

## **THE MCPLANT MASTER COMPOSTER VOLUNTEER PROGRAM IN CHARLOTTE, NORTH CAROLINA: STOP PREACHING TO THE CHOIR, TURN THE CHOIR INTO MISSIONARIES**

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### **ABSTRACT**

Master Composters, modeled on Cooperative Extension's successful Master Gardener program, are volunteers who receive special training in exchange for community service. Charlotte, North Carolina, used an innovative approach to prepare their first group of Master Composters in Spring 2000, funded by an SWRAG grant from NCDENR. Charlotte's program combines advanced home composting education with training in grasscycling, soil stewardship, vermiculture, reducing toxic chemical use, xeriscaping, landscaping with native and environmentally appropriate plants and community organizing and presenting skills. Charlotte's curriculum for training their Master Composters - known as MCPLANT volunteers, for 'Master Composter/Piedmont Landscaping and Naturescaping Training' - is solidly based on local experience and conditions. It also draws on excellent programs throughout the US and abroad, including Alameda County, California; Seattle, Washington; and the state programs of Texas and Georgia. Charlotte's first 17 MCPLANT volunteers are now designing and implementing independent service projects to fulfill their service requirement.

### **INTRODUCTION**

Environmentally sound resource management requires more than technological advances - it demands changes in human behavior as well. This is especially true of programs such as home composting and residential recycling that encourage individuals and families to change the ways they view and dispose of household 'garbage'. Program managers must provide communities with on-going information and support, particularly when the goal is to replace deeply entrenched patterns with beneficial alternatives.

One promising approach that requires a change in behavior is home composting. Research has demonstrated the benefits and cost effectiveness of home composting programs (EHMI, 1996; Renkow and Rubin, 1996; Sherman, 1996). However, even the best composting brochure will not suddenly enable citizens to see 'black gold' after years of seeing 'yard trash'. To bring about sustainable change, residents need education and support, even for proven and user-friendly techniques such as home composting. Paid staff can provide this type of assistance. However, the need to reach large numbers of people, along with the growing interest in home composting, can soon overwhelm even the most dedicated staff. A 'master composter' volunteer program, modeled on the Cooperative Extension

'master gardener' program, provides a creative and cost-effective way to extend the reach and effectiveness of residential waste reduction programs.

## **THE MASTER GARDENER PROGRAM**

In 1972, Dr. David Gibby, Cooperative Extension horticulture agent for King and Pierce Counties (Seattle, Washington), was overwhelmed by requests for information about gardening. His efforts to use the media to answer questions simply seemed to increase the number of telephone calls. Gibby had an inspiration: Could he recruit experienced home gardeners to answer the public's questions as volunteers, in exchange for specialized training in horticulture? With other extension staff and help from Washington State University faculty, Gibby designed a training program. Gardeners eagerly signed up, and 120 enrolled in the first session in 1973. After graduation, the volunteers, christened 'Master Gardeners' by Gibby, began answering phone questions and offering talks, demonstrations and plant clinics. In their first year, the master gardeners served more than 7,000 clients. Today, according to Master Gardener International, forty-five states, the District of Columbia, and four Canadian provinces offer Master Gardener programs. Master Gardeners staff horticulture hotlines, coordinate environmental and planting projects, run demonstration gardens, do research, manage public and community gardens, act as docents, work with school groups and senior centers, publish newsletters, and broadcast radio and television programs.

Master Gardener programs vary widely from state to state, but the foundational idea remains the same: Experienced hobbyist gardeners receive training lasting from 30 to 120 hours, providing solid technical and scientific knowledge to supplement their practical know-how and satisfying their desire to know more about subjects they find fascinating. In exchange, they agree to apply their knowledge as volunteers, serving a set number of hours of community service. Once trained, Master Gardeners often remain active. In some cases, Master Gardener groups continue to provide sound research-based horticultural advice to communities even after budget cuts force closure of Cooperative Extension offices.

## **MASTER COMPOSTER PROGRAMS**

The success of Master Gardeners inspired creation of other similar 'master volunteer' programs. A little over a decade after launching the first Master Gardener program, the Seattle area witnessed what may be the first Master Composter program in the mid-1980s, a cooperative effort of Cooperative Extension, County Waste Management and the Washington State environmental organization Tilth.

Dr. John VanMiert wrote the program training guide, which has provided a model for Master Composter programs since (Van Miert, 1991). Similar to the Master Gardener program, the Seattle Master Composter program required 30 hours of volunteer service in exchange for training. VanMiert's curriculum covered fundamental composting science (aerobic and anaerobic decomposition), agricultural and horticultural uses of compost, health concerns, the history of composting, compost materials composition, practical composting methodology (such as windrows, piles and pines, layering, optimum moisture and aeration, insect control, and so on), and vermicomposting.

Master Composter programs spread quickly to other parts of the US and Canada in the late 1980s and early 1990s. Some were administered at community level, like the original Master Gardener program, others at the state level. Today, scores of programs are active, and Texas Master Composter Mary Tynes has created a very useful website for North American Master Composters: [www.mastercomposter.com](http://www.mastercomposter.com).

According to Tynes, Master Composter programs generally require 15-24 hours of training. This training is mostly classroom-based, with some self-study. Certification requires completion of 20 to 100 hours of volunteer service. Service opportunities include maintenance of demonstration sites, speaking about or teaching composting, giving neighborhood demonstrations, creating visual teaching aids, giving puppet shows to kids, building compost bins for schools, and other activities that further composting education. Tyne's site offers an on-line Master Composter self-study curriculum for people in areas without a program, although she stresses the advantages of participating in a local program.

### Why Master Composters?

Master Composter programs are popular for good reason. To succeed, residential composting programs must provide education and support to members of the community. If recruited carefully and trained conscientiously, Master Composters are ideal for this purpose. They can reach people at a grassroots level with projects designed to demonstrate successful composting. In their own neighborhoods, they can lead by example. They can provide needed staffing for bin distributions and other events, and can help create and maintain compost education and demonstration gardens at museums, schools and parks. They can assist staff in evaluating home composting strategies and techniques. Master Composters also provide an invaluable 'sounding board' for staff ideas, as well as a source of articulate public support for environmentally beneficial and sensible public policy.

Master Composter programs are not expensive, requiring investment in training and materials rather than in expensive land and equipment. If managed effectively, and with the right volunteers, such programs can generate self-sustaining groups of trained individuals who provide a pool of expertise for public and private composting and recycling initiatives. The personal contacts Master Gardeners have with private and public agencies and decision makers, through work and community activities, can be very valuable in raising awareness of the value of composting and source reduction.

### Master Composter Models

Among the many excellent Master Composter programs that now exist, several stand out as models that Mecklenburg County found especially valuable in setting up its first Master Composter program. This is by no means an exclusive list: The [mastercomposter.com](http://mastercomposter.com) website has links to other outstanding programs. Like Master Gardener programs, Master Composter programs vary in both objectives and structure. Since Mecklenburg County's program focuses on residential composting and environmentally beneficial yard and garden techniques, most of the programs this paper discusses share that focus. This brief overview includes a couple of interesting alternatives as well.

### *Alameda County, California*

Alameda County, California, a large urban county in the San Francisco Bay area, offers Master Composter training annually in the spring . The class covers composting, organic gardening, and public speaking. Participants take part in classroom presentations, field trips, constructing compost bins and practice in presentation and organizing skills. Volunteers provide 50 hours of service, teaching others to compost, in exchange for the training. The program places a unique emphasis on individual projects and support for budding entrepreneurs. Alameda County's recycling and waste reduction program runs the Master Composter program completely independently from California Cooperative Extension. The Alameda County website is an invaluable resource for home composting and Master Composter programs. Their excellent training curriculum is now available on-line, along with other documents, including the county's interesting study on home composting in Alameda County (see web resources).

### *Seattle's Master Composter Program*

The Seattle Master Composter Program has played an important role in the city's waste reduction and recycling efforts for more than a decade. Currently, the program teaches people how to compost food waste and yard waste, and how to use green gardening techniques such as water conservation and minimal pesticide usage. After training, Seattle Master Composters 'pay' for their training by donating 40 hours of volunteer work to promote at-home composting through workshops and demonstrations, leading tours, and participating in local school projects and community events. Notable in Seattle's approach is the recognition that home and community composting addresses not just waste reduction, but agricultural sustainability and environmental protection as well. Seattle's program organization is a model for other regions, since Cooperative Extension, Waste Management and the environmental and agricultural organization Tilth work cooperatively on the program. This synergy may be one of the reasons Seattle's program is among the most effective in the nation, with over 60% of households reportedly participating in home composting, compared to a national average of about 16% (Sherman, 1996).

### *Georgia Statewide Program*

In Georgia, the state's Department of Community Affairs took advantage of an Environmental Protection Agency grant in 1992 to create the first statewide Master Composter program in the US. Georgia Cooperative Extension Agents Wayne McLaurin and Gary Wade created a handbook for use with trainings. The program helped create a number of exemplary home compost display sites, including one at Fernbank Science Museum in Atlanta that continues to be an attractive and crowd-pleasing exhibit, now (September 2000) featuring native plants and habitat gardening as well as composting and vermiculture displays.

### *The Composting Council National Backyard Composting Program*

The Composting Council designed their 1996 National Backyard Composting Program Training Manual for intensive workshops held over two or three days. The program's target audience is educators, community leaders, public works personnel, planners and recycling coordinators. The training's goal is to enable participants to plan and implement a home composting program tailored to community needs. The Composting Council is a private group that works to encourage composting. The training manual is a useful resource for Master Composter trainings, since it covers a variety of topics in a succinct format, including practical and scientific aspects of composting; project planning and organization; education and outreach; bin give-away programs; program promotion and evaluation. However, it must be adapted for Master Composters, since it focuses on paid staff work at the city or county level, rather than on neighborhood volunteers. The resources section is especially valuable, though it does not contain web-based contacts.

### *South Carolina: A different approach*

South Carolina's Clemson University Cooperative Extension in York County chose a somewhat different approach to master volunteer service. Their program has trained 'Master Composter/Recyclers', who work to encourage recycling and paper waste reduction as well as home composting. Their training program spends only a single session on composting, concentrating instead on other aspects of waste reduction and on outreach and presentation skills. Montgomery County, Maryland, uses a similar 'Master Recycler/Composter' approach.

### *Maine 'macro' Master Composter training*

In some cases, 'Master Composter' training focuses on large scale rather than residential composting. For example, The University of Maine, in conjunction with Germany's University of Bremen and Australia's RMIT University, has offered three day a Compost Masterclass covering skills needed to manage large scale municipal and commercial composting. The cost is \$750 AUD. More information about Maine's Composting School is available at [www.composting.org](http://www.composting.org). John Cline of Amaranth and Associates offers a similar program in Nova Scotia, for a similar fee. In the view of the authors, this type of higher level 'Master Composter' program is highly beneficial for professionals working with large volume composting operations, though neither necessary nor appropriate for most Master Composter volunteers working in the community. Conversely, backyard-oriented programs cannot be expected to train composting professionals to manage composting on a large scale.

## **MECKLENBURG COUNTY, NORTH CAROLINA, PROGRAM HISTORY**

The roots of Charlotte's home composting program go back to January 1990, when Martin Webster of the 'Pile-it Project', a citizen-based home composting initiative, advocated a county home composting program. Brenda Barger of County Engineering's Waste Reduction began working on the program in 1992, when Cary Saul of Solid Waste Management named her to a newly organized Mecklenburg County Backyard Composting Education Team. Cooperative Extension Agent Ted Caudell and Master Gardener volunteers joined the effort in 1993, working with Steve Elliot, 'Compost Central's' site manager, to create a 0.3 ha (3/4 acre) home composting demonstration 'Compost Garden' at Compost

Central, the county's central yard waste processing site. In 1994, Don Boekelheide, a returned Peace Corps agriculture volunteer hired as a consultant, set up 'Peace Corps-style' hands-on two hour home composting workshops for residents, with brief discussion of grasscycling, held outdoors in the Compost Garden (Boekelheide, 1998). These workshops proved very popular. Workshops cost \$5, and each participant received a wire bin at the end of class. Boekelheide and County Waste Reduction partnered to write a SWRAG grant in 1997 to expand the program through a series of compost demonstration fairs and bin distributions.

Shortly afterward, in late 1997, Ann Gill joined the program as full-time coordinator for Waste Reduction. Shortly after her arrival, home composting classes moved from Compost Central's Compost Garden to environmental science centers in Mecklenburg County Parks, to provide less rustic conditions and to better serve the public by offering classes at several locations around the county. At the same time, classes expanded to 4 hours, retaining the hands-on composting component and adding information on grasscycling, soil testing, pesticide and fertilizer alternatives and safety, and landscaping with native and traditional non-invasive plants. These workshops are now called 'PLANT' classes (for 'Piedmont Landscaping and Naturescaping Training'). They have proven as popular and successful as the original workshops. Participants still receive a bin, along with a wealth of printed materials, although the registration fee is now \$10.

#### Home composting problems and possibilities

The success of the county home composting program lead to a number of challenges. How could the county satisfy the increasing demand for home composting information, but still work within a limited budget? How could the program meet staffing needs for special events and demonstrations? How could the composting program be as sure as possible that all program instructors and presenters would give reliable, research-based and consistent information on best composting practices? And how could the program encourage effective cooperative relationships among different agencies and institutions in the public, private and non-profit sectors?

A Master Composter program seemed to offer an ideal answer to these challenges, given a number of conditions. First, the program needed to create a 'state of the art' curriculum and training tailored to local conditions and designed to support Mecklenburg County's program. Second, the first recruits for the program needed to be highly motivated community members with solid knowledge of at least one component of the PLANT program. Ideally, trainees also would reflect the cultural diversity and distinct communities, regions and organizations found within our large county and the city of Charlotte. Finally, since this program would be a first for the county, the design needed to be flexible enough to change in response to experience and new ideas, yet strong enough to provide a foundation for sustainable success.

#### Materials, methods and approach

The Mecklenburg County Master Composter/Piedmont Landscaping and Naturescaping Training (MCPLANT) volunteer program took shape over about 1 1/2 years of planning and implementation, beginning with research on existing Master Gardener and Master Composter program around the United States and Canada. The programs profiled in the introduction, especially the Alameda County program (for structure and overall orientation) and the Seattle program (for curriculum content), were particularly important models.

MCPLANT planners began with an inventory North Carolina Master Composter programs started by Cooperative Extension in the early 1990s. Unfortunately, around the state, all but a handful have completely disappeared at the county level, although interest remains high in many areas. Charlotte's new program, however, was able to benefit enormously from generous help and guidance provided by NC State Cooperative Extension staff in Raleigh who were instrumental in setting up the earlier statewide program. These include Rhonda Sherman, who played a key role in creating the curriculum for both the state program and for the Composting Council, and Larry Bass, principal author of North Carolina's Coop Extension home composting brochure.

### Funding

Mecklenburg County Engineering Waste Reduction sought funding for the program through a \$9000 Solid Waste Recycling Assistance Grant (SWRAG) from the North Carolina Department of Environment and Natural Resources (NCDENR). The SWRAG grant required matching support from the grant recipient. County Engineering provided the match, and also received valuable in-kind assistance from County Park and Recreation's Environmental Education Program, and at least an initial commitment from local Cooperative Extension (see Discussion). The SWRAG grant has a category expressly aimed at backyard composting, believing it represents 'a low cost method to increase diversion and potentially improve the public's perception of local waste reduction programs'. NCDENR's support was indispensable and highly valued by project staff.

### Statement of philosophy, goals and objectives

Boekelheide served as training and curriculum designer and lead facilitator for the training. Influenced by Peace Corps and Cooperative Extension practices, he worked with Gill and, later, MCPLANT trainees to create a clear statement of philosophy, goals and measurable learning objectives (Tables 1, 2 and 3).

As the goals and objectives make clear, there is more to this approach to home composting than simply making a leaf pile in the yard. Instead, home composting is one element in an ecologically sound, waste reducing and aesthetically appealing approach to residential landscaping and yard care. MCPLANT volunteers have a broader role than simply encouraging home composting - they also work to support grasscycling, soil stewardship, and lowering the amount of potentially toxic chemicals and pollutants from non-point sources such as residential neighborhoods.



Table 1  
**MCPLANT PHILOSOPHY**

1. The foundation of MCPLANT training is practical experience, supported by the best available research-based literature on composting and ecological gardening.
2. MCPLANT volunteers and program organizers practice what they preach, beginning by composting at home.
3. MCPLANT training is not simply to help participants acquire knowledge, but to empower them to make a positive difference through community service.
4. The most effective way to learn about composting and other gardening and environmental skills is 'hands-on' by doing, seeing and discussing, not by simply listening to lectures and reading articles.
5. Adults can effectively manage their own learning, and MCPLANT training must empower participants to set their own goals and objectives, independently research topics, and contribute directly to learning activities. Given this reality, and acknowledging that many potential topics possible in this class, facilitators ask participants to 'buy into' and focus on the learning objectives for this training. Other topics represent opportunities for future projects and learning.
6. The MCPLANT program welcomes and encourages innovations and creativity in independent projects. All projects should, however, fit with the environmental and cultural realities of Mecklenburg County and be based on an accurate understanding of composting science and ecology.
7. MCPLANT volunteers should 'look like' Charlotte: MCPLANT encourages diversity in age, gender, culture, income level and neighborhood location.
8. The MCPLANT program must be 'sustainable': The MCPLANT program must be able to keep going in the future on its own, even without further support from the county or state (though such support is very desirable).
9. No work is more important than bringing humanity back into harmony with nature: Composting and environmentally sound gardening are important tools in this deeply rewarding endeavor.

The curriculum, influenced heavily by Peace Corps 'hands-on' philosophy and by the 'project' approach used successfully in Alameda County, stressed active involvement rather than classroom lectures. Participants built and observed a number of compost piles, made and maintained (and continue to maintain) vermicomposting bins, and got out of the classroom for field trips and outdoor learning. Participants also helped to facilitate sessions in their areas of expertise. A topics list is provided in Table 4.

Gill managed the logistics of the training, arraigning meetings at Reedy Creek Environmental Center, an ideal location provided by Mecklenburg County Park and Recreation. The program provided simple box lunch dinners, so classes could begin at 6:30 PM. Learning took place over 10 weeks in the early spring, February through April, with regular 2 hour class meetings on Thursday evenings. The group also met 4 times on Saturday morning for field trips and other activities. For example, on one outing, trainees visited Charlotte's Compost Central large scale composting

Table 2  
**MCPLANT GOALS**

1. Enable participants to develop skills and knowledge they need to encourage home composting in the Charlotte region:
  - 1.1 Teach participants about composting science; vermiculture; organic and environmentally sound landscaping and gardening techniques; safe management of products used in the home and garden; and about the 'big picture' of how home composting and related techniques fit in with larger strategies to reduce and manage waste.
  - 1.2 Give participants guidance and practice in effective teaching and presentation skills.
  - 1.3 Give participants guidance and experience in effective community organizing, publicity and project planning.
  - 1.4 Encourage entrepreneurially minded volunteers to explore small business possibilities involving composting, vermiculture and environmental landscaping.
  - 1.5 Enable teacher volunteers to create hands-on science lessons (as well as in other subject areas) using composting, vermiculture and environmental landscaping.
2. MCPLANT training and the MC program will raise awareness of home composting in Charlotte-Mecklenburg, and encourage more people to compost and adopt environmentally friendly garden techniques.

3. MCPLANT training will 'graduate' 17 trained volunteers in the first class, qualified to assist the county home composting program in training, outreach and publicity.
4. MCPLANT training and the MC program will be self-sustaining, and members will continue to meet and work to encourage home composting in the future.

yard; on another Saturday, volunteers helped distribute compost bins at a 'truckload sale' of Earth Machine composters organized by the county.

### Recruiting

Gill handled recruiting for the program, with help from Boekelheide, using a form based on ones used in Alameda County and Seattle. Two of the participants were already serving as PLANT trainers for the county. Since the objectives set high standards, the program looked for top quality candidates. A total of 17 were chosen to become Mecklenburg County's first MCPLANT volunteers. Since this was a pioneering training, participants did not pay a fee.

### Results: MCPLANT accomplishments

All 17 MCPLANT volunteers successfully completed training and graduated from the program, and are now actively working on projects and continuing to participate in MCPLANT activities.

### Table 3 **MCPLANT LEARNING OBJECTIVES**

*Graduates of the MCPLANT program will be able to:*

1. Make and maintain a home compost pile, beginning with leaves and other garden debris and ending with finished compost:
  - 1.1 *Present an accurate explanation of the composting process, based on scientific research*
  - 1.2 *Explain the process of making a pile correctly to others*
  - 1.3 *Troubleshoot common problems in piles*
  - 1.4 *Demonstrate ways to compost kitchen scraps*
  - 1.5 *Demonstrate and explain alternatives to composting, such as leaf mulching and 'sheet composting'*
  - 1.6 *Demonstrate how to add compost to improve garden soil (including demonstrate 'double digging')*
  - 1.7 *Identify finished compost*

- 1.8 Suggest best choices for compost bins and techniques for given situations*
  - 1.9 Recommend resources, books and websites useful to home composters, especially beginners*
2. Make and maintain a successful worm composting (vermiculture) bin, using an adaptation of Mary Appelhof's technique or an alternate approved by the facilitator
  - 2.1 Make a worm bin and set it up properly*
  - 2.2 Keep a worm bin successfully, and harvest castings*
  - 2.3 Advise others on how to set up and maintain a worm bin*
  - 2.4 Troubleshoot problems with home worm bins*
  - 2.5 Recommend books and resources for home worm composting*
  - 2.6 (Optional): Design, set up and manage worm vermicomposting units for small businesses*
3. Offer accurate and helpful advice about environmentally friendly landscaping and organic gardening techniques, applied to the Charlotte region, on the following topics:
  - 3.1 Plant choice*
  - 3.2 Mulching and 'living mulches'*
  - 3.3 Organic vegetable gardening*
  - 3.4 Local soils and soil testing*
  - 3.5 Environmentally friendly lawn care and lawn alternatives, including ground covers*
  - 3.6 Water saving strategies*
  - 3.7 Putting it all together: Naturescaping, Permaculture, and other new ideas*
  - 3.8 Wildlife gardening*
  - 3.9 Working with organizations and communities to create sustainable and environmentally sound public landscapes*
4. Offer helpful and accurate information on environmentally safe alternatives to garden and household chemicals, and on safe and most effective use and disposal of garden and household chemicals:
  - 4.1 Alternative pest and disease controls-cultural and biological*
  - 4.2 Safe and appropriate use and disposal of garden and household chemicals:*
    - 4.2.1 fertilizers and lime*
    - 4.2.2 insecticides, herbicides and other pesticides*
    - 4.2.3 other hazardous materials commonly found in homes (treated wood, paints, gasoline)*

5. Lead a composting workshop (or other activity approved by the teacher)
  - 5.1 Use presentation techniques that keep people actively interested
  - 5.2 Describe the experience of leading a class in a brief report
  
6. Create an effective community project encouraging composting and other environmentally sound options in a Mecklenburg County neighborhood, school or community group (entrepreneurial options welcome):
  - 6.1 Research and plan a service project, and present the plan to the MCPLANT training
  - 6.2 On the basis of feedback from the training group, revise and present a final plan to the facilitator
  - 6.3 Implement the project, and successfully see it through to completion
  - 6.4 Report project results in a form useful to Mecklenburg County and other MCs and MC programs

Quality instruction for the general public

Graduates of the MCPLANT training now lead all Mecklenburg County PLANT classes for residents, meaning that all instructors have participated in a carefully designed program to build technical and presenting skills. In addition, MCPLANT volunteers have actively served as resources for other community projects. By teaching home composting part of a ‘package’ of environmentally sound landscaping techniques, MCPLANT volunteers encourage other beneficial outcomes, such as reduced pesticide use and improved water quality.

Table 4  
**MECKLENBURG COUNTY MCPLANT TOPICS**

- Session 1 (Thursday): FIRST STEPS (INTRODUCTION)
- Session 2 (Saturday): HANDS-ON COMPOST MAKING WORKSHOP
- Session 3 (Thursday): COMPOST SCIENCE: WHAT, HOW AND WHY
- Session 4 (Thursday): FROM THE GROUND UP: SOILS AND COMPOST USE
- Session 5 (Saturday): OBSERVE AND ASSIST WITH PLANT WORKSHOP FOR THE GENERAL PUBLIC
- Session 6 (Thursday): VERICOMPOSTING WORKSHOP
- Session 7 (Thursday): SOUTHERN SPRING SHOW

Session 8 (Saturday): COMPOST CENTRAL FIELD TRIP AND TOUR

Session 9 (Thursday): NATIVE PLANTS AND NATURESCAPING

Session 10 (Thursday): WATER QUALITY AND TOXICITY REDUCTIONS

Session 11 (Saturday): COMPOST BIN SALE AT MERCHANDISE MART  
(ASSIST)

Session 12 (Thursday): ENVIRONMENTAL AND ORGANIC GARDENING  
(VISIT TO LEAD FACILITATOR'S HOME GARDEN)

Session 13 (Thursday): PUTTING IT ALL TOGETHER (PROJECT  
PRESENTATION)

Session 14 (Saturday): NATIVE PLANTS IN CONTEXT(VISIT TO UNCC  
BOTANICAL GARDEN)

#### Outreach projects

Each volunteer created and is working on a personal outreach project to encourage composting and other environmentally beneficial waste reduction strategies. They received a commercial compost bin and made a vermicomposting unit. MCPLANT volunteers are actively vermicomposting and composting at home, helping research the most practical and effective residential system for composting kitchen scraps (Table 5).

#### Program sustainability

The MCPLANT program has taken promising steps toward independent sustainability, and has continued to meet following the training. In addition, the county has funded a second MC/PLANT training for winter 2001. The MCPLANT project is attracting word-of-mouth and media attention. This will continue to grow as MCPLANT volunteers began to make an impact in the community and beyond.

#### Table 5 **MCPLANT VOLUNTEER PROJECTS**

Set up worm and composting projects at schools, 4H and scout camps (in Hamlet, NC)  
(Shari Beale)

Design and facilitate MCPLANT training (Don Boekelheide, facilitator/participant)

Set up community compost demonstration site (Priscilla Crawford)

Bin construction and demonstrations in schools and community (Paula Fraher)

Develop activity and exhibit on water quality, pesticides and fertilizers (Kim Garrett)

Offer seminars in composting at garden centers (Jim Gertes)

Work on 'WAIT' program, which encourages businesses to convert 'manicured' grounds to sustainable, environmentally sound alternatives (Tim Gestuicki)

Organize and manage MCPLANT program in Mecklenburg County (Ann Gill, facilitator/participant)

Begin a composting club in the community (Chris Heeley)

Assist in design and compost consulting for church horticultural therapy program (Tom Long)

Teach PLANT program: Start native plant and composting program in area schools (George Morris)

Research and test different alternative materials for composting (Gerard Neau)

Advocate composting on citizens advisory board on residential waste reductions and recycling (Hans Plotseneder)

Teach PLANT program: Design naturescaping plan for suburban yard: Help create third grade composting curriculum (Mary Stauble)

Set up institutional food waste composting unit at university dining commons (Gail Thomas)

Set up composting display and curriculum at local school: Assist with third grade composting curriculum (Cynthia White)

Design and create native plant and wildlife naturescaping project at inner city recreation center, with teaching program (Charles Yelton)

Handouts, curriculum and materials

The program developed handouts, lesson and activity plans, and facilitator's notes. The facilitator is revising these for the 2001 MCPLANT class. When this material is edited and in a suitable form, the program plans to put the information on line as well as to make the documents and curriculum available to other state agencies.

## **WASTE DIVERSION**

Since MCPLANT focuses on building human capacity, by training volunteers who can teach neighbors composting and encourage changes in behavior that reduce waste, a tonnage estimate is not the best way to measure impact. Although a single home composter may have only a modest impact on reducing solid waste, the cumulative impact of the MCPLANT program over time is more significant and important. Each additional composting family adds up to additional waste reduction. Such 'ripple effects' are the most valuable contribution MCPLANT makes to reducing the waste stream.

MCPLANT volunteers will use 15 commercial units and 15 worm bins at their homes or offices. A significant percentage (estimated 25%) of their composted material will be difficult-to-process kitchen scraps. The MCPLANT graduates are also essential for continued success of the PLANT program, which now reaches approximately 500 households per year. Overall, this represents a conservative estimate of 1030 cubic meters (appx. 1442 cubic yards) of diverted material, in addition to other beneficial impacts on grasscycling and lower water, fertilizer and pesticide use. While this amount is relatively small in absolute terms, it represents a very cost effective investment (>\$6 per cubic yard diverted, based on the grant amount), as well as a program whose impact will continue to grow as more and more households began to compost successfully.

## **DISCUSSION**

The MCPLANT program has proven popular and extremely successful in its early stages, and participants and facilitators gave the training a high rating. All sessions went very well, with a variety of activities and many opportunities for active learning and involvement. MC Trainees are now able to provide accurate information on composting and other strategies for reducing waste. Beyond this, PLANT resource volunteers are continuing to contribute to waste reduction, both through their projects and their informed involvement in their neighborhoods, work places and civic organizations. Beyond these positive overall results, the project was a learning experience. There were both unexpected positive developments and unanticipated challenges to program success.

### Quality volunteers

The rich backgrounds of the trainees made a positive impact on training. One is a ranking member of our regional recycling board, another is head of the Wildlife Federation local office, another is a community development office with Bank of America, yet another leads recycling efforts at the University of North Carolina, Charlotte. Two are Master Gardeners. The varied backgrounds and contacts of participants opened many opportunities for networking and building institutional support

from within local groups and agencies. We were very lucky to have such an extraordinary group of skilled but patient and supportive volunteers who enrolled in the program.

### Participant responsibilities

The MCPLANT program changed requirements regarding participant projects between the time of the grant application and the beginning of the training. Instead of requiring participation in projects like testing home compost bins, we asked trainees to put their energy into a project of their own choosing and design. In part, this change came from discussions in Alameda County, California, where a 'project' approach has worked very well. Empowering adult volunteers to create their own project, with review by facilitators and fellow trainees, is a powerful tool for encouraging involvement and participation.

### Readings

Instead of relying solely on handouts prepared by staff, or taken from other publications, MCPLANT used a number of readily available books as 'texts' for the class. One of the best is Sara Stein's *Noah's Garden: Restoring The Ecology Of Our Own Back Yards* (Stein, 1993). Other excellent texts included *Easy Composting* (Ball and Kourik, 1992), and *Worms Eat My Garbage* (Appelhof, 1997). Materials from the Brooklyn Botanical Gardens were also very useful. These well-written books provided a wonderful starting point for discussion and involved learning.

### Recruiting lessons

MCPLANT may extend the application period and do more active outreach to ensure cultural diversity that reflects our community. In addition, teachers did not volunteer for the first MCPLANT training, though the program made a special effort to reach out to teachers. However, in view of experience with the first training, a specifically designed program for teachers might be a better strategy than trying to include educators in 'regular' MCPLANT trainings. Being able to concentrate on community development in the MCPLANT classes, rather than on K-12 education requirements and issues, helped the classes stay focused. Mecklenburg County Waste Reduction is now creating a specific curriculum package for elementary schools. Training selected teachers in this curriculum and supporting 'model' school programs may be a good way to put MCPLANT in the classroom in the future.

### Longer duration and more hands-on training for workshops

For the next training, MCPLANT may increase the number of workshops by 2 to 4 sessions (to a total 16 to 18 sessions, or from 28 to 36 hours) to allow for more participant-lead programs and a less frantic pace. In addition, training activities focused on native plants and toxicity reduction took the form of classroom lectures. Making these more hands-on will improve future classes.

### Cooperation with local Cooperative Extension

In contrast to excellent help from NC State Cooperative Extension in Raleigh, Mecklenburg County Cooperative Extension chose to neither participate in nor support the MCPLANT program. Current Mecklenburg County Master Gardeners were not encouraged to attend the training and were not allowed to receive volunteer training credits for participating in the MCPLANT training (at the time of the SWRAG grant application, Cooperative Extension had agreed to this; however, changes in Cooperative Extension personnel at the County level lead to the changed policy).

The lead MCPLANT facilitator and one of the lead trainers of the PLANT program are NC State Master Gardener volunteers, so at least a strong informal tie remains with local Coop Extension. Hopefully, the future will see expanded cooperation on the local level in Mecklenburg County, since Cooperative Extension - a publicly funded agency - is an ideal partner for waste reduction through home composting and environmentally responsible gardening programs. This is not absolutely necessary: In Texas and Alameda County, California, for example, outstanding Master Composter programs exist with no Cooperative Extension involvement at all. However, Cooperative Extension takes a leading role in Florida, Georgia and South Carolina, and is a key partner in Seattle's pace setting program. In the view of the authors, this is a better model, since interagency cooperation is a much wiser use of public dollars.

#### Need for a physical site

The Mecklenburg County home composting program is doing an excellent job, in spite of the fact that it no longer has a suitable site for classes and education programs. The original Compost Garden home composting demonstration site, set up in the early 1990s with EPA funds, is located at the Compost Central municipal composting facility far from populated areas, directly underneath the end of the runways for Charlotte's Douglass International Airport. Although the Compost Garden is still attractive and has the advantage of being on land owned by the county, there are inadequate toilet facilities and no classroom space. Trying to give a composting demonstration for senior citizens with 747s roaring by 200 feet overhead is less than ideal.

Now that the human component of the home composting program is in place, a next logical step is to create one or more MCPLANT and home composting demonstration sites, with appropriate teaching facilities available, in convenient locations closer to the residential populations that represent the target audience for the program.

#### Website and electronic presence

In addition to a physical site, another logical step is to create a web presence. Both authors are currently working on both a web page on PLANT within county government, and a separate MCPLANT page linked to the county page and to other Master Composter sites around the country.

## **CONCLUSION**

Charlotte's MCPLANT Master Composter program is already making an impact in Mecklenburg County. The first 17 graduates of the program are working on independent projects to encourage home composting and other beneficial practices that reduce waste while safe-guarding the environment. Their active and informed support and volunteer service gives a welcome boost to efforts to reduce waste in Mecklenburg County. Lessons learned during this first training will pay off in better MCPLANT trainings, and improved programs for the general public, in the future. Certainly, other communities in the Carolinas and throughout the Southeast might benefit from a Master Composter volunteer program of their own.

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### ***Web-based resources:***

- Master Composter national site (Mary Tynes, webmaster) : <http://www.mastercomposter.com>
- Alameda County, California: <http://www.stopwaste.org/fscompost.html>
- Texas Natural Resource Conservation Council: <http://www.tnrcc.state.tx.us>
- Cornell University, New York: [http://www.cfe.cornell.edu/compost/Composting\\_homepage.html](http://www.cfe.cornell.edu/compost/Composting_homepage.html)
- North Carolina Department of Environment and Natural Resources: <http://www.p2pays.org/>
- Eco-IQ (excellent reference list): <http://www.ecoiq.com/onlineresources/anthologies/recycling/>
- Directory of invasive plants:  
[http://directory.google.com/Top/Science/Environment/Biodiversity/Invasive\\_Species/Plants/](http://directory.google.com/Top/Science/Environment/Biodiversity/Invasive_Species/Plants/)

EPA Guide to natural landscaping: <http://www.epa.gov/glnpo/greenacres/toolkit/>  
Home composting listserv (email linked discussion group): [compost@listproc.wsu.edu](mailto:compost@listproc.wsu.edu)

## **ABOUT THE AUTHORS**

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Ann Gill, Project Manager, is Waste Reduction Specialist with Mecklenburg Solid Waste Management's Waste Reduction Department. She manages and co-teaches the PLANT program, covering backyard composting, grasscycling, xeriscaping, vermiculture, toxicity reduction, compost gardens and compost workshops, and is currently presenting on a national level about the importance and value of safeguarding and restoring native plant communities. Ann attended Georgia Military College, and received technical training with Lockheed Missiles and Space and Solid Waste Management of North America (SWANA). She has served as director of two subtitle D Landfills, a construction and demolition landfill, an inert landfill, a material recovery facility, a compost facility and numerous drop off convenience centers.