Georgia Department of Natural Resources
Environmental Protection Division

Compost Rule Revision
Stakeholder Group Meeting 1
June 2, 2009

Stakeholders Attending
Jim Corley, Athens Clarke County Solid Waste Department
Holly Elmore, Green Foodservice Alliance
Britt Faucette, Filtrexx International
Julie Hester, Georgia Department of Agriculture
Tom Gehl, Georgia Municipal Association
Jason Governo, University of Georgia
Murray Griffin, Atlantic Coast Consulting
Gloria Hardegree, Georgia Recycling Coalition/Atlanta Recycles/G-ROC
Wayne King, US Composting Council
Boyd Leake, Community Environmental Management, Inc
Tim Lesko, Greenco Environmental
Jennifer Szabo, Department of Community Affairs
Michael Snipes, Laurens County Solid Waste Management Authority

Stakeholders Unable to Attend
Sharyn Dickerson, SWANA
Todd Edwards, Association of County Commissioners of Georgia
Mike Giles, Georgia Poultry Federation
Mike Huff, NSWMA
Jon Huffmaster, Georgia Farm Bureau
Ciannat Howett, Emory University
Billy Malone, DeKalb County Solid Waste
Charlie Slade, Community Waste Services, Inc.

Georgia EPD/US EPA Team Members Attending
Stephanie Busch, Manager, Waste Reduction Unit
Rachel Cochran, Small Business Unit
Jeff Cown, Solid Waste Program
Roy Edwards, Sustainability Division
Jennifer Kaduck, Branch Chief, EPD Land Protection Branch
Lon Revall, Waste Reduction and Abatement Program
Mary Beth VanPelt, EPA Region 4 (Grant Administrator)
Jennifer Vogel, Municipal/County Permitting
Derrick Williams, Commercial/Private Permitting

Facilitators - Courtney Tobin and Tyler Reinagel, Fanning Institute, University of Georgia

Introduction and Charge to the Group

Members of the stakeholder group and EPA/EPD team members introduced themselves and explained why they agreed to be a part of the group.

Jennifer Kaduck, EPD Land Protection Branch Chief, gave the group some background on composting regulation in Georgia and issued the charge to the group. Jennifer explained that there are significant opportunities for encouraging composting in Georgia and that each person in the room was asked to attend because of the unique perspective they bring to the composting discussion. Jennifer clarified that the group was not being asked to draft the revised rule for the Board; rather, this group's task in the next two months is to bring together, discuss and make recommendations based on all the concerns, needs, obstacles and successes that have been experienced under the current rule and changes that would mean improvements in the composting industry in Georgia. The result at the conclusion of the third meeting should be the "essence" of a new rule that will be presented to the Board and ultimately drafted and implemented by EPD.

The facilitators walked the group through the day's agenda and a timeline for the group's work. Two overarching goals were set for the group to achieve by the end of the morning: (1) create the issue framework for a draft 'strawman'; and (2) understand the additional information needed to make informed decisions.

Presentation on Rule, Guidance and Permitting (Derrick Williams, EPD Team Member)

Derrick Williams provided background about the standards and permitting requirements for composting operations that are handled by EPD's Land Protection Branch. Included were a review of design and performance standards for composting operations; differences between permit types; available exemptions from permitting; standards for a "Permit-by-Rule"; and explanation of the Solid Waste Handling Permit expectations. The presentation, "Overview of Composting Permits in Georgia," is available at www.georgiaepd.org/Documents/fwd.html.

Group Discussion on Key Issues

The facilitators led the group through a discussion of things that are and are not working in the composting industry in Georgia. In response to the question of what is currently working well, the most common response was that the environment is being well protected under current regulations. Additional specific comments include the following:

1. The current process works for food waste generators
2. The existing 503 regulations for bio-solids work well and are not that restrictive – they could be tightened to ensure more comprehensive control
3. The existing exemption of yard waste eases the process for conducting composting operations

With respect to concerns or problems under the current regulatory structure, the stakeholder group noted a lack of consistency, differences between feedstocks, and the ability to

acknowledge and respond to differences throughout the composting process. Specific concerns included:

1. The lack of consistency in monitoring the finished product (creating problems for markets)
2. The current rule does not distinguish between processing and landfills
3. The differences in feedstocks are not acknowledged in the existing rule – there are no "tiers" for feedstock differences
4. The need to balance the cost of lab testing in finished product requirements

This question prompted the group to discuss what will foster composting in Georgia – not simply doubling, but increasing by several magnitudes the amount currently being composted.

The third question, concerning problems with Georgia's composting facilities, garnered the most response from the group. The first issue dealt with the economics of the composting industry. As a state, Georgia has not taken full advantage of the benefits of composting. As a result, there is a very small market for the finished product. Another concern focused on the permitting process. Because of the high initial capital costs of getting involved in the composting industry, this was of particular importance. Several comments dealt with the length of the permitting process, at the EPD and local government level, as both have a part in the process; a lack of clarity about where at EPD to submit the application (Land Branch vs. Water Branch); and a lack of awareness of the process and its requirements.

Discussion of the start-up process at the local level spawned further comments about the industry and its relationship with local governments. Among the most significant problems identified was the need to educate local government leaders on the benefits of composting and how it is distinguished from landfills and other MSW processes. This includes city councils/county commissions, planning and zoning authorities, waste management leadership, and the public at large (with special emphasis on youth).

The final major point to emerge from this discussion was the need for definitions of terms used throughout the rule. Stakeholders began giving examples of the challenges presented by the lack of definitions and tied this need directly to the lack of consistency discussed earlier. The topic of definitions was revisited at the end of the meeting. Specific issues raised include:

1. There is a lack of markets for finished compost product;
2. The economics of the compost market in Georgia have not been fully embraced or developed to encourage and foster composting across the state;
3. An overall lack of understanding about how much detail exists in plans and how inspections are being handled;
4. Timeframe for permitting is cumbersome and discouraging. Before an application gets to EPD, the process is significantly slowed because of the involvement of city councils/county commissions in the process and the infrequency of their meetings;
5. There is a lack of awareness about the regulatory process;
6. Zoning requirements for siting (light vs. heavy industrial) and the availability of land- particularly in metro Atlanta – is problematic;

7. Local governments tend to not be educated on composting technology, trends, needs, and benefits. Need a focused effort to educate local governments and for each to come to terms with the others' needs and efforts;
8. The term "solid waste" in the permit at the local level puts composters at an immediate disadvantage because of the negative connotations of "solid waste";
9. Statewide, we are not composting nearly enough organics;
10. Source separation issues hinder the composting process;
11. General public and local government officials are not well educated in the benefits of composting;
12. Tipping fees at landfills are relatively low and don't provide enough incentive to stop taking these materials to MSW rather than using them in a composting process;
13. No strict monitoring of laws currently in place. In many instances, yard debris is regularly included in MSW rather than being diverted as the law requires;
14. When the yard debris is free, there is no perceived value in the product and, subsequently, no demand for the product;
15. Landfill operators are increasingly making an argument for their claim to the feedstocks – namely, using the "biomass to energy" argument to stake their claim, preventing these feedstocks from being used in composting projects;
16. Storage of finished material has become problematic. This is due to both the seasonal nature of composting and the consideration of the final product as a "waste" product;
17. Lack of definitions needs to be addressed, e.g., storage requirements for biosolid and solid waste. A list of necessary definitions was developed later in the meeting.
18. There is significant reliance on the Department of Agriculture without knowing everything they do. This includes inconsistencies in feedstock and land applications, among other things;
19. Certain types of waste are not identified or addressed in the existing plan, including vegetable matter from canning operations in south Georgia, tobacco waste and (increasingly) grease traps;
20. There needs to be a clearer understanding of the distinctions between food waste, bio-solids, and yard waste. Whatever the ultimate rule might be, it needs to address all feedstocks and have reasonable expectations regarding carbon and nitrogen content;
21. There is a significant lack of funds in cities/counties for controlled efforts;
22. Classifying certain materials as "Agricultural Waste," even after processing, is not entirely accurate and is problematic in the permitting process;
23. Education is important in cities, but particular emphasis needs to be paid to understanding the economics of the composting industry;
24. NIMBY arguments in regard to composting by residents and local governments. Compost operations need the assistance of local governments in land use issues to get composting operations in place efficiently and effectively. The 75% requirement in the permit-by-rule does not lend itself to efficient composting operations; and
25. There are issues with economies of scale.

Following a break, the group was divided into three small discussion groups: (1) Feedstocks; (2) Siting; and (3) Design, Operation and Testing. This section includes both notes from the discussions that unfolded in each group, as well as reports that each small group made to the larger stakeholder group.

Small Group I: Feedstock

Report to Large Group
Key issues discussed regarding feedstock included:

1. Agricultural waste should not be classified as Industrial waste but often is. We need a definition of industrial waste that considers this issue and the issue of processing plant waste. Perhaps look to definitions from other states?
2. We need to understand the difference between waste and product or feedstock.
3. Issue of Contaminants – How should they be handled, including toxics and hazardous substances?

Information Needed:

1. What are the top 5 compostable waste streams out there (i.e., FOG, food people leave on their plates) and the infrastructure needed to address it?
2. What is the Dept. of Agriculture doing and whom do we deal with? What is their role?

Notes: During the small group discussion, group members noted that the desire to focus on feedstock is important because EPD wants to look at a tiered system that would divide high potential waste from low potential waste. People are mixing latex waste with chocolate and calling it composting. Sludge is also an issue - people have put in applications to compost from landfill leachate and portable toilet waste.

The group discussed the different waste streams and where they might fall into a tiered structure. In response to the question "are any food waste composting facilities across the state causing real problems," the group responded no – at least not the permitted ones. Permitted facilities try to have engineering controls in place to prevent problems, but there are a lot of people who may be composting who are non-notifiers.

Prisons seem to be very successful at composting – everything they generate is put into the compost. However, prisons need more yard trimmings and vegetables to up the carbon content. They have done fairly well. It is still a business for the consultants who work on it.

Post consumer waste needs to be able to have protein, dairy, bones, waste – everything on a plate needs to be able to go into the compost and be mixed.

1. *Parchment paper (used frequently in kitchens) is being taken, as is wax-coated cardboard.*
2. *There is a restaurant that is getting ready to go "Dumpsterless"*

We need to add 'wastewater treatment sludge' and 'miscellaneous industrial organics as potential separate categories or requirements under the tiered process.

The group questioned who at the Department of Agriculture could weigh in on the issue of different requirements for sludge and industrial organics? They don't have regulatory authority but they assume a lot of it. It is often easier to go to Department of Agriculture to get an answer than going to EPD.

EPD team members provided input on grease trap and fat usage in composting:

1. *EPD has a lot of questions about the grease and fats composting due to the difficulty of the fats breaking down.*
2. *EPD has to deal with the failures, which are numerous.*
3. *We've had problems with fats and grease, particularly where hazardous wastes are introduced into the mix.*
4. *Problems include people who are doing composting who don't understand the chemistry, the end market or the economics of it.*
5. *Regulators have seen people get into the business who are really just waste haulers – dumping it on or injecting it into the ground.*

The group briefly discussed how a tiered system would affect feedstocks:

1. *We have a tiered system to some extent now with yard waste – is this just mulching or is it composting?*
2. *How would a tiered process work – we need to define the top level, then characteristics to sort out the next few levels.*
3. *How many facilities just take one or two types of waste?*
4. *Would there be a facility to just take grease and fats, or do they all take everything that shows up?*
    a. *A: Permit by rule facilities have a particular type of waste that they take – we struggle because we don't have enough commercial composting facilities in Georgia.*
    b. *Currently we have 4 composting facilities – two are government, and two are private.*
    c. *Now, they are biosolids (except one of the privates), but they hope to do a food waste minor modification to add food waste.*
    d. *Chemistry of composting is important - the right combinations need to be included.*

A group member offered Cobb County as an example of a government operation that makes a huge investment in terms of people (job source) and dollars that starts well and does not run well long term – this is really MSW, not just food waste. A government operation over time does not work as well as a private company that has to make a budget and a profit. However, you need committed cities and counties involved. But when the politicians change and the next hot topic comes up, it gets left behind.

Is anything happening at the military bases? Regulators don't know about much – Ft. Benning has a facility for composting and has a small test plot, but it is sitting idle, and most of the waste goes over into Alabama.

Small Group II: Siting

Report to Large Group:

1. We would like to have the possibility of requiring recycling with new permits. This would also require an enforcement mechanism. Applicants currently have the option of doing recycling in return for an expedited permit, but there is little if any follow-up.
2. There should be an expansion on SWMP to include an enhanced focus on waste reduction (composting).
3. Create specific sitting criteria for composting facilities (based on feedstock impacts).
4. New rules must level the playing field and provide consistency that does not currently exist.

Notes: The first question posed to the siting group asked about the role the Solid Waste Handling Permits have in the process. The group was asked to discuss what had been beneficial in these permitting structures, what had been a hindrance in the past, and what challenges can be overcome in the future.

The most common hindrance identified by the group was the lack of consistency in application of the permits. Because composting is addressed as a two-page amendment, there is a great deal of discretion and very little definition given to the terminology in the rule. In that spirit, the group acknowledged that one of the first goals of the larger group should be to create definitions used. Those definitions would be necessary for the group to effectively advise EPD for the new rule.

One of the biggest opportunities in the permitting process is attempting to distinguish between different types of feedstocks. The EPD team member that was accompanying the group explained that there is a guidance document, but it is nearly fifteen years old and includes very few details. While it recognized the potential for contamination from different feedstocks, the requirements outlined by the document are minimal. Ultimately, this document attempted to create a tiered structure, but was unsuccessful when applied.

After addressing the permitting structure, the group began to discuss the actual site requirements. One of the chief obstacles is the need to go to the local jurisdiction, even with a SWHP or Permit by Rule. Because of roadblocks that have been experienced at the local levels in the past, there is hesitation on the part of potential composters to get involved in the process. An example offered by one group member indicated that it took well over a year to build the relationship with the local officials and educate them of the difference between a compost operation and a landfill operation and get them to "buy in" to the notion of a composting operation within their jurisdiction. Among the more significant problems at the local level are codes that do not specifically address composting. The tendency in Georgia cities and counties is to lump everything together, meaning that there is a negative connotation with composting because it is granted the same permit as Solid Waste.

With respect to local governments, as there is frequently a disconnect between composters and local government leaders, governments witness disconnect between their planning and zoning officials and their solid waste officials. The lack of communication and understanding between

these two arms of city and county government frequently prevent beneficial and constructive discussions regarding composting.

The siting requirements that exist are helpful in that they prevent "every Tom, Dick and Harry" from getting involved in composting, but they are problematic in that they discourage legitimate composters from beginning a new operation.

Ultimately, the group identified problems and opportunities for compost industry work with local government in regard to land use, planning, and zoning:

1. *Problems*
    a. *Zoning and land use requirements do not distinguish between yard waste, food waste and bio-solids*
2. *Opportunities*
    a. *Educate local governments on composting*
        i. *Windrow composting (large area) v. vessel composting (smaller area)*

The group did acknowledge that current wetland requirements are appropriate and reasonable and that awareness of flight paths is important for both public and private "players" in the process.

Stemming from the earlier discussion of market economics in the composting industry, group members raised the possibility of engaging in regional composting efforts that would include multiple counties. Because of the high initial capital costs and in an effort to reduce overhead costs, regional composting efforts were identified as a potential opportunity to encourage composting and reduce the amount of compostable materials being diverted to MSW. This regional approach would allow for an expansion of the market and encourage compliance with regulations.

As local governments prepare and submit their Solid Waste Management Plans, they should be encouraged/required to consider waste reduction and composting as a serious and critical component. Among the suggestions made by the group was to include a five-year short-term goal and a 10-year, long-term goal. On that front, composters and EPD team members should focus on getting organic materials back on the "front page" and promote their use and ultimate composting. Once again, definitions were recognized as being the first step toward making this effective and equitable.

Next, the group identified the need to improve hydro-geologic assessment. This would include drafting a specific appendix to deal with assessment for operation that recognizes it will be held there but won't stay there (storage issues). This revision would address specific requirements for siting for compost operations (Circular 14 and would be helpful. For example, current regulations require that an applicant dig 20 feet below rock after hitting rock – why is this required for compost? This is 'overkill when you're dealing with compost on the site. Such regulations don't exist in AL, MS and SC. To that end, Florida's regulations were recognized as being comparable to Georgia's. North Carolina is much more progressive in its requirements, which has resulted in Water and Land Groups being at odds with one another. One of the

consequences in North Carolina is that small municipalities have had to shut down mulching sites because they can't adjust to treatment of all runoff as wastewater.

This led to a brief discussion about storm water requirements and permitting in Georgia. The group came to the consensus that composters do themselves a disservice to not have a storm water permit, because without that permit, absolutely no contaminates can be discharged from the site.

The final point of discussion for the group was the need for consistency in operations. The group concluded that consistency should exist 1) within feedstock type, but not necessarily in a tiered structure; 2) in all areas, including site visits/inspections; 3) controlling the growth from individuals composting in their backyard to collection of materials from restaurants, etc and competing with fully permitted composters (need to define "small" composters, "individual" composters); and 4) same standards for all composters using high levels of potential contaminants, regardless of size.

To conclude, the group was asked to identify the needs, primary concerns, and obstacles to rule changes that will occur.

Among the needs that were identified in the small group were the need for a more legitimate rule (a two page amendment being insufficient); flexibility for EPD to adapt to the needs of individual composters and sites; and definitions that will provide consistency between operations and products.

The consensus was that the primary concern should be the quality of the end product. This is critical in addressing the market demands for compost. Without a quality product, the market does not exist, and without the market, composting is not viable. Consistency in the process and product will ensure that Georgia compost is viable.

The group identified potential barriers to effectively establishing guidelines for site management. The primary concerns were related to those sites that were already in existence. The two proposals were to either 1) "grandfather" them in and allow them to continue to operate as-is, or 2) create a timeline for compliance.

Small Group III: Design, Operation and Testing

Report to Large Group:

1. There is ambiguity in the existing rules - we need definitions for storage time, wastewater, storm water, sanitation, cleanliness, surplus of finished product, and properly trained. This includes offering more specific guidance in a tiered system and determining parameters for process quality.
2. The proposed tiered structure should recognize differences in feedstock, volume different levels within different tiers, pad design, groundwater monitoring, storm water monitoring, end product testing, and process testing.
3. Any rule revision should include a listing of all types of feedstocks.
4. The group is holding back on offering input on design, operations, and testing until there is a clearer definition of the tiers that will emerge from earlier stages in the process.

Information Needs:

1. What are other states doing on these issues?
2. What is the pollution potential for various feedstocks?

Notes: Storage is currently defined as 3x the daily capacity of equipment - this may not be best the way to measure storage. There could be different storage requirements for different entities. Don't relate storage to the capacity of the equipment, it should depend on number of hours equipment is run, storage time, spontaneous combustion, the size of pad required for material, and the ratio of tonnage and land space available.

It is not economically feasible to store finished product on a pad. Storage requirements for the finished product should be different than for the incoming material and should be site specific – for example, bio-solids must be mixed within eight hours of arriving. We need built-in flexibility for contingencies. Yard waste is exempt from storage capacity issues.

Other comments:

1. *EPD is more worried about allowing too much capacity than establishing a minimum.*
2. *We need to define storage capacity and at what stage, because the current rule is not clear – the table based on feedstock is problematic. Need to consider carbon and nitrogen sources needed to mix for the day's production. Can we make the storage requirement more generic in the rule and more specific in a guidance document?*
3. *EPD is trying to regulate stockpiling too much and not processing it.*
4. *Equipment requirements – by whose standards is this being measured?*
5. *503 overrules – EPD cannot be less stringent than 503 (503 only applies to product, not equipment).*

We need to define wastewater and storm water, what needs to be treated and how. Is waste water the correct the term to use or should another term be used? With respect to "cleanliness," it leaves a lot open to interpretation. We recommend striking the first sentence of that section and again making the rule more general, saving the specifics for guidance documents

The group identified several issues and expressed opinions relating to the finished compost product, including:

1. *US Compost Council test standards: TMECC*
2. *Certified compost*
3. *Left up to user to interpret if it meets the standards for the user's application*
4. *Carbon and nitrogen ratios, oxygen update, moisture, etc.*
5. *Storm water applications*
6. *Standards for safe end product should not be added to this rule*
7. *STPA program is best for testing product – some states endorse this*
8. *Should EPD regulate whether final product needs to be tested, certified?*
9. *Process vs. product quality testing/certification – process only*
10. *It would interfere with marketing if EPD required certification of the product (some may be marketed and some may not – for example, used for soil cover at closure)*
11. *TMECC – says suitable for X, does not say it's safe*
12. *STA – is a testing program, not certification*

Concluding Large Group Session

After the small groups made their reports, the larger stakeholder group considered two other needs identified earlier in the day and made a few more observations about the needs for the composting industry in Georgia (both public and private).

<u>Further Considerations:</u>

1. There is a need for closer coordination with planning and zoning officials at the local level (in jurisdictions that have planning and zoning) and consideration of composting in land use planning and comprehensive plans prepared by local government officials.
2. Awareness of the Solid Waste Management Plan is critical to having a successful composting operation and greater emphasis needs to be placed on creating an effective SWMP and educating people on its contents.
3. Local governments need to look at recycling and yard waste as greater opportunities.
4. EPD needs to ensure that appropriate effort is put forth in the initial application.
5. Statewide, there needs to be a greater level of appreciation/usage of organics.
6. The Department of Agriculture needs to encourage and incentivize soil reconditioning programs.
7. Approximately 80% of compost used in one Georgia business is coming from outside of the state. This is mostly attributable to issues with specifications that Georgia compost is not meeting, but that composting operations from TN, NC, AL and FL are attaining. Georgia composters must focus on meeting these specifications and marketing the finished product appropriately.
8. One of the biggest opportunities for composting in Georgia centers on educating youth about its benefits. This will create an institutional and generational appreciation for compost.

Needed/Desired Definitions:

1. Ag Waste
2. Industrial Waste
3. Waste Water
4. Storm Water
5. Non-Pathogenic
6. Pathogenic
7. Properly Trained Operator
8. Cleanliness
9. Sanitation
10. Storage Time
11. Surplus Compost (current definition inadequate – need a timeframe)
12. Food Waste
13. Feedstocks
14. Biologically and chemically stable
15. Non-processed
16. Processed
17. Non-cured
18. Cured
19. Recovered Materials
20. Totally Enclosed Setting

Considerations from Other States

1. Other states have grant money (NC, PA) that funds equipment and educational efforts.
    a. Consider limitations Georgia would need to place on money to private entities
2. Partnering opportunities with cities/counties – consider a regional approach.
3. Recognition of value of organics – programs in CO, WA
4. Tax incentives for engaging in composting – Georgia has an outdated incentive that is not useful.

Issues Raised in Discussion of Tiers

1. All compost permitting should be under one division
2. Different composters shouldn't be playing by different rules
3. Need consistency
4. Potential exists with the current organization of composting permitting to destroy the industry

Conclusion

The facilitators and EPD team members thanked the stakeholders for their participation and reminded them of the next meeting, Wednesday, June 24 from 8:30 am to 12:30 pm. EPD told the stakeholders they would send a draft "strawman" concept incorporating these suggestions by June 19 and asked them to share it with their colleagues and constituencies. The meeting adjourned at 12:15 pm.