-2016 School Year	2014-2015 School Year
Schools Receiving IR Materials	17	12	11	14	15
New Programs	13	11	6	10	5
Idle-Free Zone Sign	29	34	25	50	47
5 Minute Idling Limit Sign	67	35	12	23	4
Idle Reduction Pledge Cards	1350	800	1350	1450	1100
Static Sticker Windshield Decals	1450	1050	250	1600	1150
Bumper Stickers	900	550	400	1050	700
School Bus Dashboard Stickers	500	200	100	300	350
Palm Cards	2500	2100	1100	2000	2600

During FY19, demand for Idling Reduction materials increased over FY18, with more requests than in any of the previous five years. CET received over half of these requests after connecting with the MassDOT's



Safe Routes to School Program and sharing idling reduction information through their website and newsletter. In FY19, 13 out of 17 requests for signs and/or materials came from schools interested in starting new idling reduction programs.

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, 2019. This deadline was extended to April 19 to encourage more responses. MassDEP acknowledged all 72 classes that responded with award letters, Certificates of Recognition, and prizes for each student.

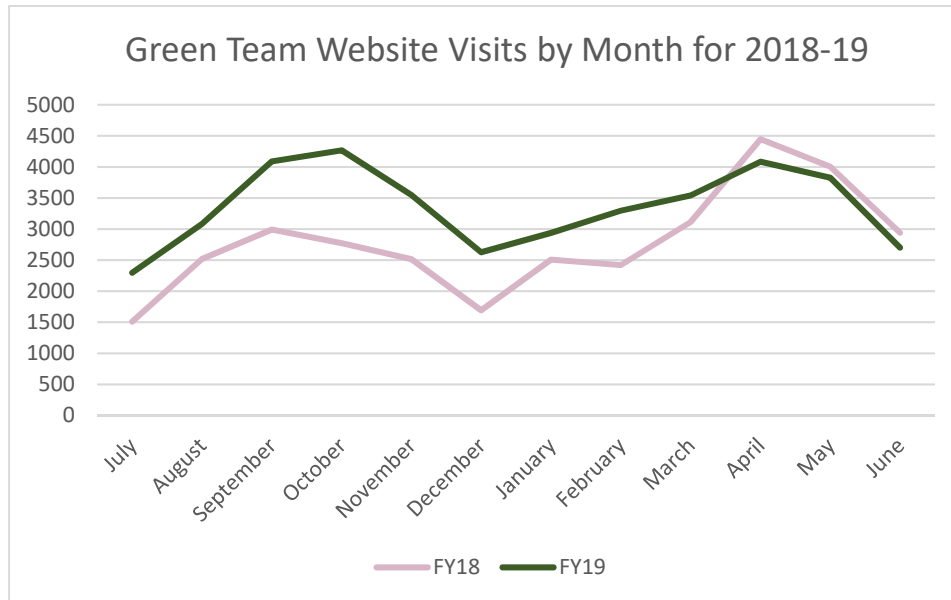
Of the 72 classes that submitted their Green Team activities, 17 were selected as grand prize recipients. The grand prizes awarded included two different assembly presentations by environmental “educators” (Jack Golden and Peter O’Malley), and gift cards to nearby garden centers for plants or school gardening supplies. Green Team prizes were also awarded to the other 55 classes that conducted activities. These other prizes included Green Team wristbands for children and adults, Green Team pencils, Green Team seeded bookmarks, compost activity books, key rings made from recycled tires, and three types of information wheels: Daily Household Management; Composting and Daily Recycler; and Household Hazardous Waste. Three of the nine planned performances were delivered in FY19, and the remaining six shows are scheduled for the fall of 2019.

Website Metrics

Total sessions and users to the Green Team website increased by 13% and 11% respectively, in FY19.

Green Team Website Traffic FY17-FY19:

	Total Sessions	Users	Page Views	Pages/Visit	Avg. Visit Duration	% New Visits
Total FY19	20,943	16,730	40,294	1.93	1:39	90.70%
Total FY18	18,570	15,020	33,430	1.8	1:30	91.00%
Total FY17	15,944	13,271	30,028	1.88	1:25	82.84%
Change (FY18 to FY19)	13%	11%	21%	7%	10%	-.3%



There was a 13% increase in the total number of visits in FY19 over FY18, with traffic patterns remaining fairly similar. Web traffic was particularly high relative to the previous year in October through December, which corresponds with the part of the year in which a higher number of teachers than usual registered for the program.

Program Administration

CET staff input registrations, assembled and mailed Green Team kits to teachers, 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, student prizes, and grand prizes. 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 created an updated participating schools map for the 2018-2019 school year and posted it to the Participating Schools page.

Special Projects

The FY19 budget also included four special projects:

- **Upgrade Green Team Website Search Function:** CET made improvements to the website search function to make it easier for visitors to locate the search tool and find key resources on the website. CET relocated the search box itself so it can always be accessed from the top of the webpage as visitors navigate throughout the site, and added a new website plugin that allows staff greater control of how the search tool returns and prioritizes results. CET manually indexed key resources, including webpages, videos, and current versions of kit materials and program forms, so that visitors can easily access the most valuable content on the webpage.
- **Slash Trash Lesson Plan Update:** CET is extending the Slash Trash lesson plan to include content appropriate for middle and high school students. The modified lesson plan for older students includes suggestions for locations and ways to track waste data outside of the home, as well as options for analysis that align with state mathematics curriculum standards. CET is updating the original lesson plan to include up-to-date recycling facts and information on recycling contamination. Once the document is finalized, it will be added to the Green Team website and included in Green Team kits for registered teachers.
- **Case Study Video of a School Recycling Program:** CET created a case study video highlighting the comprehensive waste diversion program at Hingham High School in Hingham. The video showcases the school's recycling and food waste diversion efforts, student participation, and use of Green Team resources. CET posted the case study video to the Food Waste Reduction and Spotlight pages on the Green Team website, and on CET's Facebook page. The video will also be included in the September, 2019 Green Team newsletter.
- **Furniture Reuse Best Management Practices:** From FY18 to FY19, CET developed furniture reuse best management practices for the MassDEP's RecyclingWorks in Massachusetts program. CET shared information gathered from the stakeholder process for these best management practices to help plan a workshop for K-12 schools on this topic: Trash to Treasure: Responsible Management of School Furniture. CET assisted MSBA, MassDEP, OSD, and OIG with the workshop, including participation in planning calls, reviewing the draft agenda and promotional materials, and promotion through the Green Team newsletter. CET presented at the event on December 5 at Field Elementary School in Weston.



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/>.

- **Sunderland: Sunderland Elementary School**

The *Hampshire Gazette* featured a piece about **Sunderland Elementary School's** Massachusetts Safe Routes to School (SRTS) Program. SRTS supports the accessibility and safety of taking non-vehicular modes of transportation to school, which decreases emissions from commuting and encourages exercise for students. The state Department of Transportation honored 140 SRTS partner schools in an awards ceremony held at the Massachusetts State House on May 30th.

<https://www.gazettenet.com/Sunderland-Elementary-recognized-for-Safe-Routes-26371469>

- **Westford: Nashoba Valley Technical High School**

Wicked Local Westford reported on **Nashoba Valley Technical High School's** participation in the Eco Carpentry Challenge. The challenge is an annual event held by the Furniture Trust, a nonprofit that promotes responsible reuse of unwanted office furniture. Used office furniture donated by local businesses was delivered to the 10 participating high schools, where students had their spring semester to use teamwork, imagination, and carpentry skills to transform these materials into new products, which were later donated back to the community.

<https://westford.wickedlocal.com/news/20190613/nashoba-tech-participates-in-eco-carpentry-challenge>

- **Boston: Boston Green Academy**

The official blog of the US Department of Education, *Homeroom*, highlighted the sustainability efforts of the **Boston Green Academy**, including obtaining 48 percent of its energy from renewable sources, converting its lawn to an outdoor classroom and garden, and requiring students to complete a long-term sustainability project as part of their studies.

<https://blog.ed.gov/2019/05/how-schools-are-reducing-their-environmental-impact-improving-health-and-cultivating-stewardship-values-2019-u-s-department-of-education-green-ribbon-schools-announced/>

- **Natick: Natick Schools**

Boston 25 News featured a story on the efforts of **Natick Schools** to eliminate the use of plastic straws in the cafeteria. Plastic straws can't be recycled because they are too small for recycling machines to sort. A Natick High School student met with school leaders and spoke at a school committee meeting, which encouraged the district to eliminate plastic straws altogether.

<https://www.boston25news.com/news/natick-schools-eliminate-use-of-plastic-straws-after-student-effort/950882283>



- Ipswich: Ipswich High School and Middle School

Wicked Local – Ipswich reported on the **Ipswich High School and Middle School** GREEN TEAM students that are inspiring climate action throughout their town. Sustainability scholars at the schools have successfully introduced and helped pass plastic bag and Styrofoam bans in town, set up dog-waste stations in local parks, alerted the town to the damage to lobsters of polluted outflows, created maps of the future impact of rising seas, developed recycling and composting stations in the school cafeterias, and worked with the GREEN TEAM to build the award-winning “Generation Growers” garden and solar-powered garden shed.

<https://ipswich.wickedlocal.com/opinion/20190515/climate-change-column-ipswich-students-help-paint-town-green>

- Easthampton: Maple Elementary School

The Hampshire Gazette reported on **Maple Elementary School’s** Anti-Idling Campaign. Students conducted a study to determine how much pollution idling cars were emitting while parked in front of the building, and created posters to raise awareness about the importance of not idling.

<https://www.gazettenet.com/Maple-School-students-initiate-anti-idling-campaign-24323698>

- Newbury: Newbury Elementary School

The Daily News reported on the **Newbury Elementary School** food recovery program. The school partners with Nourishing the North Shore, a group that provides access to healthy, local food, to collect excess cafeteria food each week and deliver it to the Newbury Food Pantry.

https://www.newburyportnews.com/news/local_news/school-food-recovery-program-expands-to-newbury-elementary/article_ab6f9d95-ed57-5841-b320-7950b91b1a88.html

- Agawam: Agawam Public Schools

The Reminder reported on the Town of Agawam’s ‘Cooler Community Challenge’, which aims to engage public schools in recycling and energy use education in an effort to reduce their town’s carbon footprint.

<https://www.there minder.com/localnews/agawam/agawam-begins-cooler-community-challenge-in-an-eff/>

- Wellesley: Wellesley Public Schools

Hometown Weekly reported on the 2019 Wellesley Sustainability Challenge for K-12 students who are Wellesley residents or enrolled in the **Wellesley Public School** system. This challenge asks students to work on a project promoting a local resource, policy, or behavior change that makes Wellesley greener. This can be in the form of an advertisement, op-ed or essay, video commercial, infographic, poem, music, or another form of audio/visual artwork.

<https://www.wbur.org/edify/2018/12/21/chefs-in-schools-healthier-school-lunch>



- Winchester: Winchester High School

Wicked Local featured an article on the recent renovation of **Winchester High School**, which achieved a Leadership in Energy and Environmental Design (LEED) Gold sustainability certification. In the past year, the high school used 26 percent less natural gas than the building did prior to the renovation.

<https://winchester.wickedlocal.com/news/20190204/winchester-high-school-celebrates-gold-level-in-green-building-leed-certification>

- Leominster: Leominster School District

Sentinel & Enterprise described how the **Leominster School District** installed textile collection boxes at each Leominster Public School. Bay State Textiles picks up donated clothing, linens, and other fabrics, paying the schools a rebate of five cents per pound, which goes toward the Leominster Education Foundation.

https://www.sentinelandenterprise.com/breakingnews/ci_32267840/clothing-recycling-program-benefit-leominster-schools

- Longmeadow: Center Elementary School

Western Mass News described a Longmeadow student effort to institute a single use plastic bag ban bylaw in their town. A group of sixth grade students who met while attending **Center Elementary School** helped educate the community on the harmful environmental effects of plastic bags through a series of presentations to the PTO, School Committee, and Town Selectman. Their efforts helped pass a new bylaw banning single-use plastic bags from the town.

https://www.westernmassnews.com/news/longmeadow-students-help-institute-plastic-bag-bylaw/article_6cd44730-e207-11e8-9c92-1bfd22fcde8f.html

- Wellesley: Wellesley Public Schools

Wicked Local Wellesley recently published an article on the recycling and food waste reduction initiatives in Wellesley Public Schools. Members of the Wellesley Green Schools group created the SMART (Sustainable Materials and Reduced Trash) event guide, which offers simple ways to cut costs and reduce waste during school events. Wellesley Schools also use the Massachusetts Water Resources Authority's roving water fountain at events instead of disposable water bottles.

<http://wellesley.wickedlocal.com/news/20181025/wellesley-works-at-waste-reduction>

- Newburyport: Newburyport Public Schools

The Daily News reported on the Newburyport based organization, Nourishing the North Shore, which recently kicked off the third year of its School Food Recovery Program. The volunteer-driven program collects excess food from the **Newburyport School District** and delivers it to the Newbury Food Pantry.

https://www.newburyportnews.com/news/local_news/school-food-recovery-program-underway-in-newburyport/article_8966ba17-1050-5476-b53e-b64b21eed582.html



- Shrewsbury: Shrewsbury High School

The Worcester Telegram reported on a Shrewsbury student effort to ban Styrofoam. Four students from **Shrewsbury High School** sponsored a citizen-petition article to ban Styrofoam containers from local food establishments and town facilities. Styrofoam is a non-biodegradable material which often ends up in landfills and emits dangerous chemicals that can leach into food when heated.

<https://www.telegram.com/news/20180927/shrewsbury-students-recycle-effort-to-ban-styrofoam>

-Somerville: Somerville Public Schools

Patch.com featured an article on the recycling and composting pilot program recently launched at four Somerville schools. The schools installed recycling bins and compost receptacles, as well as buckets for draining liquids from bottles.

<https://www.telegram.com/news/20180927/shrewsbury-students-recycle-effort-to-ban-styrofoam>

- Brookline: Brookline High School, Lincoln School, Coolidge Corner School

Wicked Local Brookline described the successful implementation of composting at **Brookline High School**. The program has inspired other schools in the district, including **Lincoln School** and **Coolidge Corner School**, to explore implementing compost programs as well.

<http://brookline.wickedlocal.com/news/20180813/brookline-schools-businesses-push-for-composting>

- North Adams: Colegrove Park Elementary School

iBerkshires.com reported on the students at **Colegrove Park Elementary School** in North Adams who designed eco-friendly programs and businesses as part of the Camp Solution program. Students recently displayed their projects, which focused on topics such as endangered animals, increasing local recycling, reducing ocean plastic pollution, and saving bees.

<http://www.iberkshires.com/story/57990/Colegrove-Students-Go-Green-At-Camp-Solution-.html>

Attached:

- FY19 Green Team Summary Report