Composting Stakeholders Meeting #1
August 2, 2017; 9 AM – noon
NHDES Office Building, 29 Hazen Drive, Concord, NH

Attendees:

- Sara McGraw (NRRA)
- Mike Nork (NRRA)
- Martin Srugis (NH State Hospital)
- Judy Houston (NHDES – Water Division)
- Mike Simpson (Antioch University New England)
- Olivia Saunders (UNH Cooperative Extension Service)
- Bob Magnusson (Waste Management, Inc.)
- Kim Scamman (Blue Farm LLC)
- Bob Kelly (Seacoast Farms Compost Products, Inc.)
- Adam Clark (City of Concord)
- Mark Richardson (Town of Hampton)
- Kristen Simard (Star Island Corporation)
- Rachel Worthington (Star Island Corporation)
- Marc Morgan (City of Lebanon)
- Scott Hazelton (Town of Sunapee)
- David Jeffers (Lakes Region Planning Commission)
- Evan Ford (UNH Kingman Research Farm)
- Matt Smith (UNH Dairy Farm)
- Janet Bowen (EPA – Region 1)
- William C. Meagher, III, P.E. (Loureiro Engineering Associates)
- Melissa Zych (NHDES – P2 Program)
- David Morrill (WS Badger Company)
- Vickie Davis (Upper Valley Lake Sunapee RPC)
- Athena Bradley (Northeast Recycling Council, Inc.)
- Zachary J. Conaway (Dartmouth Hitchcock Hospital)
- Josef Quirinale (Food Services – Keene State College)
- Elise Fuller (Citizen Advocate/Eliot Hospital)
- Cindy Sterling (NRRA)
- Regan Pride (North Country Council)
- Tara Albert (NHDES – Solid Waste Bureau)

Not in attendance:

- Scott Bradford (Peterborough Transfer Station)
- David Allen (Casella Waste / Bestway Transfer Station)
- Lee Anne Childress (Citizen Advocate / Town of Loudon Recycling)
- Norman Staunton (NRRA)

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9:06 AM: Meeting commenced.

9:06 AM – 9:33 AM: Opening Remarks / Greetings

Pamela Hoyt-Denison, NHDES, provided information as follows:

- Welcome
- Meeting Purpose
- Agenda
- Handouts in folder

Mike Durfor (NRRA) also greeted the group

9:33 AM – 10:04 AM: Group members introduced themselves.

10:06 AM -10:15 AM: Break

10:15 AM - 11:05 AM: Presentations by two operating NH composting facilities with questions from workgroup members:

- Bob Kelly, Seacoast Farms Compost Products, Inc., Fremont
  - Accepts leaves, grass, horse manure, agricultural cuttings, food waste from towns, residents and other generators
  - Produces organic compost using aerated windrow method
  - Sells organic compost, Superloam (enriched topsoil for better gardens), Nutri-Mulch
  - Holds NHDES issued permit-by-notification to compost food waste
  - See also attached handout

- Kristen Simard and Rachel Worthington, Star Island Corp. , Isles of Shoals
  - 100-120 staff, year round composting
  - 55000 lbs food waste produced
  - 40,000 lbs composted; 15000 lbs eaten by chickens
  - In 2002, obtained NHDES issued permit-by-notification for small food waste composting facility, with waiver allowing meat and dairy
  - 2003-2010, passive management of compost- -dumped food waste, covered with wood chips; Result: Terrible odor – "stunk out harbor"; suspended operations
  - 2013/2014 – Resumed operations using more active management
  - Chickens don't get meat/dairy – mostly get kitchen trimmings
  - Use shredded cardboard in food mix to help reduce odor (1:1 ratio)
  - Positive air flow into piles to provide aeration – powered by ½ hp motor
  - Use bucket loader / Tip 64 gallon tote into bucket
  - Have trouble with plastic, pick out by hand; try to use greenware
  - Problem with seagulls and other pests; effective control is covering with large pieces of cardboard, weighted down with tree limbs/brush
  - Test temperatures everyday / Temperature of pile ~160°F

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- Keep sludge compost separate throughout process; hope to use it to "top dress" the lawn
- Dump totes every other day
- Cap w/ woodchips or finishing compost 4-6 inches
- 3 distinct layers – each w/ own cap
- Problems:
  - Pest control – seagulls
  - Equipment
  - Communication
  - Space and Volume
  - Finishing pile – pest control
  - Access to off-island resources, in particular woodchips
  - Salt
  - Incorporating greenware into compost
  - Chipper forms fluff – lots of fluff
  - Odor not as much of a problem anymore

Group Questions/Comments

- Consider using negative air flow or switching between positive and negative
  - Filtration media for negative flow – wood chip pile/finished compost
  - Co-gen use of heated air from pile for water heating or power generation
- Crush glass onsite

11:05 AM - 11:10 AM: Break

11:10 AM - 12:15 PM Group Discussion

- Michael Simpson –
  - Quality of end product drives everything
- Bob Kelley –
  - Not many facilities of my size; which size do we focus on first?
- Marc Morgan –
  - Definitions are critical
  - Not just talking about fruit, vegetable, meats, and dairy
  - For example, Lindt chocolate cocoa shells and brewery waste are legitimate types of feedstock
- Bob Kelley –
  - 1st step should be to focus on smaller facilities
  - Maine – 500 farms; State gave everyone permits for 500 yards of compost
  - Had a team to go out to visit facilities
  - Need to look at the whole system, not just the facility/process – collection, transportation

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    - Towns are ideally set up for Star Island model
    - Streamline system
    - Pilot program – way to go is small
- Tara Albert –
    - We need to identify what we are talking about (i.e., pre-consumer or also post-consumer; composting food waste or all organics?)
- Pamela Hoyt-Denison –
    - Mike---What is most relevant to the NRRA grant proposal?
- Mike Durfor –
    - What is the end product?
- Bob Kelley –
    - Process is the lynch pin, always a market to sell the product
    - Always new markets/uses
    - The issue is the system – collection, transportation, production
- Michael Simpson –
    - Limited to the economics of how far feedstock can transported to a composting facility
- Bob Kelley –
    - Pick a few towns to use NRRA model – transfer stations
    - Separate out cardboard/glass
- Mike Durfor –
    - Does this make sense for every transfer station?
- Matt Smith –
    - Is it better to have centralized midsize operations versus small size?
    - Smaller scale typically uses volunteers – is that economically feasible?
- Regan Pride –
    - We did some economic feasibility studies on transfer stations; found it cost $100/ton and up to produce compost
- Matt Smith –
    - We must consider how economically feasible our recommendations are
    - If not feasible and we recommend it, hurts our reputation
- Regan Pride –
    - Grafton County farms, Coos County have access to cheaper labor (inmates)
    - But there are concerns about permitting, runoff, environmental effects
- Cindy Sterling –
    - NRRA grant is to look at:
        - Can this be done successfully at transfer stations?
        - What would it take?
        - How do citizens of town factor in? – we will look at the whole system
        - Where would hub and spoke be set up?
- Matt Smith –

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    - Does NRRA grant include looking at carbon footprint of process?
- Cindy Sterling –
    - Yes
- Zachary Conaway –
    - I'm a resident of VT, where small facilities closed down because they were told they had to take in material, but did not have guidance on what to do with it
    - This forced towns under; it was cheaper to just let Casella manage
    - The cost of the logistics is critical factor to consider
- Athena Bradley –
    - Important to look at experiences and requirements in all states
    - Also, what makes sense for different size operations – e.g., small facilities might not need screens
    - Community composting is a model to consider
- Tara Albert –
    - Screener mobility ---could NRRA purchase mobile equipment and rent to towns?
- Athena Bradley –
    - There is a model for sharing screeners and grinders
- Regan Pride –
    - Yes, I have heard of places renting screeners; it's feasible
- Tara Albert –
    - Could Regional Planning Commissions get together on this?
- Kim Scamman –
    - Consider different delivery options:
        - Using curbside pick up
        - Add cost to town budget to pick up/deliver to regional recycling facility
        - Widespread towns: have residents deliver their full collection buckets to recycling center
        - Pick up by local businesses at centralized area
- Pamela Hoyt-Denison –
    - Back yard composters – how can we encourage?
    - Do we try to pilot something like pick-up for a centralized area, in addition to transfer station pilot?
- Mike Durfor –
    - VT model: rolled out in phases
    - Started at 2yd – moved up to 6 yd over time
    - Pick up at transfer station
    - Need infrastructure - where is it economical?
- Kristen Simmard –
    - How much of waste is food?
- Regan Pride –
    - 46% mostly food scraps

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- Michael Simpson –
  - If post-consumer food waste is part of feedstock, compost has to meet Process to Further Reduce Pathogens (PFRPs).
- Mike Durfor –
  - What does that change?
- Michael Simpson –
  - Have to show record of temperature, how managed, process to contain pathogens
- Athena Bradley –
  - Successful operations are all about the training
  - Log books
  - Use enclosed bins, tumblers, aerobins
  - Stay away from meat to start with
  - Use a lot of volunteers
- Michael Simpson –
  - Facility scale composting is a solid waste technique that needs to be managed; it's not just a backyard operation
  - I have seen too many facilities not managed well, that then come under scrutiny
- Matt Smith –
  - Important to look at labor/time requirements
  - May need full time at some sites, part time at others
  - Transfer stations may not have volunteers
- William Meagher, III –
  - Surface water/groundwater impairment possible
  - We can't just say "It's organic" and assume it will take care of itself
  - Currently working on large scale project in Virginia - $15million facility, $800,000 just in engineering to manage; there are many considerations
- Mark Richardson –
  - Small facility may not have space for population boom
  - Larger communities may not have space
  - Population growing – staff may not grow with it
  - Can envision collection process but not managing yourself
  - Many requests for residential, but when thinking about bringing in restaurants/businesses, there are additional considerations
  - Technology is there to deal with odors
  - Not just composting, but distribution to other sites
- Zachary Conaway –
  - Education is critical
    - Need to educate staff at institutions and businesses about what goes into pile

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        - Need to educate residents about what can go into pile, i.e., they need to know that if they bring non-compostable material, it just ends up in landfill anyway
- Tara Albert –
    - At Maine Composting School, we visited transfer station in Farmington, Maine
    - It is working with 40 families to educate on what can go into compost
    - Residents don't know what to do, if not informed
- Cindy Sterling –
    - Vermont had volunteers at the collection centers to help educate and ensure people put in only right stuff
    - After 6 months, most were educated enough to not need volunteers anymore
- Kim Scamman –
    - How should anaerobic digestion be brought into workgroup discussions/work?
- Pamela Hoyt-Denison –
    - Good question--in addition to composting, NHDES must look at and include anaerobic digestion in its rulemaking efforts
    - Currently, rules do not explicitly address anaerobic digestion
- Kim Scamman –
    - The term composting is limiting to conversation
- Regan Pride –
    - The current rules don't speak to anaerobic digestion
    - Is it that rules have stifled?
- Kim Scamman –
    - So is the conversation about composting or organics diversion?
- Mark Richardson –
    - It should be both
- Michael Simpson –
    - VT started by looking at the Maine farm idea, but it did not provide control over process and farmers didn't want to start because it would open door to being regulated
    - Even with anaerobic digestion, there is solids residue that needs to be composted
    - Private hauling sector doesn't feel there is enough certainty about what materials will need to go where
    - Regulators only focused on composting process, not the entire system
    - Have to change system if you are going to receive compost at transfer stations
    - Many will just transport elsewhere
- Zachary Conaway –
    - Transportation costs get higher and higher
- Marc Morgan –
    - Many composters will work with us because we have a low value product – don't need high value

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    - Lebanon Landfill does not have screeners
    - Diverted more because not everyone can meet standards
- Michael Simpson –
    - Either get revenue from tipping fees or incentives/tax breaks
- Athena Bradley –
    - Many haulers getting on board
    - They are looking at hierarchy of waste
- Shelagh Connelly –
    - When we started taking in organics, we saw herbicides
    - Historically, composting not tested/vetted/held to high standard
    - Some compost can be harmful and kill the plants it is applied to
    - Need regulation of site of application
    - We should strive to export Phosphorous/Nitrogen from coastal areas, not import – e.g., not the best for Hampton
    - Must manage nutrients
    - Compost comes to site with everything it had at the supermarket
- Athena Bradley –
    - Manure is often source of herbicides
- Shelagh Connelly –
    - Have seen waste from elementary school with herbicides
- Athena Bradley –
    - Everything needs to be tested
- Shelagh Connelly –
    - But it's not, under the current scheme
- Pamela Hoyt-Denison –
    - This is part of tension NHDES experiences – on the one hand, regulations---like testing and standards---are seen as a barrier to promoting composting, while on the other hand, without some regulation and control, we will have poorly run facilities, no accountabilities, and questionable end products
    - For example, typically, any amount of paperwork is seen by the regulated public as "red tape"; but without paperwork we cannot ensure facilities meet standards, etc.
    - Need to guide and verify product quality
    - Public will often say "if we have to test, keep records, get permits, it's not cost effective so count us out
    - A desired outcome of this work effort is to find and demonstrate cost effective systems to compost
- Olivia Saunders –
    - Do not have to test for individual pesticides; that is costly (could be $100s in testing to determine exactly what is in the compost)
    - Instead, do bioassay for less
- Pamela Hoyt-Denison –

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- We need to wrap up / it's almost noon
- Next meeting is August 30, 9 to noon, same place
- What should our next steps be?

- Judy Houston –
  - Seems like this discussion concentrated on what operations/pilot testing should be focused on vs. developing BMPs
  - Suggest looking BMPs on a pilot track
  - Identify NHDES and NRRA's goals, see where they jive
  - Determine what issues people are having and address in rules or BMPs
  - Break up into sub-groups: group for BMPs, group for pilot demonstration projects
- Regan Pride –
  - Divide ourselves by Pilot Program and Rules
  - The BMPs will grow from Rules
- Judy Houston –
  - BMPs are guidance for complying with rules
- Pamela Hoyt-Denison –
  - This goes to Kim Scamman's question: What is the scope of what we are trying to address here?
  - NHDES has an obligation to go through rules and identify what needs to be fixed
  - How big will this rulemaking be? Just composting or all organic management methods, including AD?
  - The existing permit-by-notification for small food waste composting is seen as a barrier; we can see room for improvement/it is flawed
- Mark Richardson –
  - Have to start somewhere
  - Starting with a smaller project fine with me
  - Multiple tracks
  - Some of us will be doing work
- Judy Houston –
  - Little committees
    - Do what we did with Env-Wq 800
    - Started with general thing we wanted to tackle
    - Pulled people into smaller group
    - Some people sat in all groups and reported back to larger group
- Tara Albert –
  - Look at notes after meeting
  - Identify what tracks exist
  - Ask what tracks we want to focus on
  - What parts are you most committed to?
  - Review documents in folder Pamela Hoyt-Denison provided

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- Judy Houston –
  - We are brainstorming
- Pamela Hoyt-Denison –
  - Having one pilot – might be best to combine 1 or 2 facilities and a couple of towns under 40 person model and look at system elements: collection, transportation, operations/production
  - Determine what might work best logistically
- Mike Durfor –
  - Want to use smaller community on ground, use BMPs as we go along
  - If we break out into smaller groups on August 30th, that would be fine
- Athena Bradley –
  - In state like NH, a smaller pilot is a good idea
- Mike Durfor –
  - Smaller units might not be economical
    - Some economic studies say $250,000-300,000 models
    - Not sustainable for small towns
  - How much does composting save us?
  - Processed food packaging a problem
- Michael Simpson –
  - Delaware study – 40% of food entering in packaging
    - Plastic short circuits everything
  - NRRA should propose BMPs
    - Choose what BMPs to suggest
    - Bring to committee
    - Use as template to refine for what NRRA wants
    - Let's not try to create BMPs from ground up; better to respond to a proposal by NRRA than to create from ground up
- Athena Bradley –
  - We should study models/case studies, along with BMPs--
    - Models can provide out of box examples
    - Exeter/Maine: Good models are out there
- Pamela Hoyt-Denison –
  - Any models you can provide for our review would be helpful
  - Delaware model – where was the packaging coming from?
- Michael Simpson –
  - Restaurants, grocery stores
- Judy Houston –
  - Break it down
  - Send out a list asking people what they want to be involved in
- Michael Simpson –
  - Regulatory focus issues are broken into triad

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- Can use same triad for BMPs

- Pamela Hoyt-Denison –
  - Yes---Triad: Siting Requirements, Design Requirements, and Operating Requirements
  - Refer to 3 related documents titled "Summary" in your packet of handouts. Review these identify which existing rules should be red lined, preserved as is or preserved but worded differently
  - We know certain requirements pose problems
  - Other things are poorly worded or redundant, but still have value if reworded
  - Also, identify missing information/requirements, e.g., there is no explicit requirement re: Carbon:Nitrogen ratios
    - Rules state "must do everything practicable to minimize odors, but C:N not addressed; Should C:N ratios be specified in rules? Should there be information for formulating compost recipe(s)?
  - I suggest focusing on siting/design/operating requirements first, then look at how to improve the permitting system to implement the requirements
  - We regulate facilities through a permitting system by statute. That won't go away.
  - Current system--
    - Standard permit
    - Permit-by-Notification
    - General Permit – you register for
    - Permit Exemptions
  - We could create a General Permit for certain compost operations, similar to federal stormwater general permit for those of you that know of that; you would register to use the general permit, vs. having to apply for and be issued a permit. General Permit users must then follow the permit guidelines
  - We appreciate your time
  - Sorry to hold you over
  - August 30th same time, same place
  - Look for follow up email from me prior to meeting

Meeting terminated at 12:15pm

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Seacoast Farms Compost Products

Product Information

- **Incoming Materials** – Leaves, grass, horse manure, agricultural cuttings, food waste.
- **Organic Compost** – a stable, cured soil amendment for use in gardens, specialty plantings, and engineered mixes for drainage projects and high-end plantings.
- **Superloam** – a 50/50 blend of loam and our compost that makes a superior topsoil for use in lawn installations and specialty projects. We screen to a 3/8" sieve.
- **Nutri-Mulch** – a 50/50 blend of dark natural mulch and our organic compost, this product provides the optimum in plantings' management. This is a product for weed management without sacrificing plant nutrition. Reduces irrigation needs.
- Both our compost and *Superloam* are approved by the NH Department of Agriculture for use on certified organic farms and in organic planting applications. We are compliant with NOP Section 205.203(c)(2). Our products are tested every year.

Food Waste Permit

Seacoast Compost has the first food waste permit in New Hampshire, from 2001. Has accepted bulk waste from Hannaford and Wal-Mart grocery stores, segregated fish waste, and Mr. Fox Composting pick up service in seacoast NH.

Company Background

Bob Kelly has over 20 years experience in organics management, project design, and composting facility operations. He currently is the owner and chief operator of Seacoast Farms Compost Products, Inc., the largest organic composting facility in New Hampshire. They are the largest facility to receive approval by NH Department of Agriculture for compost use on organic farms. Seacoast Farms Compost currently markets over 20,000 yards per year of organic compost, topsoil and mulch blends to commercial and residential customers.

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