

**RE: PUBLIC ENGAGEMENT QUESTIONS – ORGANICS – REQUEST FOR COMMENT AND SOLUTIONS**

Good evening,

Attached you will find my response to the call for public engagement regarding the organics topic.

Please let me know if you have any questions.

Thank you,

Jorge

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**RE: PUBLIC ENGAGEMENT QUESTIONS – ORGANICS – REQUEST FOR COMMENT AND SOLUTIONS**

To Whom It May Concern:

Atlas Organics is pleased to provide comments to the Connecticut Coalition for Sustainable Materials Management (CCSMM) through the Public Engagement Questions for Organics Infrastructure.

Atlas Organics is a developer and operator of compost facilities in the continental United States. These facilities are operated through Public-Private Partnerships (PPP) with municipalities. Atlas Organics also offers a stand-alone solar powered fully remote Extended Aerated Static Pile (EASP) Modular Units with training, and on-going technical consulting and reporting services. These Modular Units can be operated by municipalities, private operators, or by Atlas. Below you find the answers to the questions (bold).

**Public Engagement Questions**

**Responding to Focus Area: 2(b)(ii) and (iii) Organics – development and siting of infrastructure: Composting facilities and Municipal on-site composting operations.**

- 1. Are there any model programs, best practices, or innovative concepts that the Coalition should consider, that could provide a scalable solution in any of the Focus Areas, listed above? The Coalition is interested in hearing about approaches that are conceptual, implemented on a pilot basis, or implemented at scale, whether here in Connecticut or in other jurisdictions in the United States or other countries.**

Answer:

Yes. Atlas Organics has several operations that can be used as starting blocks to build infrastructure in CT. Our operations accept feedstocks that are controlled by the municipality in exchange for a per ton tipping fee. These feedstocks are in long-term agreements with the municipalities and accept a variety of feedstocks including yard waste, food waste, and biosolids. Atlas Organics also accepts food waste from our internal hauling division into our facilities. Atlas Organics hauling division operates collections for commercial and residential customers in South Carolina, North Carolina, and Tennessee and also offers product delivery service in all markets a compost facility is present. Atlas has managed the development and permitting of all of its sites in conjunction with the municipalities involved.

Atlas uses the Extended Aerated Static Pile (EASP) composting method, which shrinks the footprint needed compared to single windrows and uses a biolayer of single ground woody material or compost to act as a biofilter on top of the composting material. Atlas manufactures soil amendment, compost, that is sold back into the agricultural, landscaping, and home gardening markets. Atlas strives to generate a consistent and high-quality product that can be sold into the marketplace, improving the quality of local

soils. All of our facilities are run by trained operators and our compost products are certified through the US Composting Council Seal of Testing Approval.

Atlas Organics' investors and board have been involved in the waste industry and impact investing for decades and are excited about the possibility of bringing our composting operations to new regions across the US. Atlas is actively involved in the United States Composting Council (USCC) and many other state and national organizations leading in composting research and market development. Many members of the Atlas management team participate in national composting committees and present at national conferences and trainings.

The table below summarizes each composting facility:

	<b>Greenville County, SC</b>	<b>City of Durham, NC</b>	<b>Indian River County, FL</b>	<b>City of San Antonio, TX</b>	<b>Small Pilot Project</b>
<b>Location</b>	11075 Augusta Road Honea Path, SC	2115 East Club Blvd Durham, NC	925 74th Avenue SW Vero Beach, FL	8963 Nelson Road San Antonio, TX	Upon Request
<b>Contract Length</b>	5 years with (2) 5-year renewals	10 years	10 years	10 years with (2) 1 year extension	2 years (Pilot)
<b>Date Completion</b>	Development - 05/2016  Ongoing Operations	Development - 05/2018 (Yard Waste) Development - 11/2019 (Biosolids & Food Waste)  Ongoing Operations	Development - 01/2020  Ongoing Operations	Development - began 05/2020  Operations anticipated to start Jan 2021	Development - began 2020  Ongoing Operations
<b>Facility Capacity</b>	12,000 TPY	Yard Waste Composting 15,000 TPY, Biosolids & Food Waste Composting 50,000 TPY	175,000 TPY	100,000 TPY	6,000 TPY
<b>Site Permit Type</b>	Type II (Yard Waste and Food Waste)	Type I (Yard Waste) Type IV (Yard Waste, Food Waste, Biosolids)	Source Separated Organics Processing Facility Registration (Yard Trash/ Vegetative Waste Compost Facility)	Source Separated Organics Processing Facility Registration	Pilot variance to compost food waste
<b>Processing Method</b>	Extended Aerated Static Pile	Extended Aerated Static Pile	Extended Aerated Static Pile	Extended Aerated Static Pile	Modular EASP Unit
<b>Products Generated</b>	STA Food Waste Compost	STA Yard Waste Compost STA Class A EQ Biosolids Compost	OMRI Yard Waste Compost (Pending) STA Food Waste Compost	STA Food Waste Compost (Future)	STA Food Waste Compost (In Process)

**2. For any solution identified in Question 1, what are the barriers that need to be addressed in order to advance any of these solutions at scale in Connecticut?**

Answer:

For new Public-Private Partnerships (PPP) composting operations to be successful, they need to address 3 main areas very well: feedstock collection, processing (composting), and finished product. For us, having a clear understanding on these 3 areas, allow us to create a mutually beneficial PPP agreement so that we can finance a new composting facility and operate it successfully beyond the life of the agreement. Additionally, if municipalities do not have the funds available to upgrade the infrastructure or build a facility from scratch, Atlas can finance the facility and build that cost into the tip fee for the life of the project. Below we outline information to consider in each of the 3 areas mentioned earlier, plus some more information about PPP agreements.

Feedstock Collection

To compost food waste, you need carbon, the typical carbon feedstock is yard waste. Typically, municipalities collect yard waste or have contractors haul it and grind it for them, or they may do it themselves. This material is critical to ensure you can compost food waste without issues. If there's not enough carbon to compost the food waste, odors will arise, and composting will take longer. Understanding the availability and seasonality of carbon is necessary to understand how much food waste you could compost. In our case, if we were to compost for you, we would recommend existing yard waste haulers to continue to haul and we would work with existing local food waste hauling companies to expand their collections. These companies could team up with the municipalities to expand their programs or they can continue with their existing business models. If there were no existing local food waste haulers, we could replicate our residential and commercial food waste collection program.

Processing (Composting)

Atlas Organics uses the Extended ASP (EASP) composting method because it provides consistent aeration and uses compost or single ground woody material as a biofilter cover to provide insulation and prevent odors. When compared to stand alone windrows, EASP allows us to shrink the footprint and increase the throughput of any site. The location of the site is critical in reducing capital expenses of setting up a new composting facility. The area can range from 2 acres to 20+ acres depending on how much the municipality would like for the operation to process. We have co-located near landfills and on wastewater treatment plants. Understanding the availability of utilities will affect the cost as well.

Finished Product

A successful composting operation can only happen if the end product, the compost, has value. Our compost is certified through the US Composting Council Seal of Testing Approval (STA) program. The STA program requires that facilities follow local, state, and federal rules, as well as test the compost through certified laboratories for regulatory parameters and other horticultural parameters. Making sure you understand where the compost is going to be used is critical to making sure backlogs and stockpiling of material is prevented. At our new facilities, we commission a market study and then we hire and train a local salesperson to understand the needs of the community to find homes for the compost products. We can also set up agreements with the municipality to provide a percentage of compost back for

residences as an educational program. We highly recommend to limit compost giveaways to small quantities, as free compost devalues the product and makes it harder to prevent backlogs and stockpiling of material. Additionally, we can set up revenue-share agreements with the municipalities.

PPP Agreement

Understanding what is available and the requirements in the 3 areas above is critical to create the PPP agreement. It is important to understand the role different entities will play in the agreement. In our case, Atlas Organics focuses on processing of the incoming materials and sales of the compost. In setting up a new composting operation, especially a PPP, each municipality needs to understand that the “tip fee” will have to be co-created through an understanding of land available, utilities, amount of materials, type of composting facility, and other factors. Each PPP will evaluate different aspects through the life of the project. To make the financing of a composting facility possible, Atlas Organics requires a 10-year contract term. This allows the economics to work for the duration of the project and beyond.

**a. Are there different implementation considerations for full or partial “subscription” towns versus towns that provide for curbside collection of trash & recyclables?**

Answer:

Contamination is the only consideration I recommend be highlighted here. In our experience, subscription services tend to have less contamination in the feedstock (i.e. plastic, metal, etc) compared to curbside commingled collection. Curbside commingled is being done in different cities across the country, but typically the composting operation has to deal with the contamination found in the bins. If it is not sorted before the composting takes place, then the trash will remain in the material composted. Contamination would have to be clearly addressed in the PPP agreement.

**b. Is it necessary or beneficial for the solution to be implemented on a statewide, multi-town, or other regional basis, or can it be implemented successfully town-by-town?**

Answer:

For us, it really depends on the amount of feedstock that could be part of the PPP. In general, the smallest that makes sense for financing a new composting facility is in the 15,000 to 20,000 tons of material per year. A regional approach could work in which several communities enter into an intergovernmental agreement to build a new composting facility.

If this is not possible, we do offer solutions in which we provide the composting equipment, training, and technical assistance for a municipality or a private operator to compost themselves. We offer this as part of a lease for our fully remote and off-the-grid Modular EASP Unit for small generators of organic waste or for demonstration purposes. This Unit can be placed on an existing site with proper permits and approvals and is able to compost starting at 3,000 tons per year of material, servicing the food waste composting needs of 10,000 households and up. This Unit comes with all of the equipment ready to compost, technical assistance, temperature alarms and logs, as well as reports for regulatory purposes. Two additional add-ons for this lease are a small wheeled bucket loader (Volvo L25) and an Atlas operator in case that a municipality would like to have us operate the site.

**3. For any solution identified in Question 1, please describe the types of implications or benefits that the solution provides with respect to:**

**a. Sustainability- environmental benefits,**

Answer:

Compared to windrow composting, EASP only need wheeled loaders, they do not need specialized turning equipment. This also helps to reduce diesel usage and relies on electricity to power the aeration blowers, which could be sourced from renewable energy, depending on the utility. Regarding building materials, the most simplistic, and most likely lowest carbon footprint, method is to use an existing flat compacted soil pad and place the perforated pipes on grade. From this design, it can get more complicated and with it the carbon footprint, trenches, concrete, walls, etc. The aeration system consists of the controls, temperature probes, hard plastic blowers, PVC pipes for the manifold, and HDPE piping for the aeration pipes. To prevent odors and insulate the composting material, a biofilter cover is placed on top of the EASP. This biofilter cover is made using compost, wood chips, or recycled overs made right on site.

Regarding the Modular EASP Unit, Volvo has plans to release an electric L25 small wheeled bucket loader, which could essentially make all of the unit run off of electricity.

**b. Reducing costs**

Answer:

The time to meet regulatory requirements is 3 days vs the windrow composting timeframe of 15 days with 5 turns in between. This means that you can process material faster in the same footprint. Atlas Organics makes compost in 45-60 days depending on the market and the material composted. Our Modular EASP Unit comes with an easy way to report the time-temperature regulatory requirement, saving hours of data management.

**4. Would you be interested or willing to present to the Coalition or a Coalition working group on solutions you've highlighted, or is there another speaker or organization that would be helpful for the Coalition to hear from on this topic?**

Answer:

Yes, we would be happy to share our experience.

**5. DEEP can play an important role in advancing sustainable materials management solutions, including: issuing RFPs for long-term energy contracts to support anaerobic digestion facilities; providing grants for collection trucks powered by compressed natural gas (CNG) or electricity through the Volkswagen settlement; employing different approaches to permitting innovative technologies; and streamlining permitting processes. Are there things that DEEP should do differently in its approach to any of the above roles/functions, that would better support sustainable materials management in Connecticut?**

Answer:

Streamlining permitting processes and clearly outlining what type of permits are needed on the solid waste, air, and water sides.

**6. Are there any solutions that you would like the Coalition to know about that do not fit within the Focus Areas above?**

Answer:

I encourage the Coalition to think about organics recycling methods and technologies that provide flexibility to process various types of food waste (pre and post consumer from residential, commercial, and industrial streams, compostable utensils, plates, etc). And also that take into account all of the costs and plans what to do with all of its byproducts.

**7. Are there any aspects of the Focus Areas, listed above, that the Coalition should *not* consider (and if so, why)?**

Answer:

No response.

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We appreciate this opportunity to provide insight from what we have put into practice. If you have any questions, please do not hesitate to contact us at 864-345-0190 or [jorge.montezuma@atlasorganics.net](mailto:jorge.montezuma@atlasorganics.net).

Best regards,

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