NERC NORTHEAST RECYCLING COUNCIL

COMMUNITY COMPOSTING TIPS

What Is Community Composting?

Organics are one of the few materials that can be entirely managed locally. Changing how we see these materials – from waste to resource – they become a valuable asset that can serve the community and support local food systems.

Ranging greatly in size (from 10 to 20,000 square feet), community composting is often volunteer run, or managed as part of an on-farm system or by non-profits. Focused on managing organics locally and producing compost for local use, in both urban and rural settings, the emphasis is on promoting community partnerships and connections.

Community composting provides an essential role in the evolution of food scrap diversion from landfills, normalizing composting at all scales – from backyard to commercial.

Benefits of Community Composting

- Increased Local Economic Vitality
- Community Engagement
- Improved Soil Health
- Reduced Storm Water Runoff & Pollution Mitigation
- Waste Reduction
- Climate Protection
- Applied Learning

Adapted from Community Composting Done Right, ILSR, 2019.

Community composting sites vary in:

- Mission
- Size
- Affiliations
- Participants

Where does it take place?

- Community gardens
- Schools
- Public parks
- Farms
- CSAs
- Food shelves
- Libraries
- Co-housing developments
- Camps
- Abandoned lots
- And more

Creating a Community of Composters

Backyard composters are part of the composting infrastructure within a community; and many act as compost champions within their communities, playing important partnership roles, and in many cases are directly engaged in both backyard and community composting activities.

Backyard and community composters together are normalizing local management of organics and promoting the importance of soil health.

"While composting as a group can sometimes be more challenging, the results are richer than doing it on my own. The increased volume makes it easier to get up to temp, and we pull from our collective experience to keep the system working well."

– From a community compost co-manager in Vermont

FIND MORE RESOURCES ONLINE AT nerc.org/nerc-resources

PROJECT PARTNERS: CAV Composting Association of Vermont; Vermont Community Garden Network; Vermont Master Composter, sponsored by UVM Extension Master Gardener and Vermont Agency of Natural Resources; Cornell University; UConn College of Agriculture, Health and Natural Resources, Plant Science and Landscape Architecture

The Science of Composting

Source: L. Bilsens Brolis, B. Platt, *Community Composting Done Right: A Guide to Best Management Practices*, Institute for Local Self-Reliance, 2019 (www.ilsr.org/composting-bmp-guide).

Photo cr. Red Hook Farm, Brooklyn, NYC

Healthy City Youth Farm, Hunt Middle School, Burlington, VT. Photo cr. VCGN

Other Community Composting Tip Sheets to consult: Science of Composting; Volunteer Engagement & Retention.

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NERC NORTHEAST RECYCLING COUNCIL

COMMUNITY COMPOSTING TIPS

The Science of Composting

Composting is a controlled, aerobic (requiring oxygen) biological process. Composting converts organic material (or feedstocks) into a humus-like product that is rich in organic matter and organisms.

Microorganisms (bacteria, fungi, other organisms) are the key "decomposers" instrumental in the composting process. Whether at home, a community compost site, a farm, or a commercial or industrial compost site, the science is essentially the same – **success comes from creating the right habitat for these microorganisms to do their work!**

What is (Finished) Compost?

- A value-added product
- Free of unpleasant odors
- Easy to handle
- Can be stored for long periods
- Soil & potting media amendment

Key components for creating the best habitat for microorganisms in composting systems:

- **Combine feedstocks to get the optimum Carbon to Nitrogen (C:N) Ratio**:

  ✓ 20:1 – 60:1; preferred 30:1-50:1

- **Aeration** provides oxygen and stimulates the removal of heat, water vapor, and gasses during the active composting phase. But too much air slows the composting process.

  ✓ Ideal oxygen concentrations: 10-14%

  While there are oximeters that measure oxygen concentrations, you can also develop a more intuitive "feel" for this. The mixed material should be "fluffy", with plenty of pore space for air as well as water. If materials are "matted" down, (unwanted) anaerobic conditions may occur.

- **Moisture** makes the nutrients in organic material available for the microorganisms.

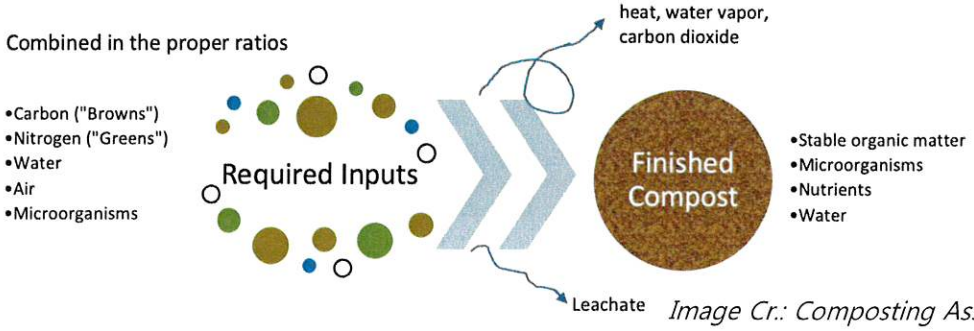
  ✓ 40 to 65% (like a damp sponge).

  Too much water kills the microorganisms, reduces oxygen, and causes anaerobic conditions; too little water slows or stops the process.

- **Temperature:** If the compost habitat properly established and maintained, the decomposers will raise the temperature of compost to above 100°F.

  ✓ 120°-160°F.

  Note that the Process to Further Reduce Pathogens (PFRP) requires maintaining a temperature of at least 131°F for 3-15 days, depending on the compost system used.



Healthy biological activity is essential to successful composting; setting up the right environment and conditions is fundamental to the process.

Image Cr.: Composting Association of Vermont

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The Science of Composting

Additional components to consider for larger community compost systems

- **Bulking agents** ensure that the pile isn't too dense, which reduces the pore space for oxygen and water.
  - ✓ Examples: wood shavings or wood chips, plant stalks, and shredded cardboard or newspaper)

  Note: larger wood chips and stalks will need to be screened out of finished compost because they take longer to decompose, they can be returned to an active compost bin or pile.
- **Optimum pH range:** Compost microorganisms are most productive under neutral to acidic conditions.
  - ✓ Ideal range 5.5 to 8

  During the initial stages of decomposition, organic acids are formed. The acidic conditions promote the growth of fungi and breakdown of lignin and cellulose. The organic acids become neutralized as the composting process continues; mature compost generally has a pH between 6 and 8.

★ **A note about particle size:** Smaller particles increase the surface area on which microorganisms can do their work, which speeds up decomposition rates.

The Benefits of Using Compost in Soil

Healthy soil is crucial for the wellbeing of the planet—it supports growing plants, helps create clean air and water, and sustains productive forests, rangelands, and other ecosystems, ultimately supporting a diversity of animal and plant life.

Compost provides essential organic matter needed for healthy soil, which supports the cycling of nutrients and other elements throughout the soil food web.

Healthy soil:

✓ **Improves Soil Physical Properties:** Increases water retention; improves soil aeration and structural stability; increases resistance to water and wind erosion; allows for deeper root penetration; stabilizes soil temperature.

✓ **Enhances Chemical Properties:** Increases macro- and micro-nutrient content; stabilizes pH; converts nutrients to a more stable form, reducing fertilizer requirements.

✓ **Improves Biological Properties:** Increases activity of beneficial microorganisms; promotes root development; can increase agricultural crop yields; suppresses certain plant diseases; acts as biofilter; bonds with heavy metals.

Porosity and Bulk Density

The term "porosity" refers to the gaps between solid particles. "Bulk density" refers to ratio of the total weight (mass) of compost to its volume.

✓ The optimal compost bulk density range is 800-1,200 pounds/cubic yard.

✓ Optimal porosity is in the 35-60% range.

➢ ***While it's good to be familiar with these terms, focusing on aeration and moisture is often enough for community composting systems.***

Other Community Composting Tip Sheets to consult: *Compost Recipe Overview*; *Systems & Operations*.

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NERC NORTHEAST RECYCLING COUNCIL COMMUNITY COMPOSTING TIPS

Community Compost Systems & Operation

Community composting, or small-scale composting, can be done in many ways. The "best" way is the one that meets the needs of your compost site's unique circumstances.

Tumblers, Bins, or Piles?

What to consider when choosing a compost system:

- The amount of organic material to be composted
  - Remember that carbon materials are often the limiting factor!
- The amount of space available at the site
- The amount of time the compost stewards & compost team can put into maintaining the system
- Any other community- or site-specific concerns, such as vector (animal) control, proximity to neighbors, buildings, waterways, or aesthetics.

Choosing the best system, or combination of systems, will be guided by your community's composting goals, resources, needs and constraints, including:

✓Size of the site
✓Human capacity— # of people involved & amount of time they can devote to composting
✓Resources & budget

Systems Commonly Used at Community Composting Sites:

Tumblers

Tumblers can be single chamber or double chamber, made from rigid plastic or metal. The most effective tumblers for colder climates are insulated; and tumblers that can be locked down are best for deterring wildlife.

These factors, along with the size of the tumbler (volume), how high they sit off the ground, and how well they're engineered (for easy turning and durability over time), should be considered when purchasing or making a do-it-yourself tumbler.

Well-constructed, double chamber tumblers are very effective for rapid composting of food scraps, with little odor (when managed correctly), and are well-suited for sites concerned about rodent or wildlife intrusion. While typically more expensive than other systems, tumblers are durable and the benefits provided make the added expense worth considering.

Examples of compost tumblers. Top: 2-chamber Hot Frog; middle: insulated 2-chamber Jora; Bottom: DIY tumbler

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Community Compost Systems & Operation

Bins

Bins may be purchased or homemade from wire, wood, cinder blocks, or other materials.

Wire bins, often made from chicken wire, are best for storing carbon sources (leaves, yard trimmings, garden trimmings, etc.). Wire bins are not recommend for composting food scraps because they are not fully enclosed and can attract wildlife.

Photo Cr.: Champlain Valley Housing Trust Fort Ethan Allen Community Garden and Compost, Colchester, VT

Wood bins, made from new lumber or salvaged materials (avoid pressure-treated lumber), are very common at community composting sites. They are modular, allowing a site to start with one or two, and adding more bins over time if increased capacity is needed.

The most practical design is constructed so that one side (typically the front) can be opened or boards removed to make turning or moving the material easier.

Wood bins should be lined on all sides and the bottom of the bin with 1/4-inch gauge hardware cloth to ensure that rodents or other wildlife are deterred from getting into the bin. There are numerous plans for building wooden compost bins available online.

Plastic bins can be constructed from any kind of large plastic container, such as standard household trash or recycling bins. Drill holes into all sides of a plastic container, including the bottom (to let leachate drain), as well as the lid.

A wide variety of plastic compost bins are available for purchase from local solid waste agencies, garden supply stores, and are available online. Enclosed plastic bins can last a long time and offer protection from rodents, particularly when the bottom of the bin is lined with hardware cloth.

Plastic bins can have challenges with sufficient airflow, causing the material to become too wet (anaerobic), which can lead to strong odors. If using this type of bin, be sure the compost recipe contains enough browns to absorb excess moisture.

Plastic "Soil Saver" Compost Bin

Community Compost Systems & Operation

Piles

Piles maximize space efficiency and are capable of handling larger volumes of organic waste than small tumblers or bin systems.

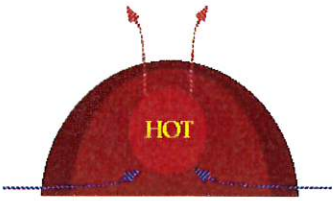
Piles should be at least 3 feet in diameter and 3 feet high, to maintain heat inside the pile. They are not contained by physical structures so they can be moved as needed, allowing for more efficient and flexible use of space. However, good management of these systems is important as these are "open" piles, and must be closely managed to deter wildlife.

Piles require careful construction, regular turning, and consistent temperature monitoring. This type of system, especially larger ones, will likely require more volunteer assistance for turning and maintenance.

Photo Cr.: Athena Lee Bradley. Ludlow Area Community Garden and Compost, Ludlow, VT

The piles are built by layering greens and browns, and then "capped" with 6-8 inches of finished compost or soil, in order to insulate, keep odors down, and deter pests. Canvas or other material covers may also be used to insulate the piles. If compost or soil is used for the cap, these materials can be integrated into the pile when turning.

Windrows are elongated piles, sometimes up to hundreds of feet long that are often used on farms or for large-scale composting. At community composting sites, windrows are usually much shorter in length (~25 feet long) and are turned by hand with shovels or pitchforks, or with small machines.



Natural Air Circulation in a Compost Windrow

Windrows are managed similarly to piles. Windrows can compost a much larger quantity of food scraps than piles or bins, but they require a lot of dedicated manual labor to maintain.

Photo Cr.: David Hurd, GrowNYC

Both pile and windrow composting systems may utilize an "**aerated static system,**" whereby air is forced into the piles through a blower system. This helps the material (feedstocks) heat up more rapidly and reduces the need to turn the system. There are small scale blower systems, "do-it-yourself" kits, and instructions available on the Internet.

Community Compost Systems & Operation

Integrated Systems

Combining systems with a mix of tumblers, bins, and/or piles can be an effective way of maximizing the volume of organic material that can be processed on a small footprint.

Photo Cr.: Athena Lee Bradley, Bennington Community Compost Site, Bennington, VT

Tumblers, whether store-bought or homemade, are effective systems for "jumpstarting" the decomposition process. They are contained systems, which help some communities address the "ick factor" of fresh food scraps, and—because it's easier to tumble than turn in a bin—managed tumblers tend to get hot faster. Within a few weeks, food scraps are unrecognizable, have less of the "ripe" odor, and are less attractive to animals.

Depending on the volume and type of organic materials you are putting through your system, tumblers can be the principal system, or the material may be emptied from the tumbler after 2-4 weeks, into a bin, pile, or added to a windrow.

In this case, compost teams often operate the tumblers primarily with food scraps and a smaller amount of high-carbon material (for example, wood shavings), and then add manures and other bulking materials with the tumbler-processed food scraps when moved to another system.

Photo Cr.: The Garden at 485 Elm St., Montpelier, VT

Photo Cr. Tuftonboro Community Garden, Tuftonboro, NH

Regardless of the system, remember to record food scrap volumes, carbon and other materials (e.g., manures), temperatures, and any other issues in a logbook. Make any additional notes about types of materials added (types of carbon used, notes about variation in food scraps, etc.).

Other Community Composting Tip Sheets to consult: Feedstocks & Overview of Compost Recipe Development; Record Keeping Essentials. Written with funding from a USDA Rural Utilities Solid Waste Management Grant. NERC is an equal opportunity employer and provider.

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NERC NORTHEAST RECYCLING COUNCIL

COMMUNITY COMPOSTING TIPS

Process Management

It's important that the compost steward(s) has a detailed understanding of how the community composting system is supposed to work, and is keeping tabs on how the system is actually working. This includes monitoring the collection of feedstocks, sourcing materials as needed, reviewing the logbooks, and troubleshooting as needed. It also includes the people-part of the process, providing or arranging for trainings, knowing volunteer availability and scheduling, and fostering clear and open communication.

Ensure That Best Management Practices Are Followed:

- Minimize odors:
  - Quickly incorporate food scraps into the system, use the right amount of carbon & cover with piles & windrows with carbon material or soil.
- Prevent run-off or ponding:
  - Protect your compost system from rainfall, snow & ice by covering your bins, piles or windrows. If your system gets too dry, you can always prop open the bin lids or remove the covers during rainfall.
  - Pay attention to the slope of your site – where will water run after a heavy rain?
  - Consider the addition of a wood chip bedding under piles and windrows; this will help absorb any extra moisture.
  - Consider wood chip, compost or soil berms in key areas, if needed.
  - Consider directing any runoff to a vegetated buffer area.
- Be sure not to harbor rodents or other pests:
  - Keep weeds in check, as they provide habitat for ticks.
  - Don't give rodents & other critters a place to hide – keeping a tidy site is key.
  - See the Community Composting Troubleshooting tip sheet for more on vector control.
- Remember to observe, monitor, sample, & test the finished product.

Have a Site Plan!

Key elements of a site plan include:

- Overview of the site & system
- Feedstock procurement (especially for carbon sources)
- Monitoring & recordkeeping
- Provisions for controlling odors
- Communication & training (internal & external)
- Be a good neighbor!
- Animal control measures
- Health & Safety, & Fire Emergency plans
- Security & vandalism (if needed)
- Contingencies (including closure plans)

See the Community Composting Site Plan tip sheet for more detail.

Management of Feedstocks

As you operate your site, you'll get a feel for the rhythm of your community, the volume and timing of food scraps coming in, and how quickly you go through your carbon sources.

- Remember to always plan ahead!
  - An integral part to a community composting plan and management is to have PLENTY of carbon on hand. This means that you need a dry, secure place to store it so that it doesn't inadvertently become a home for rodents.

Community Composting Process Management

- Be on the lookout for contamination:
  - Training is an iterative part of system management! It's ok to send out reminders if you're seeing contamination creep into your system (produce stickers, plastics, twist ties, or organic material you don't accept in your system). Hone your New Member orientation to be sure that everyone joining your site helps combat contamination.
  - Do you have a new source of carbon materials? Great! However, be sure that you're not inadvertently bringing a new source of contamination. For example, cigarette butts and other small bits are hard to pick out of dry leaves.

Pro tip: Remember that as members join or leave your site, the volume of food scraps coming in and amount of carbon needed will change. As you plan for expansion, keep this in mind and double down on the amount of carbon you keep on hand.

Know Your System & Operate Accordingly

Simple & "Slow" Method
- Follow the basic recipe for your system (See *Compost Recipe Overview tip sheet for more detail)*
- Turn occasionally
- Compost will be ready in 12-18 months

Active ("Hot" Compost) Method
- Enclosed containers
- Proper "mix" of green & brown feedstocks
- Frequent turning of materials to achieve heat
- Temperature should rise to 90-120°F for 3+ days (131°F is goal)
- Finished compost in 6-8 months

Communication and Training

Initial and on-going communication and training can make or break a community composting site.

- Recruit & train your team
  - Shared leadership & management make for successful system management.
  - Provide education & outreach.
  - Delegate tasks effectively.
  - Create & know your volunteer schedule.
  - Establish a communication plan.
- Recruit & train everyone contributing food scraps (this may be a different group than those who help manage the system)
  - Effective signage is crucial.
  - Make sure everyone understands the materials accepted & the materials not accepted.
  - Size matters! Be sure that people know if they are expected to chop their food scraps. Consider whether you need to provide tools to do this on site.
  - Establish a communication plan.

Be a good neighbor!
- Depending on the location of your site, consider the view from the road or nearby houses & buildings.
- Consider using plants, trellis or fencing to screen your site from public view.
- Be mindful to use the proper setbacks from property boundaries.
- Remember: People "smell" with their eyes! A neat site appearance is important.

See the Be a Good Neighbor tip sheet for more ideas.

Other Community Composting Tip Sheets to reference: *Compost Recipe Overview; Systems & Operations; Troubleshooting; Recordkeeping; Volunteer Job Planning & Recruitment; Community Composting Site Plan.*

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COMMUNITY COMPOSTING TIPS

Compost Recipe Overview

A compost "recipe" is a specific blend of materials mixed together in a compost system – tumbler, bin, pile, or windrow. Having different recipes, based on the type of feedstock materials used, will help the system reach the optimum carbon to nitrogen (C:N) range for the decomposing microbes to do their work (20:1 – 60:1; preferred 30:1-50:1).

All organic materials have some carbon and some nitrogen. They are classified as "browns" or "greens", depending on whether they're higher in carbon or higher in nitrogen.

Bin, Pile, and Windrow Systems

Even though there's variation, a good basic recipe for most feedstocks (organic material) used in bin, pile, and windrow systems is 2 to 3 parts carbon to one-part nitrogen:

- **2 to 3 Parts Carbon (C) - "Brown" materials**
  - Woody, dry materials (e.g., wood shavings, leaves, soiled/shredded paper, straw, animal bedding)
- **1 Part Nitrogen (N) - "Green" materials**
  - Fresh, "wet" materials, such as kitchen scraps, grass clippings, garden trimmings (no weeds), manures

Estimated Carbon to Nitrogen Ratios

Carbon Sources	C:N
Yard wastes (leaves, dried grass clippings, chopped branches)	50 - 90:1
Straw	60 - 80:1
Paper (shredded)	160 - 180:1
Cardboard (shredded)	250 - 350:1
Wood shavings, chips, dust	250 - 500:1
Nitrogen Sources	**C:N**
Vegetable scraps	10 – 30:1
Fruit scraps	10 – 30:1
Grass & garden gleanings	10 – 20:1
Chicken manure	10 – 25:1
Cow manure	20 – 30:1
Horse manure	25 – 30:1

Adapted from Robert Rynk, "*On-Farm Composting Handbook*," Natural Resource, Agriculture, and Engineering Service, 1992.

Tumbler Systems

Many community composting sites choose compost tumblers to manage food scraps, as they are closed vessels, often raised up off the ground – making it harder for wildlife to get into the compost system.

In compost tumblers, using a material with a higher carbon content, like wood shavings, is recommended. This allows for a smaller volume of carbon material (compared to, say, dry leaves) to achieve the recommended C:N ratio, leaving more space for composting food scraps in the tumbler.

- **1 Part High Carbon (C) - "Brown" materials**
  - Woody, dry materials (e.g., wood shavings, shredded cardboard, animal bedding)
- **1 Part Nitrogen (N) - "Green" materials**
  - Fresh, "wet" materials, such as kitchen scraps, grass clippings, garden trimmings (no weeds), manures

If using an integrated composting system (see *Community Compost Systems & Operation Tip Sheet*), other bulkier feedstocks, or ones you might have in larger quantities such as horse manure, can be integrated into once the material is emptied from the tumbler.

Community Composting Compost Recipe Overview

Best Management Practices for Mixing a Compost Recipe

- ✓ Mix ingredients together to create a balanced, homogeneous mix
- ✓ Keep it small! (mow, grind, chop, chip, shred your feedstocks)
- ✓ Balance the C:N ratio to approximate the ideal conditions (20:1 – 60:1; preferred 30:1-50:1).
- ✓ To speed decomposition, monitor:
  - Temperature
  - Moisture level
- ✓ Don't forget bulking agents (wood chips, animal bedding, vegetable stalks), as needed for:
  - Porosity
  - Pile stabilization
  - Aid in air flow

Carbon sources are ideally kept dry:

- ✓ Store wood shavings in bucket or garbage can with tight fitting lid.
- ✓ Store leaves, other yard or garden trimmings, straw, etc. in a bin or garbage can.
- ✓ Cover piles of manure/ animal bedding with a tarp.

Good management is based on regular observation!

- ✓ Monitor the temperature
- ✓ Is it too moist or too dry?
  - It should feel like a damp sponge
  - If it's too dry, water it or leave the lid or cover off of the compost system during rain
  - If it's too wet, add carbon and protect it from rain
- ✓ Is it too dense or compacted?
  - Turn the pile to loosen and aerate
  - Mix in more bulking agents to add structure if the compost material particle size is too small

For tried and true recipes:

- ✓ Search online for recipe calculators.
- ✓ Talk with other composters.
- ✓ While some trial and error is fine – know when to get expert advice!

Other Community Composting Tip Sheets to consult: Science of Composting; Systems & Operation; Troubleshooting.

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COMMUNITY COMPOSTING TIPS

Site Design – Going With the Flow

Regardless of how big or small your site, putting some thought into how you set it up can make a huge difference in the ease of use for site participants. You need to consider tool storage, carbon storage, access to water, high-flow areas (for example, food scrap drop off), potentially parking, and more. Below are some tips for how to set up your site to make it easier to "go with the flow".

#1–Material Receiving Area:

Whether site members are just dropping off their food scraps, for compost stewards to integrate into the system, or adding them directly into the system themselves – having an easily accessible and organized place for materials intake is important! This area ideally has space for carbon storage (sawdust, leaves, straw, etc.) and a logbook.

- ✓ If people are dropping off their food scraps, be sure to have (a) a scheduled time, with volunteers on hand to help, or (b) well-trained members & easily accessible carbon to cover food scraps with, as well as a logbook for noting the time, date, & volume dropped off.
- ✓ If people are adding their food scraps directly into the system, this area should also include a mixing area (#2).

Image used with permission from the NYC Compost project Master Composter Course Manual. Chapter 4: Site Design & Management. Page 4-14.

#2–Mixing Area:

This is where the "feedstock", or organic materials, are prepared and mixed according to the recipe for the site's system. This area should include easy access to tools for chopping and shredding food scraps or carbon that are too large for the system (remember: surface size helps the microorganisms do their jobs!), as well as the logbook.

#3–Active Composting Area:

Whether tumbler, bin, or pile–this is where the action happens! Signage is REALLY important, to keep everyone up-to-date on which tumbler chamber, bin, or pile to add to. Depending on your system management structure, you may want a separate log book here for tracking inputs, moisture, temperature, and any other management notes (when material was moved, any odor or vector concerns, etc.).

Site Design – Going With the Flow

#4–Finishing/Curing:

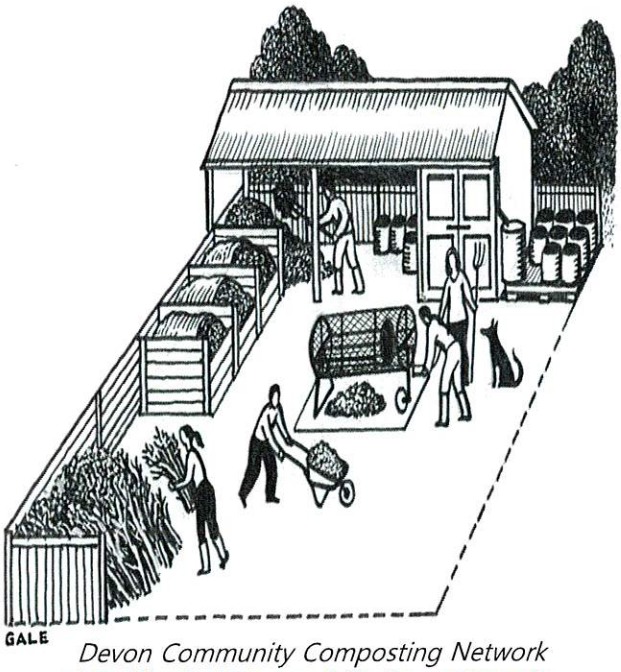
Some people forget this stage, but it's really important! After the active (thermophilic) stage is complete, compost needs to cure, or stabilize. This can happen in a tumbler chamber, bin, or pile, depending on site design. Remember to make sure that curing compost is located in a place where there's no chance of it being contaminated by leachate (or contact fluid) from the active compost.

#5–Screening:

Once the compost is fully cured (we recommend doing a germination or bag test), the material is ready to be sifted. This can be accomplished in a variety of ways, and the goal is to remove any material that has not fully decomposed (like avocado pits or woody materials that take longer to decompose), or inorganic materials (like produce stickers that may have slipped through).

#6–Finished compost:

Don't forget that you'll need a place to store finished compost until it can be distributed or used on site.



Devon Community Composting Network
http://www.dccn.org.uk/in-the-community

Establishing a Site

- ✓ Secure a location
- ✓ Develop a site plan
- ✓ Get permission, if needed
- ✓ Discuss with neighbors
- ✓ Form a team
- ✓ Fundraise/asset development
- ✓ Building or obtaining bins
- ✓ Start small!

General Site Layout

- ✓ Year-round accessibility
- ✓ Access to water is a necessity
- ✓ Shrubbery, fencing, or cover to block wind
- ✓ Insulation for winter
- ✓ Sit bins/piles on ground, grass or vegetated area
- ✓ Tumblers can be mounted

Other community compost tip sheets and resources to consult: *Community Composting Regulations*; *Be a Good Neighbor*; *Local Opportunities, Issues & Priorities*

Written with funding from a USDA Rural Utilities Solid Waste Management Grant. NERC is an equal opportunity employer and provider.

FIND MORE RESOURCES ONLINE AT nerc.org/nerc-resources

PROJECT PARTNERS: CAV Composting Association of Vermont; Vermont Community Garden Network; Vermont Master Composter; Cornell University; UConn College of Agriculture, Health and Natural Resources

NERC NORTHEAST RECYCLING COUNCIL

COMMUNITY COMPOSTING TIPS

Health & Safety Guidance

When starting a composting program in your community, staff, volunteers, and even people in the larger community may have questions about the health and safety of the project. Everyone involved with the collection of food scraps and community composting should follow the following Health and Safety Guidance. When announcing or discussing the project, consider sharing these guidelines.

Health and Safety is Important at Your Site!

Composting can be a fun and educational experience. To make it a safe environment, address and reduce potential risks:

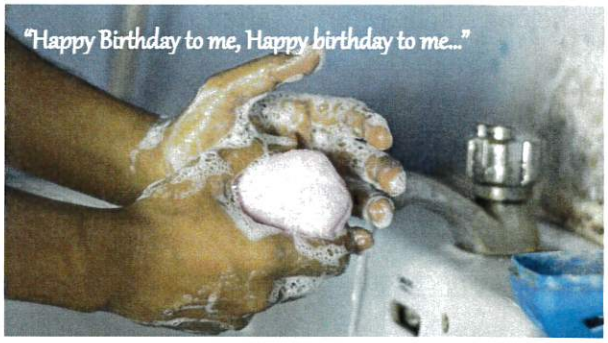
1. Protect those likely to be most sensitive. Talk about your site's Health and Safety Guidelines and ask anyone involved in the community composting site if they have allergies, are immunocompromised or are prone to infections that could make them sensitive to potential risks (remember to protect the privacy of medical information).

   Control exposure of these individuals by restricting who comes in direct contact with the collection of food scraps or the community compost system. Assign others to feed the compost bin or take samples. Do not stir or otherwise disturb the pile or bin when people sensitive to inhalation of allergens are nearby.

   Remember: there are many roles that support a compost system; there is no need to exclude potentially health sensitive community members. Simply assign them roles that limit their direct exposure. Examples of acceptable roles include recording data, taking photos, sign making, writing project summaries, etc.).

2. Turning a compost pile will release airborne particles and gases that can cause symptoms in some people, particularly people with asthma or allergy issues. If a pile is turned, be aware of the wind direction and of the susceptibility of nearby individuals, including those doing the turning. Avoid turning piles on particularly windy days. Health sensitive members of your site should not turn the compost and should be cautious when handling finished compost.

3. Community compost site members, who monitor the food scrap collection, transport the collected food scraps to the compost area and/or add materials into the compost tumbler, pile, or bin, should wear appropriately sized non-latex, disposable gloves. Once gloves are removed, participants should wash their hands. Effective hand washing requires use of soap and sufficient time (sing Happy Birthday twice while lathering up).



4. Maintain a properly managed compost system; monitor and record temperatures. If a hot compost system is properly maintained (reaching temperatures above 120 F°, preferably 131F°, for 3 to 15 days), the risk of pathogens is decreased.

5. Making compost requires a mix of materials, some high in nitrogen (like food scraps) and others high in carbon (like sawdust, straw, and leaves). Keeping food scraps covered with high-carbon materials will minimize flies and dispersal of fungal spores.

Making compost requires a mix of materials, some high in nitrogen (like food scraps) and others high in carbon (like sawdust, straw, and leaves). Keeping food scraps covered with high-carbon materials will minimize flies and dispersal of fungal spores.

Ensure that the compost site has a sufficient stock of high-carbon materials for the proper balance required for the volume of food scraps brought to the site. A list of materials and their carbon to nitrogen ratios can be found at http://cceclinton.org/resources/compost-home-composting-brochure#

Estimated Carbon to Nitrogen Ratios

Carbon Sources	C:N
Yard wastes (leaves, dried grass clippings, chopped branches)	50 - 90:1
Straw	60 - 80:1
Paper (shredded)	160 - 180:1
Cardboard (shredded)	250 - 350:1
Wood shavings, chips, dust	250 - 500:1

6. Review proper tool use with all members involved in maintaining the compost system. It should be reinforced that tools are not toys and using them inappropriately can lead to injury. The appropriate tool for the job should always be used, such as a pitchfork for turning and aerating compost. Tools should have an organized place where they belong and be returned after use.

Adapted from A Guide to Starting a Composting Program in Your School by Green Mountain Farm to School. *For more information, see the fact sheet on Health & Safety Guidance for Small Scale Composting at http://cwmi.css.cornell.edu/smallscaleguidance.pdf.*

Other Community Composting Tip Sheets to consult: Health & Safety Guidance for School Composting; Community Composting in the time of Covid-19.

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COMMUNITY COMPOSTING TIPS

Be a Good Neighbor

Being a "good neighbor" is vital for the long-term sustainability of all community compost sites. Neighbor concerns will arise and it's up to site coordinators and the compost team to respond to these concerns.

Some Ways to Communicate with Neighbors:

- Consider developing a short flyer describing what community composting is, the proposed site & compost system to be used. Be sure to welcome neighbor input & let them know how they might speak with a site coordinator.
- Hold an open house on the site & invite the neighborhood, community supporters & leaders, potential funders, volunteers, etc.
- Be sure that all Compost Team members know about site specifics & feel comfortable communicating with neighbors who may have questions or issues.
- Be ready to respond to common concerns from neighbors, such as whether rodents & other wildlife could be attracted to the site, potential odors, increased neighborhood traffic, etc.

Photo Cr.: Vermont Community Gardens Network, CTG Potluck

Building Neighbor Support

Practice transparency at all times—communicating early and often will help neighbors understand the value of community composting and what to expect at the site. If compost team members are approachable, neighbors are more likely to ask questions before misunderstandings or misinformation take hold.

Key Communication Points:

Describe the community compost system.
Here are some examples:

- An enclosed compost tumbler (or bin) will be used to compost food scraps.
- Compost tumblers are vector resistant, significantly reduce odors, & are managed to fully decompose food scraps within a couple weeks. Once the food scraps are no longer identifiable, the contents will be moved to enclosed bins to finish the composting process.
- We won't have any motorized equipment onsite for our compost system.

Tell people what materials ("feedstocks") are accepted at your site, and how they'll be managed.
Here are some examples:

- Food scraps will be placed into a collection bin & covered with a layer of sawdust (to add a "biofilter" for additional odor control); our compost team will then incorporate the material from the collection bin into the *(fill in your system type – enclosed compost tumbler, enclosed compost bin, …)* & mixed with other carbon materials, including (*fill in the blank – dry leaves, wood chips, …*).

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Be a Good Neighbor

- Food scraps will be placed directly into the *(fill in your system type – enclosed compost tumbler, enclosed compost bin, …)* & then mixed with sawdust & other carbon materials, including (*fill in the blank – dry leaves, wood chips, …*). Our compost team will check in regularly to make sure that the recipe is working well.

Note: All food scraps are compostable. However, we do not recommend that meat be accepted initially – at least not until the compost team has gained confidence in effectively managing the system for hot composting.

Tell people when site members will be visiting the site.
Here are some examples:

- People will be dropping off their food scraps on (*fill in the schedule for your site – for example Wednesdays & Saturdays, between 9 am & noon*). Members of our compost team will be there to supervise the drop-off & ensure that the food scraps are incorporated into the compost system in a timely manner.
- Members of our compost site have been trained & can bring food scraps to our site when it's convenient for them. Our compost team will check on the compost system regularly to make sure that the recipe is working well, & will move the contents from (*tumbler to bin, one bin to another, …*), as *needed.*
- If appropriate, let neighbors know where participants/team members will park their cars.

Other Commonly Shared Information:

- Our tumbler & compost bins are/will be enclosed by a fence (or out of view, etc.).
- Our compost team has been/will be fully trained by compost professionals & will have ongoing support & technical assistance, as needed.
- Our collection will start small—with just (*fill in the blank – for example, our community garden members, students, cohousing residents, etc.*) contributing food scraps. If the compost system works well & there are no issues, we may consider adding additional participants. Let us know if you are interested!
- We (will) keep a logbook of the materials composted, compost temperatures & other system metrics, & any issues that arise (e.g., odor), & how these were addressed.
- We invite all of our neighbors to give us feedback, please let us know if there are issues, or if we can answer any questions.

"Proactively talking with your neighbors and fellow community members, taking the time to explain what you're doing and why – can save a world of heartache down the road. Plus – learning to be a good neighbor can open new partnerships in unlikely places."

— Comment during a community composting training

Other Community Composting Tip Sheets to consult: Community Compost Systems & Operations; Community Composting Feedstocks & Overview of Compost Recipe Development; Community Composting Record Keeping Essentials.

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