



Green Cones *for* Small Schools

.....

*A food scrap management option
for small schools, day care centers,
low-residency colleges, and more*



Funded by a grant from the Vermont Agency of Natural Resources

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Welcome to the World of Green Cones!

Small schools offer unique opportunities as well as challenges for implementing waste reduction programs, especially when it comes to food scraps. To reduce waste, reduce the load on landfills, and reduce methane gas production and greenhouse gas emissions, it's critical to keep as many food scraps out of the landfill as we can. That's where Green Cones and this booklet come in.

The quantity of food scraps produced at a small school probably pales in comparison to larger schools, making it costly for a hauler (and thus the school) to add the school to an existing food scrap pickup route. In some areas, a hauling route may not be an option and, even where it is an option, onsite management of food scraps is the better choice for the environment because it eliminates the fuel use and carbon emissions inherent in a hauling operation.

Green Cones offer an easy-to-use means to managing food scraps onsite for small schools and programs. But what is a "small school" and how do you know if Green Cones are right for you? There isn't a firm definition, but here are some general guidelines to consider:

- A "small school" can generally be defined as a public or private school serving up to 300 students on a regular school-year schedule; or, a small year-round child care facility; or, a small, limited residency college or other adult educational program.

- The quantity of food scraps generated will obviously influence the number of Green Cones your school/program would need, and this can vary widely by the age of the students as well as the cafeteria options you offer. See "Determining How Many Green Cones to Install" on page 7 in this booklet for a guide to help you determine how many cones your program might need to handle all of the food scraps generated onsite. Please note that this chart offers a basic guide, not a definitive answer.

- Schools larger than 300 students should consider other options unless the food scrap generation is really minimal (i.e., day programs that don't span meals or no cafeteria onsite) or larger programs with very limited onsite residency.

A simple school-wide training of kitchen staff, maintenance staff, students, teachers, and administrators and a clear, coordinated effort are all that it takes to make a food scrap-to-Green Cone program a success. But before we get into how to develop such a program, let's briefly explore the "whys" of food scrap diversion.

Food scraps simply don't belong in a landfill.

Food Scraps: Out of the Landfill and Into the Soil

Food scraps simply don't belong in a landfill. When packed into landfills, they decompose under anaerobic conditions—meaning in the absence of oxygen. Methane gas, *a greenhouse gas with 23 times the heat-trapping capacity of carbon dioxide (CO₂)*, is produced when organic materials such as food scraps, lawn and garden clippings, paper, and wood decompose under anaerobic conditions. Landfills are the largest source of human created methane in the U.S. (Source: www.zwinc.org/scraps_gas.html)

There are other benefits to diverting food scraps from the trash, including potentially lowering trash costs and handling lighter bags of trash. Food scraps are wet and heavy; by keeping them out of the trash, maintenance staff will no longer have to handle heavy trash bags. Lighter bags reduce the likelihood that bags will split and create a mess, and also reduce the chance of

worker injury. The food scraps can also be taken out in small containers to make them easier to carry. By keeping food scraps out of the dumpster, schools can usually diminish their trash removal costs, as well as realize a reduction in dumpster odor and pests such as flies and bees.

There are three basic options for managing the food scraps diverted from the trash:

- Partnering with someone to haul the food scraps away to a farm or compost facility;
- Putting them into an onsite compost bin and managing the composting process; or
- Putting them into a food scrap digester such as a Green Cone.

All three options treat food scraps as a resource to be recycled into a soil nutrient and eliminate the methane gas production inherent in landfilling organic material. But using Green Cones may be the most cost-effective and efficient way to recycle food scraps at a small school.



What to Put in the Green Cone What to Keep Out

YES!

Add these to your cones:

Fish

Meat & Poultry

All Bones

Bread

Fruit (including peelings)

Vegetables (including peelings)

Dairy products

**Raw and cooked
food scraps**

Crushed egg shells

Tea bags

Coffee grounds
(but not coffee filters)

**Small amounts
of animal excrement**

NO!

Please keep these out:

Metal

Wood

Plastic

Glass

Paper

Straw

Grass cuttings

Hedge clippings

Bulk oil

Disinfectant & bleaches

**Large amounts of
coarse vegetable matter,
i.e., corn husks and pea
shells** (While this type of material can be put into a cone, a large quantity quickly fills a cone so it's better to compost it instead.)



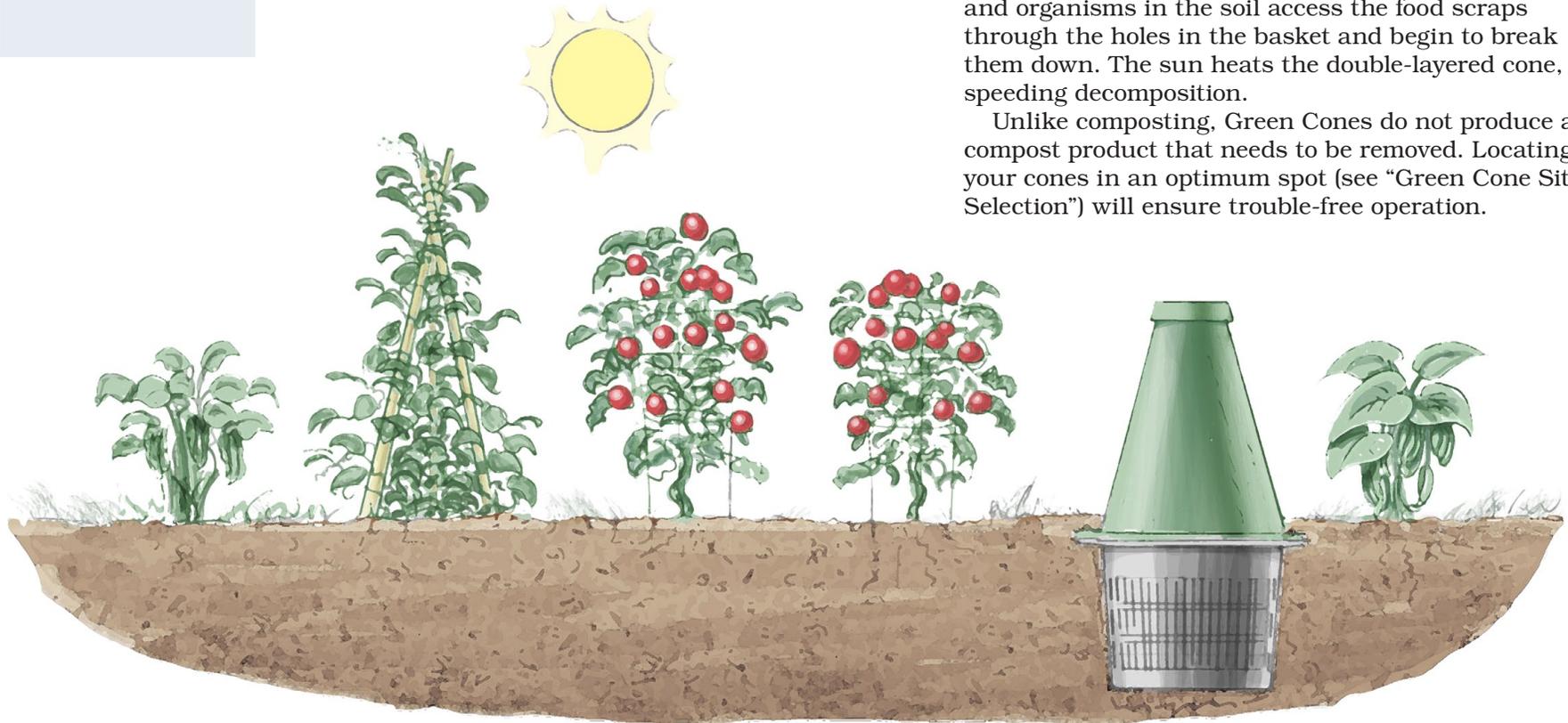
Green Cones digest all food scraps, including fruit, vegetables, meat, fish, bones, dairy, and small amounts of oil.

Green Cones: A Tool for Small Schools

A Green Cone is a “food scrap digester.” The cones digest all food scraps, including fruit, vegetables, meat, fish, bones, dairy, and small amounts of oil. Anything scraped off a plate or left over from meal preparation can be put in a Green Cone. Food decomposes in the Green Cone with the help of heat from the sun and organisms living in the soil in the presence of oxygen—thus, this decomposition process does not produce methane gas.

A Green Cone is actually three parts that fit together: a black basket that resembles a plastic laundry basket; a green cone; and a black passive solar liner that fits inside the cone to help retain heat from the sun. The cone and liner are attached to the black basket and the basket is placed in a hole in the ground. Assembled and installed, the Green Cone sits about 26 inches above ground level. Food scraps are added to the cone through a lid on top, and organisms in the soil access the food scraps through the holes in the basket and begin to break them down. The sun heats the double-layered cone, speeding decomposition.

Unlike composting, Green Cones do not produce a compost product that needs to be removed. Locating your cones in an optimum spot (see “Green Cone Site Selection”) will ensure trouble-free operation.



Choose a site that meets all the criteria so that your Green Cones are easy to use and work long into the future.

Green Cone Site Selection

Selecting a site for your Green Cones requires careful consideration since they are installed into the ground and are not easily moved. Choosing a site that meets all of the following criteria will ensure that your Green Cones are easy to use and work long into the future. Try to involve everyone who might be affected by the site selection during your process, including maintenance staff.

Easy access

Green Cones must be installed in an easy-to-get-to location since someone will be carrying food scraps out to the Green Cone every day. This task can be made easier by choosing a spot with year-round access from the cafeteria and/or kitchen.

Ample sun

Green Cones work best with plenty of sunshine, especially in the winter when cold temperatures will slow the decomposition process. The sun helps to warm up the Green Cones, which helps the food scraps decompose quickly and fully. The more sun, the better your Green Cones will work.

Well-drained soil

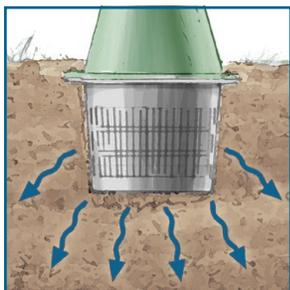
Green Cones are installed 2.5 feet into the ground and a successful decomposition process requires good drainage so that the decomposed food scraps can filter into the surrounding soil. If the soil becomes saturated during rains or for a prolonged period during snow melt and doesn't drain well, the food scraps will stop decomposing.

To test for well-drained soil, dig a test pit 2 feet deep. Pour a bucket of water into the hole and time how long it takes for the water to fully disappear. If the water drains completely away in a few minutes, it is well drained. If the water takes 15 minutes or longer to drain, it is not a well-drained spot. If the best or only site on the school property has poor drainage, there are steps that can be taken to improve drainage. See the Manufacturer's Installation Instructions for details. <http://solarcone.net/system/installation.php>

Please note: For proper installation, it is important to know whether the Green Cone site you've chosen is well drained or not.

Garden Potential

As food scraps decompose in a Green Cone, the nutrients are dispersed into the surrounding soil, feeding nearby plants and trees. Locating your Green Cones near an existing garden, or planning a future garden around the location of your Green Cones, may be an option for your school site. Green Cones can also be installed near fruit trees to improve tree yields. But be careful to install them far enough away so that the tree's root system does not grow into the black basket below ground level, which could affect how the cone works. Small berry bushes and flowering shrubs with shallower root systems can be planted among the Green Cones to help integrate the cones into the landscape as well as to add beauty and fruit to the school yard.





Safety

Using Green Cones doesn't create any particular safety issues. However, some simple guidelines can help ensure safe use and address some of the concerns you might have:

- Since the cones will likely be sited near the school building and perhaps in the school yard, young students may be inclined to play around or on them. Although the cones stand just 26 inches above ground level when installed, standing on them and jumping off them is not recommended! Urge students to stay away from the cones (except when adding material to them) as part of your school-wide instruction. You can also make them physically off-limits by installing a fence around them to prevent access. But remember that the cones need to remain easily accessible for dumping food scraps into them. If you decide to build a fence around the cones, make sure the fence does not block sunlight from reaching them.
- Green Cones are not associated with the transmission of bacteria. However, if students, staff, or parents are concerned about this, you can advise everyone who puts food scraps into the cones to wear gloves and/or to wash their hands after touching the Green Cones.

Traffic patterns

Consider present and future traffic patterns when choosing your site. Imagine the site with whatever number of cones you will be installing. Will it be hard to get around? Will the location of your Green Cones impact school evacuations? Do maintenance vehicles need to use the Green Cone location for getting around the school building or grounds?

If the best site is in public view, you will want to develop a plan to reduce the likelihood that the public will use the cones to get rid of trash. A sign

explaining what the cones are and/or a physical barrier to reduce access to the cones might serve as both a deterrent and an educational opportunity.

Snow Removal

For those in northern climates, the impact of snow and how easy it will be to remove it from around the cones are critical to consider as part of your siting process. Will snowmelt off of the roof inundate the cone area? Will it be difficult to shovel out a path to the cones or to shovel out the cones themselves? The cones need to be free of snow so the sun can heat up the interior to speed decomposition. Consider locating them close to the building (but out of line of snow sliding off the roof) or where it's easy to plow a path. You'll need to add snow removal to your list of tasks for winter management, so be sure to include the staff person in charge of this at your school in your site selection process. Their input may be critical to the program's success.

You might consider having two Green Cone areas—one for the colder months and one for the warmer months. But both locations should be a short distance from the building; otherwise, the daily task of taking food scraps to the Green Cones will become a chore.

A Green Cone
can digest
about 675 lbs.
of food scraps
each year.

Determining How Many Green Cones to Install

Each Green Cone can digest approximately 675 pounds of food scraps a year. We estimate that when all food scraps are collected from a school, each student discards approximately $\frac{3}{4}$ lb. of food scraps per week. Diversion rates vary depending on food service options, how fully a school adopts the food diversion program, and the age of the students.

The equation below will help you to determine your school's food scrap generation. Use the following numbers for the "pounds of food scraps diverted per student per week" (box #1):

- Elementary schools: 1.18
- Middle schools: 0.76
- High schools: 0.41
- Kindergarten – 12th grade: 0.68

Using the Cones will Determine the Final Number

Only actual use will determine whether you have installed enough cones, but this will give you a good starting point. Because most schools are in session during the colder months when Green Cones digest food more slowly, the cones will appear to "fill up." Once the weather warms up in the spring, the biological activity will increase and the level of material will shrink; at that time, more food scraps can be added. If your cones are used year-round, you'll notice that the digestion rate will increase further in the summer. If your school closes for the summer, the cones should be ready for renewed use at the start of the new school year. Keep an eye on your cones and evaluate how they are working for you. Add additional cones if the ones you have can't keep up with the quantity of food scraps generated.

$$\begin{array}{|c|} \hline \text{Pounds of food scraps diverted per student per week (see above)} \\ \hline \text{_____} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Number of students in your school} \\ \hline \text{_____} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Number of weeks of school per year} \\ \hline \text{_____} \\ \hline \end{array} \div \begin{array}{|c|} \hline \text{Green Cone annual rate of digestion} \\ \hline \text{675} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Estimated \# of Green Cones needed} \\ \hline \text{_____} \\ \hline \end{array}$$

Measure the site, plan the layout, and purchase the materials for the installation. Be sure to involve enough staff members!

Installing Green Cones

After selecting an appropriate site for the number of Green Cones your school will need, the next steps are to measure the site, plan the layout, and purchase the materials for the installation. Be sure to involve enough staff members so the job isn't too onerous, and maintain a realistic expectation of how long the installation will take. The first cone will take the longest to install!

For installation instructions, please refer to the Manufacturer's Assembly and Installation Instructions that came with the cones. Or you can find them online: <http://solarcone.net/system/installation.php>

Note: When installing more than one Green Cone, we recommend having a cordless drill on hand to reduce the strain on hands and wrists!

For tips on installing and using Green Cones, see the Green Cone Tips PDF on the Zero Waste Inc. Web site: http://www.zwinc.org/pdfs/gc_tips.pdf Please note that some of these tips relate to home, rather than school use, but many of the suggestions are still applicable to a larger Green Cone installation.



Generating student and staff enthusiasm coupled with a simple, clear training will help ensure the program begins well.

Developing a School-Wide Food Scraps-to-Green Cones Program

A successful school-wide program requires everyone to be on board and committed to making it a success. When tasks are well-defined and spread among a number of people, they require little time and are simple to complete. Involving parent volunteers to help with these tasks (particularly monitoring and tracking) can be rewarding for both the parents and the school.

STEP 1 **Select the Green Cone Point Person or Team**

The first step is to organize a Green Cone Team or to name a Green Cone point person to see that all the pieces of this new initiative are pulled together and ready to roll.

Explanations of the tasks and suggested roles are provided later in the “Suggested Green Cone Roles and Tasks” section and are listed in a reference format in Appendix C.

NOTE: The Green Cone Team might decide to take on Steps 2 and 3 below while the Green Cones are being installed, or they might wait until installation is complete and the school is ready to begin separating food scraps.

STEP 2 **Generate School-Wide Enthusiasm**

Training students and kitchen staff to separate food scraps is a great way to make a simple, but serious, commitment to the environment. Both the pre-training in-school promotion and the training

itself offer opportunities to get everyone excited about taking part. Generating student and staff enthusiasm coupled with a simple, clear training will help ensure the program begins well.

A school-wide announcement will help make sure everyone is on the same page. This can be done through an announcement by the Green Cone Team, an all-school assembly where everyone can ask questions, or through class-by-class program overviews. The purpose is to share why the school will be doing this, why it’s important to keep food scraps out of the trash, when the program will start, and what a Green Cone is and how it works. At the least, this is the opportunity to provide an overview and explain some of the whys and hows. But it’s also an opportunity to start off with a lot of excitement. For instance, you could make the announcement or presentation and then set a date for a Kick-Off Day Celebration that might include educational lessons and games that correspond with this subject matter (See Appendix A for suggestions) and a school-wide celebration.

STEP 3 **Teaching about Food Scrap Separation and Green Cones**

Teaching students and staff about food scrap separation and Green Cones is best accomplished in small groups with good visual aids. For example, the visual aids could include a drawing of how your food scrap diversion buckets will be set up in the dining area

and/or you might have an assembled Green Cone on hand to demonstrate how food scraps are put into the cone and so they can see how the Green Cone is designed. It might be best to teach the food scrap diversion practice in the cafeteria at the food scrap Separation Station. Young children, especially, will benefit from the hands-on approach.

Every student and staff person should learn how to separate food scraps from the trash and why it's so important. Everyone also needs to know what a Green Cone is, where they are located onsite, and a general idea of how they work. A discussion of who will take the food scraps to the Green Cones (e.g., students, staff, via a rotating schedule, etc.) and who will be responsible for other tasks (such as washing out food scrap collection containers) are also important to include in the training. By including big picture information along with the details you'll help to create clarity and confidence among participants.

Monitoring at Meal Times

Monitoring in both the kitchen and the cafeteria is essential to successful food scrap diversion. It's especially important to monitor when the program first gets going and after the initial excitement and attention wears off, usually after the first few weeks of the program. Monitoring is also helpful to restart after students and staff members return from a break, or at the start of a new school year. If your program will constantly rotate through new students, as many low-residency college programs do, you may want to schedule a regular cafeteria monitor.

Here's how monitoring works:

- In the cafeteria, a teacher, staff member, parent volunteer, or older student stands by the separation station during meals and encourages students to separate their food scraps, helps ensure it's done properly, and makes sure all contamination (paper, metal, plastic, rubber

bands, etc.) is kept out of the food scrap containers. Monitors are most successful when they are engaging, enthusiastic, and encouraging. They are responsible for communicating with the administration or Green Cone Team about any difficulties the students or staff are having, and they help make sure any issues are resolved. Monitors are the eyes and ears of the program and they can help ensure its success.

- Monitors may also be responsible for counting and weighing the buckets and recording this information on the clipboard at the Separation Station. The monitor may also designate a student or group of students to handle this task, but should oversee it to ensure it's done carefully.
- Kitchen monitoring is simpler since there is a smaller group to monitor. The kitchen manager or other designated staff person could simply keep an eye on both the food scrap buckets and the trash can to ensure that materials are being properly separated.

Taking Food Scraps to the Green Cones

Staff or volunteers can take the food scraps out to the Green Cones, or this can be a student task if they are capable and responsible enough to handle it. *Note: Younger students should be accompanied by an adult.*

The basic task involves taking the buckets of food scraps out to the Green Cones and carefully emptying the food scraps into the cones, making sure the food scraps don't spill outside of the cones, and that any contamination (paper, plastic, utensils, etc.) is removed as soon as it is noticed. It's helpful to have a long-handled grabber on hand to pick trash out of a cone, and a large, strong spoon is helpful for guiding the food scraps into the cones and to pick up any food that might spill around the base of the cones.

The Separation Station: Cafeteria and Kitchen

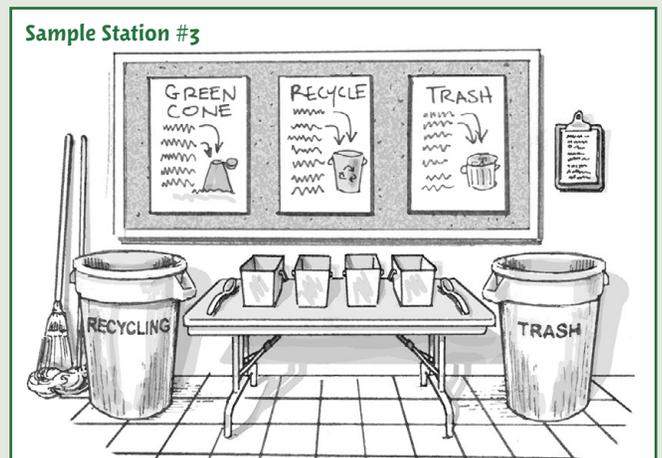
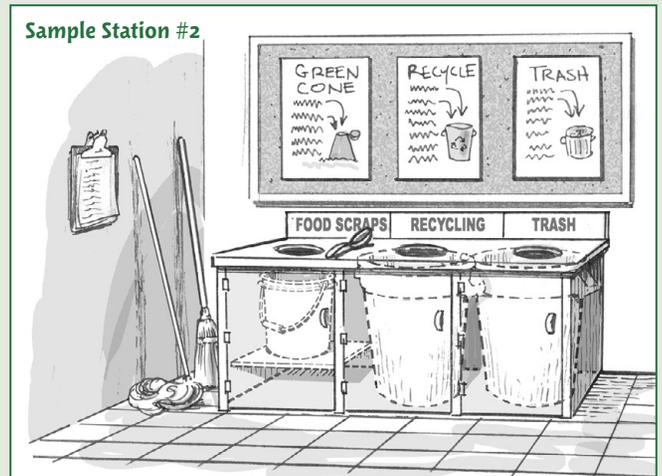
The Separation Station should be set up in both the kitchen and the cafeteria before every meal. It consists of food scrap collection buckets, a clipboard and pencil for recording the number of buckets and bucket weight after each meal, a scale for weighing the food scrap buckets (optional), and a cart for holding and moving the food scrap buckets (optional). Every Green Cone comes with a small kitchen caddy that can be used in the kitchen and cafeteria in place of a bucket. If the kitchen caddy is too small, find a container or bucket that seems size appropriate for collecting food scraps in. Note that the container size and shape also needs to be easy to maneuver to empty into the cones.

In addition, a poster or posters may be hung near the station to provide a visual reminder of what goes in and what stays out of the Green Cone. The poster(s) should be clear and easy to read. They may be student posters completed as part of an art class or a school-wide contest, or they may be professionally designed for this purpose.

General tips about setting up the stations

- A cart makes it easy to get your food scrap buckets out to the Green Cones. If you put your food scrap buckets in the cart before they are filled, the mess is contained and some of the lifting is eliminated. A red wagon or a garden cart both work well.
- A clipboard is helpful for recording the monitor/volunteer/staff schedule for monitoring the station, and for recording the number and/or weight of the buckets of food scraps collected at the station.
- Clear signs help ensure everyone puts materials into the correct container.
- Make sure the food scrap buckets are the right height for staff and student use.
- Keep a garbage can nearby so trash can be put in the proper container.
- The area around the separation station may get messy, so keep a mop and a broom nearby.
- Set up the station for good flow and to prevent traffic jams!

The three set-ups illustrated on this page will give you some ideas.



When the food scraps reach the top of the in-ground basket, it is time to add the food scraps to a less full Green Cone. Try creating a rotation pattern ahead of time, maybe numbering the cones to help make this process simpler to figure out in the moment. The monitor or adult supervisor should also keep an eye on how full the cones are, occasionally noting how the food scraps are decomposing and how the rotation schedule is working.

Cleaning the Buckets

After the food scraps are put into the cones, the collection containers are brought to the kitchen where the kitchen staff cleans them in preparation for the next meal. *Note: The buckets must be emptied and cleaned each day.*



Helping your school understand quantity of food scraps diverted in the context of the larger world is important for drawing connections between our actions and the impact of our actions on the planet.

Food Scrap Diversion: Tracking and Reporting

Tracking food scrap diversion quantities is a great way to keep people excited about separating food scraps. Also, knowing how much food is added to the cones over the course of a year can help drive home the importance of reducing waste.

The first step is to decide on the unit of measure to use; both gallons and pounds are simple to calculate.

Gallons: Determine the volume of the food scrap collection containers you are using—be sure they are identical or your calculations will be more complicated!

Count the number of full buckets and calculate the gallons before they are emptied into the cones.

Pounds: A gallon of food scraps weighs approximately 4.5 lbs. So if you know the number of gallons, you can simply multiply that number by 4.5 to get an approximate weight of food scraps diverted.

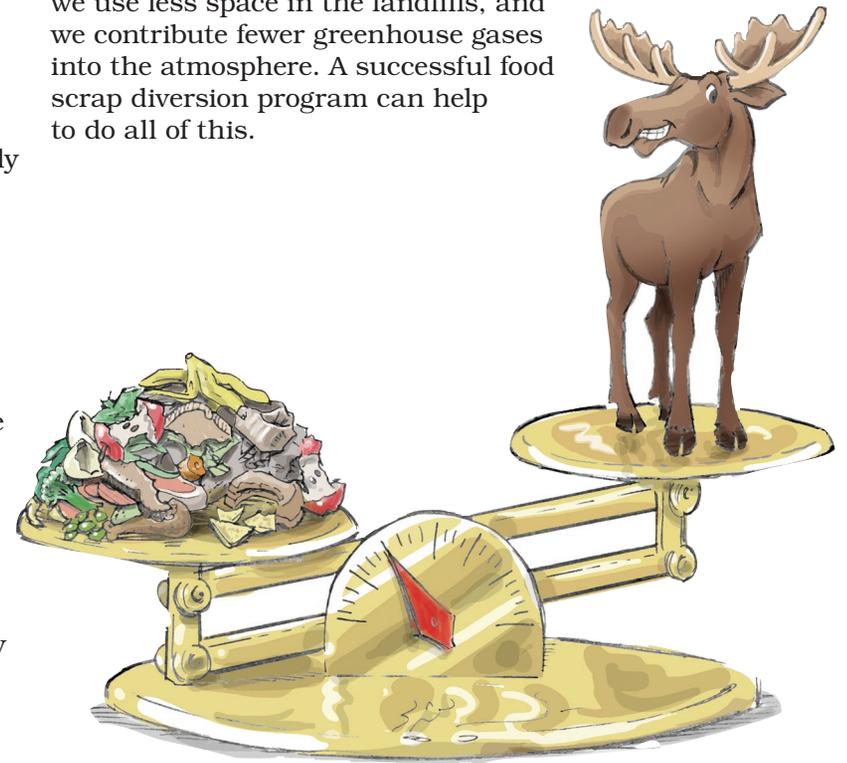
For a more precise weight, set up a scale in the Separation Station; weigh each bucket and record the total weight before the buckets are emptied into the cones.

As an educational activity, students can chart the totals over the course of the year. Or, a staff person can simply add up the full-year total from all of the tracking sheets and announce it to the school. Knowing just how much food has been diverted to the Green Cones can be astonishing, especially if the totals are tracked year after year.

Helping your school understand the total quantity of food scraps diverted in the context of the larger

world is important for drawing connections between our actions and the impact of our actions on the planet. For example, few young students will grasp how many tons of food scraps they've helped to keep out of the landfill. But comparing that amount to an equivalent number of objects by weight (such as moose or elephants) or by size (such as a football field or the surface size of a local body of water) can help bring the message home.

When we waste less, we use fewer resources, we use less space in the landfills, and we contribute fewer greenhouse gases into the atmosphere. A successful food scrap diversion program can help to do all of this.



Suggested Green Cone Program Roles and Tasks

The following can serve as a guideline that you can adapt to fit your program and participants. See Appendix C for a sample checklist format of these same tasks.



Green Cone Team or Point Person

- Read this entire booklet carefully and be prepared to lead the project!
- Create a work plan so that all the tasks associated with the program are implemented, and so that everyone knows who is doing what, where, and when.
- Make sure the budget reflects all program-related expenses.
- Develop or co-develop the School-Wide Kick-Off Celebration to generate excitement.
- Either conduct the student and staff training or designate others to handle this role.
- Create the Cafeteria Monitoring Schedule, including information about who is responsible for what tasks, on what days, and at what meals; schedule who will empty the buckets after each meal.
- Set up a place to record the quantity of food scraps separated at the Separation Station. Make sure there is a clipboard available for recording the information after every meal.

Teacher/Volunteer Roles

- Understand what a Green Cone is and how to use it, and be able to guide students in the proper use of the Green Cones.
- Engage students in activities and lessons related to soil, food decomposition, nutrient cycles, and waste reduction. (See Appendix A for suggested lessons and activities.)
- Help monitor the food scrap separation process in the cafeteria and help ensure students are doing it right. Help students take the food scraps to the Green Cones, and help them to remove any contamination (paper, plastic, metal, rubber, etc.) from the buckets and/or the Green Cones.

Maintenance Staff Roles

- Help install the Green Cones in the designated location according to the installation instructions. See the instructions that came with the cones; they can also be found online at: <http://solarcone.net/system/installation.php>
- Help remove snow from around the cones during the winter to ensure the cones are easy to access and receive sunlight.

Kitchen Staff Roles

- Set up Separation Station(s) in the kitchen and separate food scraps during meal preparation and cleanup.
- Set up Separation Station(s) in the cafeteria. This includes food scrap containers, posters, and sometimes carts for moving the buckets.
- Clean the buckets after they are returned empty to the kitchen; hopefully this is as easy as sending them through the dishwasher.

Student Roles

- Separate all food scraps into food scrap buckets in the cafeteria.
- Track the food scrap totals at the Separation Station.
- At the end of each meal, take the buckets out to the Green Cones and carefully empty the food scraps into the Green Cones, being careful not to spill any on the outside of the cone or the ground. Use the large spoon to pick up any spilled food scraps and add them to the cone.
- Bring the buckets back into the kitchen to be cleaned.



Address any issues that arise right away!

Troubleshooting Green Cone Issues

It's best to address any issues that arise right away; a small problem is simply easier to solve than one that has grown larger over time. Here are some ideas for how to handle some issues that may come up.

Snow Removal

Be sure to have a snow removal plan in place before you even site your cones. Who will do it, with what equipment, and where will the snow be moved to? If the cones get buried due to a heavy snowfall, it's helpful to know which ones are full and which are empty so you can prioritize which ones to dig out first.

Slow Digestion During Winter

Cold weather slows down the digestion process. Although decomposition doesn't actually stop, a month of below-freezing temperatures can make it seem like it has. To help the process recover, keep the cones as clear of snow as possible so that the sun can warm the green plastic. Stop adding food scraps to a cone when the cone level reaches ground level; at this point, move on to an emptier cone.

Slow Digestion During Summer

Try aerating the food scraps by punching holes into the scraps from above using a long poking device, such as a shovel handle or a long straight branch. Be sure to avoid hurting yourself, and either clean the instrument after use or keep it out of reach of the public.

Trash In a Green Cone

Keep a long-handled grabber on hand so you can remove trash from the Green Cone without reaching into it with your arms. It is important to remove non-biodegradable items from the Green Cone so that the decomposition process can proceed smoothly.

Animals Digging Near a Cone

If you are concerned about animals digging near the cones, hardware cloth can be installed under the sod; this prevents animals from excavating the soil around the Green Cone in an attempt to access the food scraps. http://www.zwinc.org/pdfs/gc_tips.pdf

If you see signs of digging around the cone, sprinkle a repellent such as cayenne pepper around the base, or use a non-toxic commercial repellent available at garden supply stores. Placing heavy objects like rocks or even a thick layer of small stones around the base of the cone will also deter digging.

Insects or Odor During Warm Weather

Fruit flies and fly larva are sometimes present in the Green Cone during the warmest months. These insects help the decomposition process and are not harmful to humans or the Green Cone. Be sure to close the lid after each use, and they will disappear when cooler weather sets in.

A slight odor may be noticeable during the warmest months when the lid is open. Close the lid after each use; the smell will dissipate with cooler weather.



APPENDICES

A. Making Environmental Connections

There are a variety of classroom activities you can use to help draw larger connections between separating food scraps in the cafeteria and soil fertility and environmental health. Many environmental education curriculums include activities around rot and decay in a forest environment that can be adapted or expanded to explore food scraps, aerobic digestion, and the composting process.

The CVSWMD has published an online activity book that contains a variety of applicable activities. *Do the Rot Thing: A Teacher's Guide to Compost Activities* can be accessed via the CVSWMD's Web site at: <http://www.cvswmd.org/wp/school-composting-program/> Scroll down the page until you see information about *Do the Rot Thing* and the link to download the guide.

We've found the following activities from *Do the Rot Thing* apply to the Green Cone program, but we invite you to review the entire guide to see if other activities can also be adapted for your program.

- Activity #1: What is Biodegradable?
- Activity #2: Dirt for Lunch
- Activity #3: Environmental Lunch
- Activity #4: Decomposition Tag
- Activity #5: I Can Compost
- Activity #8: Compost in a Bucket
- Activity #9: Plants in Compost
- Activity #10: Warming Up to Worms

B. Additional Resources

For more information about Green Cones, contact:

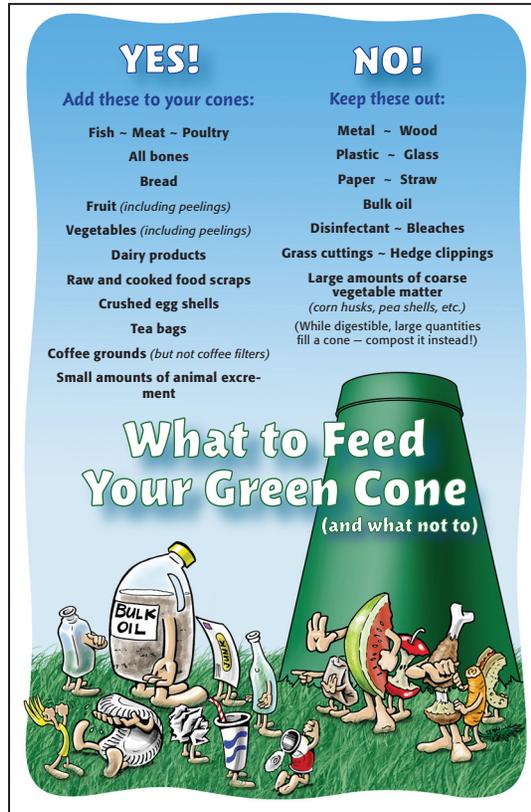
- Zero Waste Inc. <http://www.zwinc.org/>
- Solar Cone <http://solarcone.net/system/index.php>

C. Checklist of Green Cone Tasks and Suggested Roles

The chart on the following page is just a sample chart; be sure to alter the task list and the individual or group responsible to best meet the needs of your program.

D. Separation Station Poster

Below is a reduced version of the 11x17 poster that is available on our Web site as a PDF file.



Appendix C: Green Cone Tasks and Suggested Roles

This is just a sample chart; be sure to alter the task list and the individual or group responsible to best meet the needs of your program.

TASKS	WHO'S RESPONSIBLE
Decide who the Green Cone point person, or team, is.	Administrators, Teachers
Read this booklet carefully and be prepared to lead.	Green Cone Team
Create a work plan so all of the program tasks are implemented and everyone knows who is doing what, where, and when.	Green Cone Team
Make sure the budget reflects all program-related expenses.	Administrator
Help install the Green Cones in the designated location according to the installation instructions.	Maintenance Staff
Remove snow during the winter and ensure the cones are easy to access.	Maintenance Staff
Recruit parent or community volunteers to help monitor in the cafeteria.	Green Cone Team
Create the Cafeteria/Dining Area Monitoring Schedule.	Green Cone Team
Schedule students/staff to empty the food scrap buckets into the Green Cones after each meal.	Green Cone Team
Set up food scrap Separation Station(s) in the kitchen.	Kitchen Staff
Set up food scrap Separation Station(s) in the cafeteria or dining area.	Green Cone
Set up the food scrap tracking station, including a scale (if applicable) and a clipboard for recording the number of buckets and weights after every meal.	Team, Teachers, and/or Monitors
Separate food scraps during meal prep and cleanup.	Kitchen Staff
Separate food scraps after meals in the dining area.	Students and staff, with help from Monitors/Teachers.
Monitor students to ensure they are separating food scraps correctly.	Monitors, Teachers
Track the weight or number of buckets at the tracking station.	Students, Monitors
Empty food scrap buckets into the Green Cones.	Monitors, Teachers, Students
Check Green Cones for contamination while supervising the addition of food scraps to the cones. Remove any contamination (paper, plastic, metal, etc.).	Monitors, Teachers
Return empty buckets to the kitchen for cleaning.	Monitors, Students
Clean the buckets in preparation for the next meal.	Kitchen staff
Engage the students in activities and lessons related to soil, food decomposition, nutrient cycles, and waste reduction.	Teachers, Parents