

2017-2018 Green Team Final Report

The Center for EcoTechnology (CET) continued to administer the MassDEP Green Team program in the 2017-2018 school year. Two highlights of the 2017-2018 fiscal year were developing an instructional video on cafeteria source separation and updating the Green Team library to include an expanded virtual library list. While participation in the 2017-2018 school year was slightly lower than the previous two years, CET anticipates that these new materials can be used to help leverage new participants in the 2018-2019 school year.

Participation Summary

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

	2017-2018 School Year	Percentage Change	2016-2017 School Year	2015-2016 School Year	2014-2015 School Year	2013-2014 School Year
Participating Green Teams	317	5% Decrease	332	363	319	289
Participating Schools	287	4% Decrease	300	314	278	237
Participating Students	56,538	6% Decrease	60,325	64,716	64,927	59,128
TRFs Submitted	59	5% Decrease	62	66	65	79

Most registrations were received early in the school year, over 150 teachers registered as early as August and September. However, there were not as many registrations later in the school year. At the end of FY18, the Green Team did additional outreach and pushed the deadline for the Teacher Response Form (TRF) submission as there fewer TRFs received by mid-April as compared to previous years. The additional push to encourage teachers to submit TRFs succeeded in receiving TRFs from 19% of registrants, which is the same proportion as the previous school year.

Outreach

CET conducted a variety of outreach activities this 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 25 new teachers. CET also reached out to several organizations that work with K-12 schools requesting that they share information about The Green Team. Some of these organizations, such as the Massachusetts Environmental Education Society, promoted The Green Team



in their newsletter and/or website. CET also reached out to teachers that had registered their Green Teams in the past years and had not registered in the 2017-2018 school year.

CET promoted the Green Team through interviews and presentations, including a “Back to School” segment on Channel WWLP-22’s Mass Appeal show in September, a radio interview on Valley Free Radio, a presentation at a MassDEP SWAC Meeting, and two Greater Quabbin Food Alliance meetings.

CET fellows helped promote the Green Team in several ways. Fellows staffed a Green Team table at the annual Massachusetts Environmental Education Society Conference in March; seven teachers registered while visiting the Green Team table. CET fellows included Green Team at general organizational tabling opportunities throughout the year, and mentioned the Green Team in recycling presentations at elementary schools in Pittsfield.

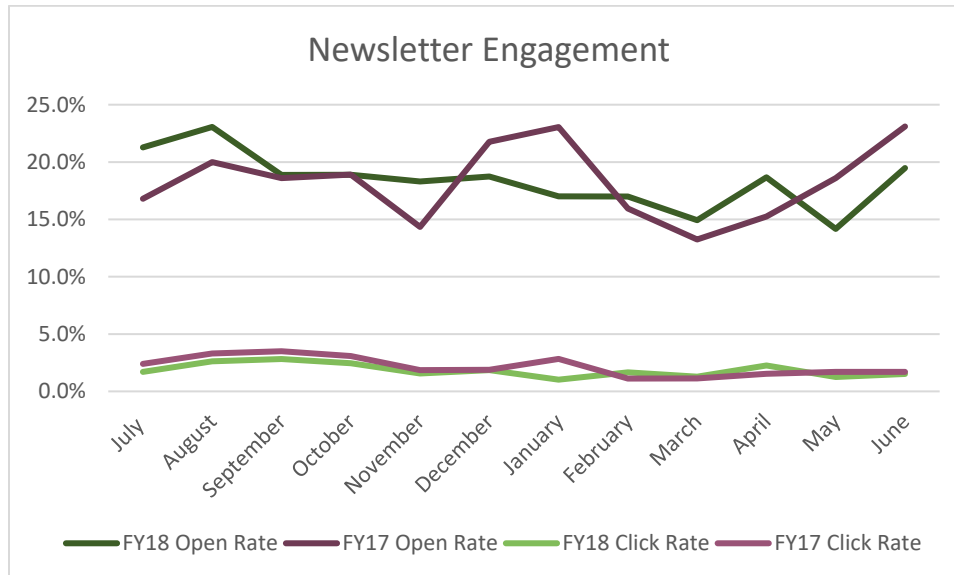
In FY18, the Green Team was also promoted through CET’s media channels, including the CET Go Green Blog, EcoBytes email newsletter, and CET social media.

Communication

The primary communication vehicle with Green Team teachers is the monthly electronic newsletter. Registered 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 2,847 subscribers at the end of the school year.

The open rate for newsletters in FY18 was approximately the same as the previous school year while the click rate was slightly lower. On average, about 525 people open 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 47%. Registered teachers are about three times more likely to open the newsletter than contacts that are not registered for the current school year.

Green Team Email Newsletter Metrics		
Fiscal Year	Average Open Rate	Average Click Rate
FY18	18.4%	1.8%
FY17	18.3%	2.2%



Participation and Results

In the 2017-2018 school year, the 317 Green Team registrations represented:

- 315 Teachers
- 287 Schools
- 56,538 Students

In FY18, the Green Team received registration from over 180 new teachers, representing approximately 57% of registrations. All participants received a Green Team Kit containing a classroom poster, lesson plans, press release, and suggested activities. A total of 59 teachers submitted response forms indicating the Green Team activities they conducted with their students, and almost 2,590 students pledged to recycle and prevent pollution at home, at school, and in their communities. As always, these included a many heartwarming and inspiring stories, and teachers reported that their students experienced a range of benefits from participating in the Green Team. Teachers shared how students are proud of their actions to help the planet. Students observe the positive impact that they are having on their natural surrounding and adapt activities to impact their school and community.

Equipment & Materials

Recycling

MassDEP provided recycling equipment to 62 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:



	2017-2018 School Year	2016-2017 School Year	2015-2016 School Year	2014-2015 School Year	2013-2014 School Year
Schools Receiving Equipment	62 (62 requests)	59 (59 requests)	80 (82 requests)	74 (74 requests)	48 (50 requests)
New Programs*	32	17	23	20	34
Set Out Container	582	787	625	785	636
Recycling Desk Side Bin	374	345	467	255	278
Recycling Cart	121	73	177	202	76
Compost Bin	52	43	57	37	27
Worm Vouchers	26	16	18	9	7

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

Idling Reduction

In FY18, twelve schools requested and received Idling Reduction (IR) materials from the Green Team.

	2017-2018 School Year	2016-2017 School Year	2015-2016 School Year	2014-2015 School Year	2013-2014 School Year
Schools Receiving IR Materials	12	11	14	15	13
New Programs	11	6	10	5	11
Idle-Free Zone Sign	34	25	50	47	41
5 Minute Idling Limit Sign	35	12	23	4	6
Idle Reduction Pledge Cards	800	1350	1450	1100	1550
Static Sticker Windshield Decals	1050	250	1600	1150	1100
Bumper Stickers	550	400	1050	700	700
School Bus Dashboard Stickers	200	100	300	350	750
Palm Cards	2100	1100	2000	2600	1400

Idling Reduction materials increased in demand over FY17. In FY18, eleven out of twelve 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, 2018. This deadline was extended to April 20 to encourage more responses. MassDEP recognized all 59 classes that responded with award letters, Certificates of Recognition, and prizes for each student.



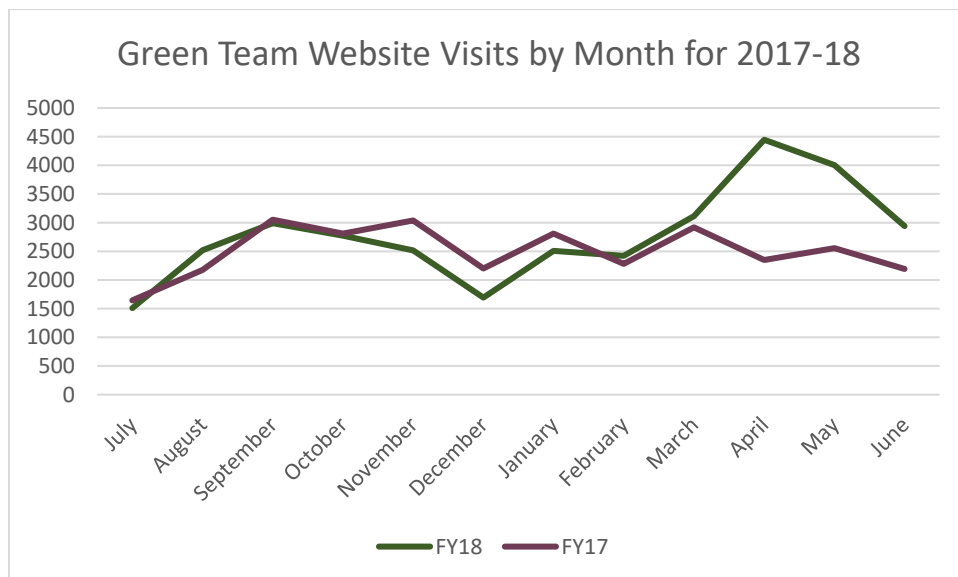
Of the 59 classes that submitted their Green Team activities, 19 classes were selected as grand prize recipients. The grand prizes awarded included three different assembly presentations by environmental “edu-tainers” (Jack Golden, Peter O’Malley, and Earthtunes), and gift cards to nearby garden centers for plants or school gardening supplies. Green Team prizes were also awarded to the other 40 classes that conducted activities. These other prizes included Green Team wrist bands for children and adults, Green Team pencils, Green Team bookmarks, compost activity books, key rings made from recycled tires, key rings made from corn resin, and three types of information wheels: Daily Household Management, Composting and Daily Recycler, and Household Hazardous Waste. Five of the seven planned performances were delivered in FY18, and the remaining two shows are scheduled for the fall of 2018.

Website Metrics

Total sessions and users to the Green Team website increased by 16% and 13% respectively, in FY18.

Green Team Website Traffic FY16-FY18:

	Total Sessions	Users	Page Views	Pages/Visit	Avg. Visit Duration	% New Visits
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%
Total FY16	14,698	12,111	28,799	1.96	1:36	81.70%
Change from FY17 to FY18	16%	13%	11%	-4%	6%	10%



There was an 11% increase in the total number of visits in FY18 from FY17. For most of the year, the traffic was fairly similar to last year. However, traffic was particularly high in April and May, which corresponded with posting the Instructional Video on Cafeteria Source Separation. This video was promoted through the Green Team newsletter, MassDEP, CET Facebook page, and Franklin Solid Waste Management District, which led to a 60% increase in visitors to the Green Team website over this period.

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 2017-2018 school year and posted it to the Participating Schools page.

Special Projects

There were also four Special Projects:

- **Case Study Video on Source Separation in School Cafeterias:** CET created an instructional video highlighting best management practices for source separation in school cafeterias. This video documented the two schools at the Greenfield public school district, Four Corner's Elementary School and Northfield Elementary School. Once complete, CET posted this video to the Food Waste Reduction page on the Green Team website, and promoted it through the Green Team newsletter and CET Facebook page.
- **Website Event Listings Plugin:** CET updated the format of the Events page of the Green Team website in order to display active events for teachers to easily navigate through upcoming grants and workshops. Once this updated was completed, CET began adding new events to this page each month.
- **Green Team Library Catalogue:** CET updated the list of books, videos, and curricula with more up-to-date materials and posted this list as a "Virtual Library" of environmental education materials for teachers. CET posted this list as an interactive spreadsheet that teachers can filter by grade, topic, publication date, etc. Physical versions of some Green Team materials are still available by request.
- **English Language Arts and Mathematics Framework Alignment Documents:** While CET was updating the documents aligning Green Team lessons and activities with the English Language Arts (ELA) and Mathematics Curriculum Frameworks in FY17, the Massachusetts Department of Elementary and Secondary Education (Mass DESE) was in the process of updating the frameworks themselves. In



FY18, CET made minor modifications to the alignment documents for ELA and Mathematics once the updated frameworks were posted by Mass DESE. CET also added composting to these documents.

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/>.

- Greenfield: Academy of Early Learning

The Greenfield Recorder recounted a composting tour at the Academy of Early Learning and described other recycling and composting efforts happening in the Greenfield Public Schools. Greenfield Public Schools were awarded a \$30,000 Massachusetts Department of Environmental Protection School Recycling Assistance grant, and have used that funding to establish successful cafeteria and kitchen compost programs, with assistance from Amy Donovan of the Franklin County Solid Waste Management District. As a result, each school has slashed trash by 75-80%! They have also participated in THE GREEN TEAM, receiving lessons, activities, and supplies to help teachers bring environmental education into the classroom.

<http://www.recorder.com/Between-the-Rows-Composting-before-kindergarten-17883492>

- Newton, Lexington, and Northfield: Newton North High School, Lexington High School, and Pioneer Valley Regional High School

Massachusetts Envirothon announced the winners of the 31st Annual Envirothon, held on May 18th. This annual competition brings teams from schools across the state together to demonstrate their knowledge of Massachusetts' natural environment. Congratulations to Newton North High School, Lexington High School, and Pioneer Valley Regional High School in Northfield, who took the first, second, and third places overall, and to all of the schools that competed!

<https://massenvirothon.org/2018/05/18/2018-mass-envirothon-winners/>

- Ashburnham and Fitchburg: Oakmont Regional High School and Memorial Middle School

The Sentinel & Enterprise News described how local GREEN TEAM schools and a local educator were honored as part of the 24th Annual Secretary's Awards for Excellence in Energy and Environmental Education. Congratulations to Oakmont Regional High School in Ashburnham, Memorial Middle School in Fitchburg, and Lunenburg resident and science educator Sarah Cammer, PhD!

http://www.sentinelandenterprise.com/news/ci_31886285/3-schools-honored-environmental-education3

- Arlington Public Schools

WickedLocal Arlington reported on Arlington Public Schools being named a 2018 U.S. Department of Education Green Ribbon School District Sustainability Awardee. This award recognizes school districts



for reducing greenhouse gases, addressing the nutrition, fitness, mindfulness and overall health of students and staff, and teaching curricula that addresses environmental topics. Congratulations to the students and staff of Arlington Public Schools!

<http://arlington.wickedlocal.com/news/20180518/arlington-public-schools-gets-sustainability-award>

- Shrewsbury: Shrewsbury High School

The Worcester Telegram and Gazette covered efforts Shrewsbury High School students are taking to encourage the town to ban Styrofoam food containers from the school district and other food service operations. Four high school juniors presented information to several town departments, including the School Committee, encouraging them to support the measure. More than two dozen Massachusetts cities and towns have joined communities nationwide in approving polystyrene regulations.

<http://www.telegram.com/news/20180513/shrewsbury-town-meeting-is-asked-to-dump-styrofoam>

- Huntington: Gateway Regional High School

Gateway Regional High School in Huntington recently published a press release to celebrate more than 10 years of their “Be Green” recycling program. To commemorate the occasion, they invited founding members of the club back to the school to see the program’s growth. One former student, Kathleen Ryan, has since become a teacher and brought some of her students to Gateway to learn about starting a program at their own school.

<http://www.grsd.org/userfiles/4/my%20files/breaking%20news%20articles/fy'18/hs%20be%20green%20anniversary.pdf?id=7599>

- Springfield: STEM Middle Academy

The Springfield Republican reported on the successful early efforts of the Green Team at STEM Middle Academy in Springfield. They have made great strides this year, including building a community garden, switching from Styrofoam to cardboard lunch trays, and establishing a compost system. In the process they have slashed lunchtime trash from 18 bags a day to just three!

<http://sections.masslive.com/the-republican/special-section/Reduce-Reuse-Recycle/04-20-2018/Page-14>

- Arlington and Lexington Public Schools

Wicked Local Lexington reported on the great strides Arlington and Lexington Public Schools are making in reducing their cafeteria waste. Both districts have accomplished significant reductions in the amount of waste generated in their school cafeterias since implementing recycling and composting. In the elementary schools alone, lunchroom trash has been slashed from an average of six to seven bags per day to one!

<http://lexington.wickedlocal.com/news/20180330/what-can-lexington-do-to-reduce-waste>

- Westford: Nashoba Valley Technical High School



The Lowell Sun described how students at Nashoba Valley Technical High School are participating in the eighth annual Eco-Carpentry Challenge sponsored by The Furniture Trust. This annual challenge asks students to demonstrate their creativity and commitment to recycling by converting donated office furniture into repurposed products.

http://www.lowellsun.com/news/ci_31676399/nvths-carpenters-take-eco-challenge

- Hingham: Hingham High School

The Boston Globe recently reported on Hingham High School's "Slash the Trash" lunchtime competition. The program engages all 32 of the school's varsity sports teams, with the goal of reducing the amount of trash that students generate at lunch each day. Each team takes turns setting up collecting stations in the cafeteria to help students properly separate recyclable and compostable materials from the trash. School custodians monitor the activities and issue "penalties" for compostable or recyclable materials that are thrown into the wrong bin. The award-winning program has proven to be successful in motivating students, staff, and other schools to practice environmentally-friendly habits. They also compost on-site in compost bins provided by THE GREEN TEAM!

<https://www.bostonglobe.com/metro/regionals/south/2018/02/16/this-contest-least-trashy-team-wins/oZVPiM82KL1mWmXpQMiuAP/story.html>

- Marshfield: Marshfield High School

Wicked Local Marshfield reported on two members of the Marshfield High School Green Team who are getting involved in local government by advocating for a local plastic bag ban. The high school seniors are spreading the word among other students and inviting classmates who have turned 18 to attend upcoming town meetings.

<http://marshfield.wickedlocal.com/news/20180220/marshfield-teens-join-group-advocating-for-plastic-bag-ban>

- Woburn: Linscott-Rumford Elementary School

The Woburn Patch article describes how fifth grade students from Linscott-Rumford Elementary School in Woburn were awarded a field trip to the Museum of Science after winning their school-wide recycling contest. The class collected more than 7,000 bottles for recycling in just 10 days as part of the JN Phillips Auto Glass Greenshield Recycling Education initiative. During the field trip, the students were also joined by Celtics center Aron Baynes, Celtics Mascot "Lucky" the Leprechaun, and JN Phillips President, Bob Rosenfield.

<https://patch.com/massachusetts/woburn/woburn-5th-graders-visit-museum-science-celtics-player>

- West Tisbury: West Tisbury School

The Martha's Vineyard Times reported on the Zero Waste Movie Night held at West Tisbury School on Martha's Vineyard in January. In support of the school's zero waste initiative, attendees were encouraged to bring their own cups and plates from home to receive reduced-priced concessions. Sixth graders also collected signatures in support of a student-founded initiative, Safe Sea MV, which would



introduce a new bylaw prohibiting the intentional release of helium or lighter-than-air balloons in West Tisbury. The featured movie, *Everything Connects*, is the third documentary from 14 year old filmmaker Dylan D’Haeze, who traveled with his mother from the West Coast to attend this special event.

<https://www.mvtimes.com/2018/01/30/saving-world-one-kid-time/>

- Northborough: Marion E. Zeh Elementary School

The Community Advocate recently described how fourth and fifth graders at Marion E. Zeh Elementary School in Northborough are bringing more awareness to textile and electronic recycling. Each month, the school’s Environmental Club focuses on a new topic that aligns with the classroom curriculum. In January, the Environmental Club organized a textile recycling competition between different classrooms and, in February, they hosted an Electronics Recycling Day fundraiser.

<https://www.communityadvocate.com/2018/01/24/zeh-schools-environmental-club-brings-awareness-textile-electronic-recycling/>

- Brookline: Brookline High School

The Sagamore reported about Brookline High School’s food waste diversion program through which the cafeteria will be diverting 3 tons of food waste per month. The food waste is sent to Save that Stuff, where it is prepared for anaerobic digestion, a process converting organics into a fertilizer product and methane which can be captured to generate energy.

<https://thesagonline.com/27777/news/composting-a-new-addition-to-cafeteria/>

- Lexington: Minuteman Career and Technical High School

Wicked Local Needham reported on the new textile recycling program at the STEM Club at Minuteman High School in Lexington, through a partnership with Bay State Textiles.

<http://needham.wickedlocal.com/news/20171215/minuteman-girls-in-stem-starts-recycling-program>

- Wellesley: Wellesley Public Schools

The Town of Wellesley issued a press release describing how Wellesley Public Schools are participating in a collaborative food rescue program, which will donate an estimates 20,000 meals to people in need this year.

<https://wellesleyma.gov/DocumentCenter/View/8554>

- Hyannis: Barnstable High School

The Cape Cod Times reported on the innovative composting program at Barnstable High School, which was implemented by one high school senior as part of a project for her Advanced Placement Environmental Science Club.

<http://www.capecodtimes.com/news/20171125/barnstable-high-senior-develops-compost-plan>

- Arlington: Dallin and Brackett Elementary School



Wicked Local Arlington reports that Dallin and Brackett Elementary Schools in Arlington helped collect 3,000 pounds of pumpkins after Halloween, which were taken to Davidian Farm in Northborough for composting.

<http://arlington.wickedlocal.com/news/20171113/arlington-students-help-compost-3k-pounds-of-pumpkins>

- Shirley: Shirley Middle School

The Lowell Sun featured Shirley Middle School's annual "Recycle Your Reusables" event. This annual one-day event focuses on collecting reusable household goods.

http://www.lowellsun.com/todaysheadlines/ci_31362947/star-quarterback-green-team

- Malden: Salemwood and Beebe School

WickedLocal Malden profiled North Shore schools, including Salemwood and Beebe School, that worked with Bay State Textiles to collect and recycle used clothing. As of last week, the program has made over \$5,000 to benefit schools in the city of Malden.

<http://malden.wickedlocal.com/news/20170920/one-mans-textile-trash-is-another-schools-treasure>

Attached:

- FY18 Green Team Summary Report