

**COMPOST OPERATION STAKEHOLDER ADVISORY GROUP MEETING**  
Commons Building – Wake County Office Park

**Meeting Minutes**

**WEDNESDAY, JANUARY 20, 2010**

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**1:00 PM WELCOME BACK: Ken Pickle**

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**1:10 PM REVIEW OF LAST MEETING AND PREVIEW OF MEETING: Dave Halley**

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Wealth of information on the Portal – please check that.  
Will send email if something specifically posted there  
<http://portal.ncdenr.org/web/wm/sw/stakeholder>

Explain process – **Process Improvement Cycle**

**Solutions**

- Initiate Change
- Use It
- Evaluation
- Monitoring

**Information Gathering**

- Define Objectives
- Share Data
- Flowchart of complete process

**Solutions**

- Improvement Strategies
- Recommendations
- Preferred Options

**Analysis**

- ID Problems w/process
- Factors Affecting Process
- Complete Picture

**Review Last Meeting**

**Preview this meeting**

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**1:20 PM OVERVIEW OF DWM PERMITTING PROCESS: Michael Scott (DWM)**

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- What are the different types of composting facilities?
- How do we permit those different composting facilities?

**Solid Waste Compost Facilities**

Composting Facility Defined – A solid waste facility which utilizes a controlled biological process of degrading a non-hazardous solid waste. Classified based on types and amounts of materials to be composted.

Small Facilities – Receive less than 1000 cubic yards of material for composting per quarter AND occupy less than 2 acres of land.

Large Facilities – Receive more than 1000 cubic yards of material for composting per quarter OR occupy 2 acres or more of land.

Type 1 – May receive yard and garden waste, Silvicultural waste, untreated and unpainted wood waste, leaves

**Frank Franciosi** – Define yard trash as opposed to yard waste?

**Michael Scott** – Yard waste comes from land clearing (builder clearing lot to build a house)

Yard Trash comes from lawn care maintenance, grass clippings that could contain pet waste (from landscaping activities)

**Bob Rubin** – Yard Trash does not include yard or garden furniture that has been broken down

**Craig Coker** – What about garden waste from a nursery or garden center?

**Michael Scott** – Nursery waste would fit in a Type I without any issue

Small Type I – shall process or store less than 6,000 cubic yards of material per quarter

Need a Yard Waste Notification rather than a permit

.1406 and .1404(1-10)

Large Type I – shall process or store more than 6,000 cubic yards of material per quarter

Type 2 – May receive **pre-consumer** meat-free food processing waste, vegetative agricultural waste, source separated paper, other source separated specialty waste

Level of physical contaminants and pathogens must be low

Can compost Type I materials also

**Dave Halley** – What does source separated mean?

**Michael Scott** – Materials are separated into specific types at another facility before being brought to the compost facility

Type 3 – May receive: manures, agricultural wastes, meat, post consumer-source separated food wastes, other source separated wastes

Relatively low in physical contaminants but may have high levels of pathogens

Can accept Type I or Type 2 waste for composting at Type 3 facility

**Jennifer**: Composting of dead birds?

**Michael Scott**: State vet handles current permits for handling on farm, DWM permits for those who want to distribute waste to the public

**Craig Coker**: Clarify boundaries of DWM permitting and State Vet permitting

**Michael Scott**: State Vet does not have regulations on heavy metals, pathogens, etc. – farmers on using it on farm not selling back to the general public. Waste is generated on-farm, composted on-farm, and final product used on-farm (exemption in our rules)

Type 4 – May receive: mixed municipal solid waste, post collection separated or processed waste, Industrial solid waste, non-solid waste sludges

Allowed to handle high contaminants/high pathogens

**Craig Coker**– Goldsboro uses yard waste as a bulking agent – what are the limitations according to DWM regs on what could be used (food waste)

**Michael Scott** – if the facility is mainly sludge they would stay under DWQ permit and possibly be allowed to take some additional bulking agents, would really have to visit on a case-by-case basis

**Craig Coker** – growing interest in composting food waste but lack of availability in the US as well as NC

**Michael Scott** – if Goldsboro's main operation is sludge and they take in some food waste they would stay a DWQ facility. However if that changed to 80% food waste the way they are permitted would change

Type I, 2, 3 wastes can be accepted at a Type 4

#### Operations not requiring a permit

Compost Pilots and Demos – 13B 15A NCAC .1409(b)

12 month approval (could be extended to 24 months)

Must adhere to setbacks

Agreement between DWM and DWQ not a specific requirement for a wastewater permit

**Joe Hack** – Could you do a demo in the boundaries of an already permitted facility?

**Michael Scott** – have done this in the past with a few facilities

**Joe Hack** – would this hold up a DWQ permit or require changes to a DWQ permit

**Michael Scott** – would make sure both Divisions are aware of the demo at a facility

Backyard Composting

Farming/Silvicultural operations

Small Type I Facilities that use a Notification Form

Question: Vermicomposting – where does it fit?

**Michael Scott** – Based on the types of food the worms eat determines what type of composting facility (most likely Type 2 or Type 3). More extensive sampling per batch to bring Vermicomposters under the regulations (since time and temperature really don't work for the worms)

Question: Facility boundaries

**Michael Scott:** Try to focus on facility boundaries that the facility actually has control of – will revisit the boundary topic a bit later

DWM Compost Permitting Process (Flowchart)

**Craig Coker:** can this be downloadable PDF on the portal, possible to add estimates of timeframes for each facility type

**Michael Scott:** PDG on portal – yes, 3-6 months on a new facility if a complete submittal is received for DWM but could be hold-up with DWQ permit

**Craig Coker:** Private sector facilities looking at coming to NC need to know the timeline on permitting; this is an extreme expense for new businesses

**Frank Franciosi** – DWM Compost Flowchart is great work and a long-time coming, timeframes are important to private industry as Craig mentioned, perhaps adding on a renewal segment to each facility Type along with a checklist of requirements

Assessment of the Permitting Process (feedback worksheet) – complete after each presentation

**2:00 PM**

**MAPPING THE DWQ PERMITTING PROCESS: Ken Pickle (DWQ)**

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- What is definition of compost, industrial facility, process water, wastewater, runoff and stormwater?
- What types of water do you generate? Where do you want the water to go?
- Diagramming how the permitting process works today

**Ken Pickle** – DWQ Report #1 - Identify regulatory basis for stormwater versus wastewater  
– posted on portal Dec. 18<sup>th</sup>

DWQ Report #2 – quick overview

More likely we will make changes to our procedures and permitting process (not so much to the rules/legislation)

Administrative agreement not to permit Type I yard waste facilities – we don't have the resources to chase those. Are they covered in our rules and regulations, yeah, probably. But we don't have the resources to address those.

Process wastewater is any flow that originates after contact with process materials. Flow that contacts the windrow and runs off is classified as wastewater. Notification site – we're not chasing those right now, they're small.

Stormwater is everything else that's non-contact.

**Craig Coker** – is that your interpretation of the federal regs or is that your interpretation

**Ken Pickle** – we have not consulted legal counsel, this is our interpretation

**Craig Coker** – that's not how other states interpret this, other states are calling the runoff from compost windrows stormwater

**Ken Pickle** – if this interpretation is wrong we would like to know and have it brought to our attention

No definition in the Federal Rules that governs what composting is in DWQ

No distinction with regard to Type I

Office of Management and Budget Standard and Classification manual – 3 businesses listed, one of which is composting industry

Bottom line in DWQ – if Michael Scott thinks it's composting, so do we

**Allen Hardison** – If you have a facility just grinding yard waste and giving it away with no attempt to control temperature, quality – do they qualify as composting

**Michael Scott** – We do not allow yard trash to be handed back to the public without composting, land clearing debris can be ground up and handed back to the public without a composting process

Transitional period, have many more inspectors, we are enforcing these rules now.

**Frank Franciosi** – you cannot run a vac truck, pick up yard trash and dump it on someone's property

**Michael Scott** – we have a 110 degree threshold, if you have a grinding/mulching facility and you go above the 110 degree mark you are then composting and must meet the requirements

**Ken Pickle** – this is a new issue to us, we do have stormwater permits to cover the grinding/chipping activity

**Craig Coker** – can you give an SIC example where a facility has a stormwater permit and portions of it are required to have a wastewater permit

**Ken Pickle** – difference of perspective between DWQ and DWM, Michael Scott cares about what's going on at the facility such as materials brought in and records kept, what we (DWQ) care about is the waters that leave the site.

#### Matrix of Permits Required from DWQ (handout)

Compost leachate and contact rainfall (process wastewater)

Non-contact rainfall (stormwater)

Other special flows

Where does the water go?

Determines what type of permit is required

EPA rules behind DWQ

Need to go to City for Pump-and-haul or sewer connection

Stormwater – have to go to DWQ

Special Flows – by rules are regulated – “deemed permitted by rule”

If you are causing a problem then DWQ must regulate and permit may be required

**Craig Coker:** Please clarify closed-loop recycle systems?

**Ken Pickle:** Specific kinds of closed-loop recycle systems identified by the rules. Determined that we don't want staff chasing these if rules are followed. Perhaps need more clarification on what is and what isn't closed-loop.

**Craig Coker:** Already said that what comes in contact with the compost windrows is a wastewater. If the wastewater does not come in contact with surface water, is not discharged to sewer, but recycled internally we need a permit?

**Michael Scott:** This came up with City of Durham – LAU permit or not? May need better clarification on this point.

**Ken Pickle:** DWQ will take this on as homework.

**Dave Halley:** Let's capture a question – does reused water trigger a permit (closed-loop system)

**Frank Franciosi:** When larger municipalities cannot hold the flow they just let it go into surface waters

**Bob Rubin:** Decided if it was a named storm event there were provisions that could be exercised – believe we could do water balances which should determine whether or not a permit is required.

Question: How do you handle a large named storm event? (DWQ)

#### **DWQ Stormwater Permitting Process Flowchart - Handout reviewed**

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What kind of water are you talking about?  
Where does the water go?

**Frank Franciosi :** Under ideal conditions what is the timeframe for obtaining a permit?

**Bethany Georgoulizs:** Currently once a complete application is received it takes 180 days to obtain a permit

**Ken Pickle:** We have about 20 general permits in stormwater that we have to review and they have to go through EPA. General permit is written for a whole category – “one size fits all” permit  
Individual permit – look at individual and craft a permit for that one site

General permit has some advantages and we may want to pursue that for Types 1, 2, and 3 facilities. Not likely for Type 4 because they are high-risk facilities. The fix here seems to be a wastewater fix, probably a land application fix.

Question: Trigger for stormwater permit petroleum products? Permits on landfill seem to be triggered by storage of petroleum products used for maintenance of equipment

**Ken Pickle:** Site with petroleum products we do want to see an oil spill protection plan whether there's a permit or not. If doing vehicle maintenance there is a special section in the permit for that.

**Bethany Georgoulizs:** Landfill general permit is different – much more restrictive. Dealing with where trucks track in materials

**Noel Lyons:** Industrial activity of composting – does that pertain to storage of compost product? Is that a reason why water coming in contact with a compost product is considered wastewater? If compost is stored offsite would it still come under that?

**Ken Pickle:** Process wastewater definition from DWQ Report #1

**Craig Coker:** Why does stormwater permitting require public notice?

**Scott Mouw:** Do DWM and DWQ receive application at the same time?

**Ken Pickle:** DWQ review begins when we receive a complete application

**Scott Mouw:** Exploring timeline in coordination of Divisions

**Craig Coker:** Costs for permitting process (estimates of engineering, etc.)

**2:40 PM**

#### **WHERE DO WE DRAW THE LINE? : Jon Risgaard & David Goodrich (DWQ)**

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- How do we define the compliance boundaries?
- Is how EPA defines boundaries different than how NC defines them?

**David Goodrich:** Wastewater must be managed in accordance with a Department-Issued Permit such that Groundwater and Surface Water Standards are not violated. Compliance Boundary is where Groundwater Standards must be achieved under 15A NCAC 2L .0107

It extends vertically downward from the water table and does not apply to soils or surface water quality

Area where ground water must meet the 2L standards – 50 feet from property line, 250 feet from waste treatment area

Ground water not meeting the 2L standards within compliance boundary may enter surface water, however, the surface water quality standards must be met.

Runoff of wastewater off site or into surface water is not allowed. EPA has situations where they've negotiated certain compliance boundaries on a case-by-case basis.

**Craig Coker:** What's the compliance boundary for stormwater?

**Ken Pickle:** We don't have a parallel circumstance here. When the flow leaves the leaves the property line or enters a creek that's where we have the compliance boundary. You catch the flow as it leaves the site or enters the creek.

**Bob Rubin:** Could you use that diagram and show where you would sample as far as a compliance boundary?

**Ken Pickle:** You don't own the waters of North Carolina. It's where the flow enters the water.

**Craig Coker:** Project we worked on – the North Carolina Zoo. Is the compliance point the property boundary or where it enters the stream?

**Ken Pickle:** We consider it the property boundary not the stream because you don't have access to the other landowner's property.

**Noel Lyons:** Is it allowable to be able to lease land from the adjacent landowner?

**David Goodrich:** Yes that is allowable.

**Craig Coker:** Must be 50 foot from the property boundary, what's the basis for the 250 feet?

**David Goodrich:** 250 feet basically from the rules, not sure of the details

**Craig Coker:** What is the federal citation for a 250 foot compliance boundary and is it possible to have a variance to extend the boundary?

**Bob Rubin:** Federal Standards are Title V standards and address drinking water

**Ken Pickle:** Is all drinking water in NC groundwater?

**Bob Rubin:** Somebody made the determination that all water in the saturated zone in North Carolina is drinking water.

Back to facility boundary question

**Michael Scott:** Odors would be one issue – where to we require minimization of odors, would be at the properties boundary. If parcels are leased, facility footprint for the compost facility must control odors on their footprint. If it's at a larger facility such as a landfill it would be at the property boundary of the larger facility as a whole.

**Lindsay Roberts:** Is accommodation given for treatment that occurs in the soil zone before it enters the ground water?

**Bob Rubin:** That is true for land application. Different levels for different constituents.

**Lindsay Roberts:** Is there a time limit?

**David Goodrich:** It's up to the person requesting a permit to present how this will impact the ground water over a certain timeframe. If it's questionable we might have you put in monitoring wells

**Bob Rubin:** Try to design these systems so that if it's a constituent it gets to the root system of the plant. You have to do the models to document or demonstrate that at the compliance boundary you will not violate the standards. Once you get over the level you violate the standard whether it's one year or ten years. The whole water column must meet the standard (from the diagram)

**David Goodrich:** Limits on compliance boundary are horizontal. Maximum of 250 feet. Chances are your contamination is going to pan out the deeper and deeper it goes. Mostly what we deal with are 25-30 foot monitoring wells.

**Frank Franciosi:** Have not covered all options in DWQ Non-Discharge Permitting Process  
Have regulations noted on documents/flowcharts

**3:10 PM**

### **WHAT IS COMING OFF COMPOST PILES? – Frank Franciosi (NCCC)**

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- What potential pollutants do we have to worry about?
- Based on best science what problems do we need to solve?

On Portal is Oregon study

Potential Problems from Process Water at Composting Facilities

Nitrogen (nitrate/nitrite)

Total Phosphorus

Soluble Salts  
Biological Oxygen Demand (BOD)  
Chemical Oxygen Demand (COD)  
Total Suspended Solids (TSS)  
Pathogens (Fecal coliform/salmonella)  
Heavy Metals (copper Cu, lead Pb, zinc Zn)  
Oils and Grease  
pH

**Bob Rubin:** under nitrogen the ammonia or add “total” nitrogen, add arsenic to heavy metals

**Michael Scott:** arsenic from the treated wood

**Frank Franciosi:** As homework would recommend reading Biocycle article and C2HM Hill study which are posted on the Portal

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**3:40 PM      WHAT ARE OTHER STATES DOING? : Craig Coker (NCCC) and Brian Rosa (DWM)**

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**Brian Rosa:** We will have the whole report next meeting. 28 of the states so far – ranges from two lines stating managed all leachate and runoff, to pages and pages. Will come up with some kind of summary

**Dave Halley:** coming up with list of best practices

**Craig Coker:** Varies across the states from no requirements to extensive requirements. Many will regulate compost facilities under SIC regs. Oregon, Colorado, Maine, and North Carolina are looking at overall impact. North Carolina is the only state we’ve found so far that calls the runoff from compost facilities a wastewater.

- Progress report on gathering and compiling information on how other states are handling compost facilities and regulation?

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**3:50 PM      WHAT ADDITIONAL INFORMATION DO WE NEED TO PROCEED? : Dave Halley**

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**Ken Pickle:** North Carolina extension agents are absent at today’s meeting and have taken on assignment of what can be done with treatment flows.

**Are there any information gaps?**

- Is there any new or existing technology on pollutant removal we need to know about?
- What else do we need to examine before moving into more detailed “solution mode”?

**Noel Lyons:** Do we all feel the problem has been defined as it pertains to NC facilities? Is the NC composting industry negatively impacting the environment?

**Joe Hack:** Think we still need the legal determination of process water, wastewater, and stormwater as it pertains to compost facilities.

**Michael Scott:** Think it’s going to have to come from the AG office

**Ken Pickle:** We have some legal resources but have not gone up the chain for that. However, when the legal counsel is involved they’re out to win. Typically they are very slow to respond.

**Joe Hack:** Simple answer is to go out and search if EPA has any definitions.

**Craig Coker:** NCCC has not searched for these definitions. Would like to go back and understand what water quality did in regards to sampling at compost facilities back in 2005 and 2006? Never had a satisfactory explanation on how the data was collected, was it valid data.

**Ken Pickle:** Will have this data at the next meeting – was 3<sup>rd</sup> homework assignment from December meeting and has not been forgotten.

**Scott Mouw:** Even after seeking legal counsel and reviewing data we will be left with water that touches the compost is wastewater. We have to march our way to BMPs

**Ken Pickle:** Group needs to address how to manage this wastewater, accommodate the industry, and move forward even if the data is poor. 2005/2006 Wallace and Brooks came to DWQ and we could not issue a stormwater permit for these operations. We were dealing case-by-case and trying to be consistent. In the end we're here to compromise and listen. If it's weak wastewater treat it as weak and if it's strong wastewater treat it strongly.

**Craig Coker:** would like to ask DWQ to consult with its colleagues in other states.

**Scott Mouw:** Disagrees that NC is the only state calling this wastewater. There is a distinction when water hits a pile it is the wastewater. Sometimes in NC we are pioneers and we have the arrows in our back. We have great resources to work through these things and get to the point where we have a growing and vibrant composting industry with no impact on the waters.

**Noel Lyons:** I absolutely agree with you on that. Where do you start drawing the line on wastewater? At the mine it is considered industrial wastewater but at the reseller or supply yard what is the runoff considered?

**Ken Pickle:** DWQ has no authority to regulate once it leaves the site unless there is a water quality violation. Need to get better clarification outside of the wastewater area and into the stormwater.

**Michael Scott:** We're designing for 25 year storm not 100.

**Bob Rubin:** If it's discharge from a named storm they will recognize there's a discharge and will not fine you for it, you don't have to report it. Believe it is in the non-discharge portion of the 2T rule – will check on it.

**Joe Hack:** Process water and wastewater – in my process rainwater is going to touch my compost pile and I'm going to collect that and put it back into my piles. At what point does it become wastewater? To my customers I would like to say its process water.

**Ken Pickle:** Most of the recycle systems are in the 2T rules.

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**4:00 PM**                      **WHAT ISSUES DO YOU HOPE THIS PROCESS SOLVES FOR YOU? Dave Halley**

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**4:10 PM**                      **NEXT STEPS/CLOSING**

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**4:15 PM**                      **DEPART**

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**Minutes compiled and submitted by:**

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