

GREENER BY EXAMPLE: REMOVING BARRIERS TO  
COMMUNITY ORGANICS RECOVERY IN ULSTER COUNTY  
CFA # 56017

### **Synopsis and Alignment with Category 3 CGC Goals**

Ulster County, in partnership with the Ulster County Resource Recovery Agency (UCRRA), is submitting a proposal to NYSERDA under the *New York Cleaner, Greener Communities* program to expand and remove market barriers to regional composting. This proposal demonstrates an innovative approach, consisting of outreach and education, market analysis, customer support and facility improvements which set a path to overcome a serious market barrier to regional composting through a collaborative project providing significant community wide GHG emission reduction and cost savings.

### **Background**

Since the Ulster County and the Mid-Hudson Region do not have a municipal solid waste (MSW) landfill, UCRRA currently transports MSW to landfills located in Central New York, at substantial economic and environmental costs. *In a two year period (2013-2014), Ulster County spent in excess of \$2.6 million on diesel fuel, driving over 3.8 million miles and emitting over 9,500 MTCDE to transport our waste.*

Ulster County is fortunate to have one of only two municipally-operated Extended Aerated Static Pile (EASP) composting facilities in New York State. This facility, operated by UCRRA, accepts organics, including food scraps, yard waste and other compostable waste and creates a finished compost product which can be used as a soil amendment. UCRRA's advanced, EASP method significantly reduces fuel use and greenhouse gas pollution when compared to landfilling. This process eliminates the need for transporting organic waste across the State and reduces methane emissions that would occur if materials anaerobically decompose at a landfill facility. In addition, composting provides a valuable soil amendment that can lessen the use of energy intensive synthetic fertilizers.

The UCRRA organics recovery facility currently processes approximately 500 tons of organics annually. Considering that about 12.5% of the municipal solid waste stream is food scraps which could be diverted to the County's composting facility, there is substantial opportunity to expand the volume of waste diverted from landfills for disposal to the UCRRA facility. UCRRA estimates that in Ulster County's commercial waste stream there are 20,000 tons of food scraps disposed of as MSW annually.

UCRRA has worked to increase incentives to encourage communities to separate organics for composting to the greatest extent possible by discounting its fee to approximately one-third for organic material versus MSW (\$33/ton versus \$103/ton). In 2014, the rate for organics disposal was further discounted to \$20/ton, which is below the cost of processing the material, when a significant drop off in material disposed at the facility was experienced. However despite the low tipping fees, economic and market barriers continue to impede broader adoption of community composting and waste diversion. Most notably, private waste haulers are unable to offer a lower rate for the collection of organics than that of MSW under existing business models. Haulers require economies of scale. They need robust customer base to reach a route density that makes collection of organics cost efficient. They also require capital investments in new equipment to handle the pick-up of organic materials. Large institutional customers similarly face barriers to composting, including costs for new containers to collect organics, funding to train staff, and investment in establishing systems and procedures for the separation of organics. As a result of these barriers to both haulers and customers, few commercial customers have established organics collection programs. A critical mass of customers is necessary to make collection cost-effective for haulers and as well as customers.

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## **Proposal**

This project seeks to reduce market barriers to wide-scale implementation of municipal composting in this region through the following steps:

### **Incentivize Composting/ Reduce Cost to Compost**

- A grant-funded subsidy to UCRRA allowing the elimination of tipping fees for organics for two years and a reduced rate (\$11/ton) for the third year. This cost reduction will reduce the cost to businesses and individuals to compost thereby creating a larger customer base, which will in turn lower operating costs for private haulers. This is necessary to reach a critical mass in the market place to support organics collection. A market study would be conducted to review UCRRA's operational costs of processing compost and viable commercial compost hauling rates in order to set a sustainable tipping fee for organics after the initial three years funded by this grant.
- Support for generators of organics through purchase and distribution of compost bins (totes) for commercial customers as well as technical assistance to set-up composting programs. These bins are usually purchased by the commercial collection services and the cost is passed on to the customer.

### **Improve UCRRA Organics Recovery Facility Capacity**

- A ten-fold expansion (over three years) of current composting area/capacity at UCRRA by improving the composting facility. This project would result in an increase from 500 tons to 5,000 tons annually thus creating the capacity to handle a large scale municipal composting effort. Build out of the site would include: a leachate collection system, organics receiving building, aeration equipment, and a covered building for bagging finished material.

### **Significantly Increase Demand for Composting and Finished Compost**

- Identify and map food service operations and institutional generators within the UCRRA service area. Produce marketing and educational materials for potential generators. Outreach to all identified potential generators--but especially target areas of higher customer density which would yield more cost-effective hauling routes. Collaborate with implementation of the UC Food Service Waste Reduction Act.
- Identify and outreach to multi-unit residential complexes, particularly those serving low to moderate income residents, to provide education and support regarding the benefits of organics diversion.
- Purchase and install a compost bagging machine which will greatly increase the marketability of finished compost. A market for finished compost is necessary to increase the revenue associated with the compost operation and remove another barrier to a self-sustaining program. Locally produced compost also provides greater sustainability benefits by reducing the need for energy intensive synthetic and imported soil amendments.

### **Ensure Woody Bulk Necessary for Composting**

- Appropriate and beneficial re-use through composting of Emerald Ash Borer-infested wood (a major material management issue in the region) as carbon-bulking material necessary for the compost process.

### **Demonstrate Compost Recovery at County Facilities**

- Establish an organics recovery program at the Ulster County Law Enforcement Center and possibly other sites which produce significant quantities of food waste. Case study materials would be created throughout the process in order to provide information to other jurisdictions. The project would be developed as part of the County's **Sustainable Ulster: Greener by Example** initiative.

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## Proposal Alignment with Selection Criteria

### 1. Stimulate Market Transformation

Through this proposal, Ulster County is seeking to expand the capacity of its current composting operation, managed by the Ulster County Resource Recovery Agency (UCRRA), by making the process and costs associated with separating food waste more attractive to haulers and their commercial customers throughout the region. This project would help expand necessary regional infrastructure and lessen the demand on landfills and other disposal facilities by animating markets.

### 2. Support Clean Energy and Sustainable Development Projects or Services

This proposal would provide direct stimulus to businesses involved in organics recovery, composting, and waste reduction by lowering operating costs. It supports a growing sector of businesses directly involved in organics recovery, composting, and waste reduction (see support letters). It also provides a visible and notable way for businesses to adopt “green” practices which further the green brand of the Hudson Valley

In addition, a cost-competitive market that provides organics recovery delivers necessary infrastructure for many other sustainable design and smart growth projects to reduce environmental impact. An organics recovery program can be used to achieve credits under the USGBC LEED certification program.

### 3. Create Regional and Community Benefit

The project supports the goals of the Mid-Hudson Regional Development Council’s Strategic Plan, specifically its goal to “Leverage the region’s outstanding natural resources, its tourism industry, and agriculture in a ‘natural infrastructure’ strategy that protects agriculture and the environment” by supporting the agricultural market (including co-packing facilities) by providing food scrap disposal and by increasing the availability of locally produced nutrient-rich compost for soil improvement.

This project captures a number of the “green” circle industries that are meaningfully tied to the land and our natural infrastructure and are important to retain and attract employers and employees in all sectors. This project is also in alignment with the goals of the New York State “Beyond Waste” program, working to reduce consumption and waste, increasing reuse, recycling and composting, and decreasing use of land fill and incineration.

This innovative project also helps to “Develop non-mandated programs that encourage, educate, and foster green development projects as part of developing a green Hudson Valley economy” as stated in the MHREDC Strategic Plan, through education & outreach, creating a sustainable market for organic recycling, and creating a local demand for locally produced compost product.

By enhancing the green brand of the region, this project helps to make the Mid-Hudson region more attractive to young educated professionals in order to stop “youth flight” and “brain drain” in the region.

This project directly supports many goals of the Mid-Hudson Regional Sustainability Plan including the following:

- Reduce transportation fossil fuel consumption and GHG emissions (Transportation TL3)
- Reduce the volume of solid waste generated (Waste Management MM1)
- Increase the proportion of material diverted from landfills and incinerators via reuse, recycling, composting and other organic recycling methods (Waste Management MM2)
- Become radically less energy and fossil fuel intensive while strengthening the regional economy (Energy: EN1)

Expansion of organics recycling is listed as one of just two high-priority initiatives for implementation in the Mid-Hudson Regional Sustainability Plan. In addition, the need to find a beneficial reuse of EAB infected wood

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is highlighted as an emerging and pressing materials management issue in the plan. This project creatively addresses this challenge.

#### **4. Leverage CGC Funds**

We are proposing that NYSERDA provide a grant of \$538,750 to Ulster County to support our proposal. For the scope of this proposal, this grant would be matched by the County of Ulster with \$188,290 of staff salary, supplies and contractual costs funded through the County's operating budget. In addition, the County's partner in this proposal, the Ulster County Resource Recover Agency, would also provide match in the form of staff salary. It is our understanding that UCRRA, as a public benefit authority, may not be counted as eligible match in this application.

This project also leverages significant prior investment, over \$200,000, by UCRRA in the organics recovery operation. UCRRA receives some state funding for recycling and waste reduction initiatives but funds all its operations through tipping fee revenue. Ulster County is a flow control county and all MSW generated in the county must be received by UCRRA. UCRRA does not receive a net service fee from Ulster County.

This application leverages significant County staff time including time associated with two other materials management issues. In May of 2015, the County passed a comprehensive ban on the use of polystyrene foam for food service. The ban requires outreach to hundreds of food service establishments in Ulster County regarding alternatives to polystyrene. This proposal expands this outreach to include the use of compostable service wear and organics collection. The project also leverages County time involved with education and outreach regarding the Emerald Ash Borer infestation. As mentioned above, EAB presents a major materials management issue for Ulster County and composting at an approved facility is a NYS Ag & Markets approved disposal method.

#### **5. Reduce Carbon Emissions**

The proposed project will dramatically reduce the cost, GHG emissions, and energy necessary to dispose of municipal solid waste in Ulster County. This is achieved in two main ways: reduction in transport miles for materials, and reduction associated with aerobic decomposition (at the compost facility) versus anaerobic decomposition (at a landfill).

Over the three year proposed term this project would reduce greenhouse gas emissions from MSW transportation by 14,549 MTCDE and the increase in tonnage which could be accepted over the term of the project due to NYSERDA funding would result in a greenhouse gas emission reduction of an additional 12,055 MTCDE. More detailed information on the sustainability benefits of this proposal is included in the attached Project Benefits Report.

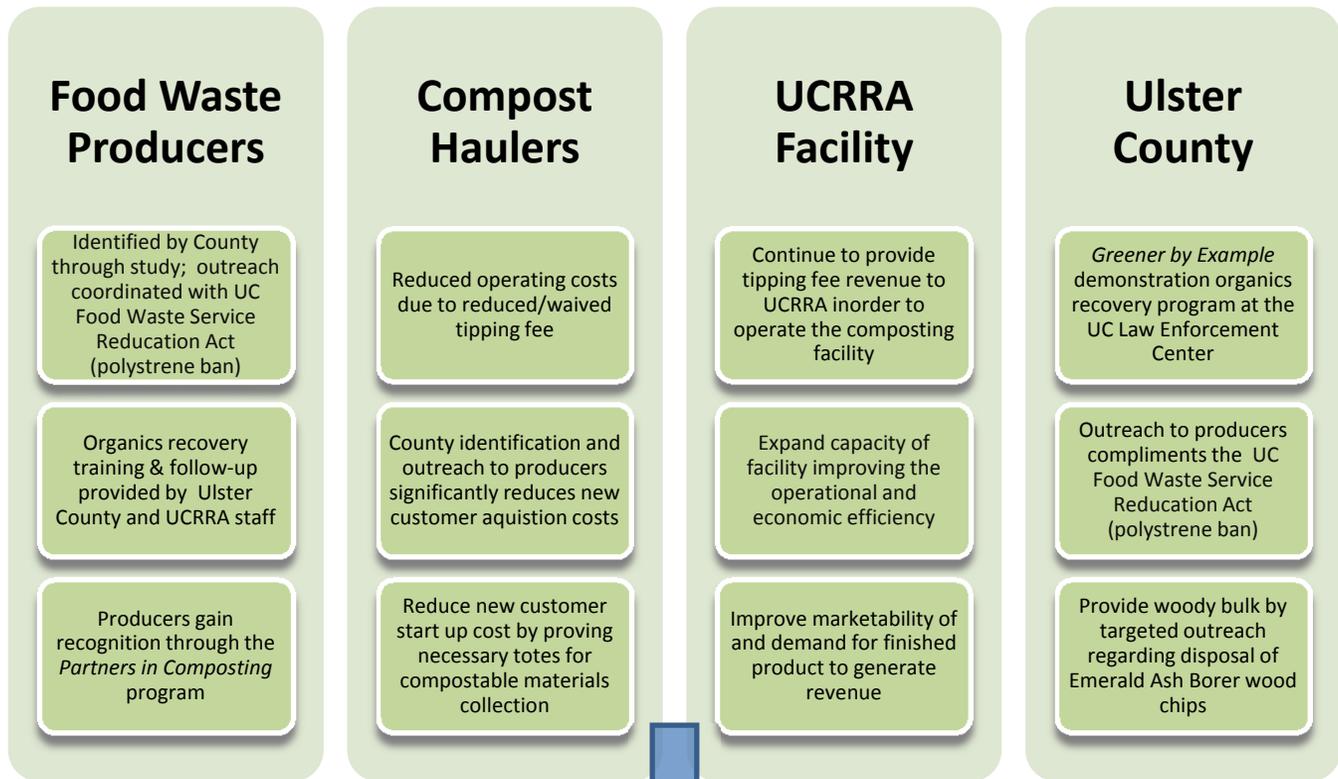
Because all municipal solid waste in Ulster County must be received and transported by UCRRA, excellent records are available detailing tons of waste disposed, fuel consumed, and vehicle miles traveled. In addition, the UCRRA has data on exactly how many tons of waste are processed at their composting facility. A comparison of these two data sets will allow for a precise and accurate evaluation of the GHG avoidance and reduction in energy use this project will yield.

#### **6. Preferred Eligible Project Types (LMI)**

This project provides a unique opportunity to strengthen the link between smart growth/sustainable design and low to moderate income residents. Through this project, we would target new and existing multi-unit developments which service LMI residents (see letter of support from RUPCO) to explore establishing an organics recovery program.

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## Summary of Key Project Elements and Benefits



### Market Impacts

Immediately creates new, more attract composting price point. Makes compost more competitive with MSW collection. Increase in customer base allows haulers to achieve route density and improves economy of scale. Improvements to UCRRA facility and sale of finished compost reduce unit cost of processing compost and should allow a lower tip fee post-program.

### Regional Environmental and Economic Benefits

- Direct support to businesses in organics capture and education (jobs)
- Direct support to increase composting operation at UCRRA (jobs)
- Supports the green brand of the Hudson Valley creating a more attractive place to live, recreate and do business
- Provides critical infrastructure to support all types of smart growth and sustainable design projects by providing compost collection
- Creates a locally produced soil amendment that can be used by residential, commercial and agricultural customers
- Significantly reduces GHG emission associated with transport and disposal of waste
- Reduces costs associated with transport and disposal of waste which are borne by all residents and businesses that generate waste

## Region

Mid-Hudson

## Questionnaire Questions & Answers

### Threshold

#### **Cleaner Greener Communities (CGC), Phase II Implementation Grants, Category 3: Community-Scale Sustainability Projects - Round 3 (CFA Round 5)**

Q\_4149

Is the applicant seeking between \$500,000 and \$3 million in funding to implement a community-scale sustainability project that is innovative and transformational in its contribution to advancing sustainable development; that supports energy efficiency, renewable energy, or carbon mitigation; and that fits into one of the following two project type definitions? 1. Showcase or anchor construction projects that deliver one or more key elements of a defined sustainable neighborhood development effort. To be eligible, the effort must: (i) be either a project(s) identified as part of an approved neighborhood master plan that consists of several buildings OR an actual development project that consists of several buildings; (ii) meet prerequisites (see prerequisites in the Cleaner Greener Communities Guidance Document) for smart location, walkable streets, compact development, neighborhood connections, and green infrastructure and buildings; AND (iii) demonstrate that the project strategy has the potential to lead to replication or other spill-over effects. 2. Innovative projects or programs that either: (i) facilitate, develop, or expand a private-sector business model targeting delivery of community-wide clean energy services or sustainability projects as described in number 1 above; OR (ii) utilize innovative and well integrated community engagement or aggregation strategies to accelerate community-wide demand for clean energy projects or services. Eligible applicants must demonstrate their program's ability to affect or deliver impact at community scale, and how their program will facilitate the development of self-sustaining mechanisms for the applicable clean energy installations or services, or sustainability projects as described in number 1 above. Applicants that respond 'no' to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

Yes

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Q\_4152

Did the applicant review and does the applicant understand the Cleaner Greener Communities Guidance Document? See Help section for more information. Applicants that answer 'no' to this question will not be considered ineligible for Cleaner Greener Communities Round 3 funding. All applicants are strongly encouraged to review this document thoroughly in order to understand program objectives and requirements. By answering 'yes' to this question, the applicant is agreeing that he/she has read and understands the program requirements outlined in the guidance document.

This answer cannot be modified.

Yes

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Q 4146

With respect to the Cleaner Greener Communities (CGC) program objective of “Leverage Cleaner Greener Communities Funds,” a minimum cost-share of 25% of Total CGC Project Cost is required to be eligible for this program. For example, if an applicant requests \$750,000 from NYSERDA, the applicant must also commit a minimum cost share of \$250,000, for a total minimum project cost of \$1,000,000. Cost share may include private equity, private or federal grants, loans, in-kind or volunteer services documented in dollar value, or other non-New York State (NYS) government funding sources, but NYS government funding cannot be included. Will this project include at least a 25% cost share? Applicants that respond ‘no’ to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

Yes

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Q\_4138

Will NYSERDA funds be used for the cost of consumables including, but not limited to, gasoline, wood pellets, fuel oil or biodiesel? Applicants that respond ‘yes’ to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4139

If the project contains biomass heating or biomass energy generation equipment, is the project utilizing a biomass fuel source other than premium quality wood pellets? All other project types, please answer ‘no.’ Applicants that respond ‘yes’ to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4140

Does the project propose ONLY to install a single technology at one location? Applicants that respond ‘yes’ to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4141

Is the project a research and development effort? Applicants that respond ‘yes’ to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4142

Does the project consist solely of a single building that is NOT part of a larger (multiple buildings) approved community or neighborhood plan? Applicants that respond ‘yes’ to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4143

Does the project include natural gas, electricity, or other ‘fuel distribution or supply lines’ including, but not limited to, gas pipelines or electricity lines? For the purposes of this solicitation, combined heat and power systems and district energy systems are not considered ‘fuel

distribution or supply lines.' Applicants that respond 'yes' to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4144

Is the project likely to have an adverse effect on indoor or outdoor air quality, carbon emissions, or public health in general? Applicants that respond 'yes' to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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Q\_4145

Do the project components for which the applicant is requesting NYSERDA funding implement an action that is required by law or regulation? Applicants that respond 'yes' to this question are not eligible for Cleaner Greener Communities Round 3 funding.

This answer cannot be modified.

No

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## Location

Q\_184

NYS Assembly District(s) where the project is located. (please enter a number between 1 and 150 that represents your Assembly District)

This answer cannot be modified.

103

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Q\_190

NY Senate District(s) where the project is located. (please enter a number between 1 and 63 that represents your Senate District)

This answer cannot be modified.

46

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Q\_565

Project City

This answer cannot be modified.

Kingston

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Q\_568

Project State

This answer cannot be modified.

New York

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Q\_572

Project Latitude

This answer cannot be modified.

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41.977553

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Q\_573 Project Longitude

This answer cannot be modified.

-73.966486

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Q\_616 For more than one project location, please provide full address(es) for each location. If Not Applicable, indicate "NA".

This answer cannot be modified.

N/A

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Q\_928 Project Street Address: if the project does not have a definite street address, please skip to "Project without a Street Address" below.

This answer cannot be modified.

999 Flatbush Ave

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Q\_971 Project Without a Street Address: please enter a description of the project location. Include project starting/ending street addresses, cities & zip codes if applicable.

This answer cannot be modified.

No Answer

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Q\_972 Project county or counties.

This answer cannot be modified.

Ulster

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Q\_1034 Project ZIP Code. (please use ZIP+4 if known)

This answer cannot be modified.

12401

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Q\_3527 US Congressional District where the project is located.

This answer cannot be modified.

19th

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## **Basic**

### **General Project Information**

Q\_550 If you are a DBA, what is your DBA name?

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This answer cannot be modified.

N/A

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Q\_549 Type of Applicant (select all that apply)

This answer cannot be modified.

County

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Q\_556 Select an applicant ID type from the list below that you normally use to identify your organization on application forms.

This answer cannot be modified.

Federal Tax ID Number

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Q\_2655 Based on your selection from the previous question, enter your applicant ID number. (Please do not provide your social security number).

This answer cannot be modified.

14-6002575

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Q\_969 If you are a business, have you been certified as a New York State Minority or Women-owned Business Enterprise (MWBE)?

This answer cannot be modified.

N/A

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### Applicant

	Answer
<b>Legal Name</b>	This answer cannot be modified. County of Ulster
<b>Street Address</b>	This answer cannot be modified. 244 Fair Street
<b>City</b>	This answer cannot be modified. Kingston

<b>State</b>	This answer cannot be modified. NY
<b>Zip Code (use ZIP+4 if known)</b>	This answer cannot be modified. 12402
<b>Telephone Number (include area code)</b>	This answer cannot be modified. 845-340-3000
<b>Email Address</b>	This answer cannot be modified. exec@co.ulster.ny.us

### Contacts

	<b>Primary Contact</b>	<b>Additional Contact</b>
<b>First Name</b>	This answer cannot be modified. Amanda	This answer cannot be modified. No Answer
<b>Last Name</b>	This answer cannot be modified. LaValle	This answer cannot be modified. No Answer
<b>Title</b>	This answer cannot be modified. Coordinator, Dept of Environment	This answer cannot be modified. No Answer

<b>Street Address</b>	This answer cannot be modified. 17 Pearl street, PO Box 1800	This answer cannot be modified. No Answer
<b>City</b>	This answer cannot be modified. Kingston	This answer cannot be modified. No Answer
<b>State</b>	This answer cannot be modified. NY	This answer cannot be modified. No Answer
<b>ZIP Code</b>	This answer cannot be modified. 12402	This answer cannot be modified. No Answer
<b>Telephone Number</b>	This answer cannot be modified. 845-338-7455	This answer cannot be modified. No Answer
<b>Email Address</b>	This answer cannot be modified. alav@co.ulster.ny.us	This answer cannot be modified. No Answer

Q\_4199

Please select the primary sector or characterization that best defines this project.

This answer cannot be modified.

**Environment**

Q\_4198

Please select the secondary sector or characterization that best defines this project.

This answer cannot be modified.

**Municipal/Government**

Q\_3656

Is the project included in a NY Rising Community Reconstruction Program plan or a NY Rising Countywide Resiliency Plan?

This answer cannot be modified.

No

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Q\_3744

If the project is included in a NY Rising Community Reconstruction Program plan or a NY Rising Countywide Resiliency Plan, please indicate the planning committee name, project name, and location.

This answer cannot be modified.

N/A

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Q\_3762

Does your project directly address the needs of people in your region who are living in poverty and who seek resources for inclusion in the economic life of New York State?

This answer cannot be modified.

No

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Q\_3763

How does your project seek to apply CFA funds for the purpose of eliminating barriers to skilled employment by poor people in your region, as identified by the Opportunity Agenda? Please describe any efforts to collaborate at the local or regional level (i.e. public, private, labor, philanthropic sectors).

This answer cannot be modified.

This project proposal would educate a variety of stakeholders, including inmates at the Ulster County Law Enforcement Center and other food service workers, on organics diversion and collection. This provides knowledge and skills desirable in the job market which are transferable to other businesses.

This project would also create local demand for compost collection services and for a locally produced product (compost). The transport of food waste to the compost facility, the production of the product, as well as other value added products from the compost, would help support local or regional level (i.e. public, private, labor, philanthropic sectors).

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Q\_3764

How does your project build workforce development programs, improve physical infrastructure, and/or establish social services that connect people living in poverty in your region with skilled employment, in correspondence with the economic revitalization priorities, distressed community targets, and the industry growth areas identified in the Opportunity Agenda and Strategic Plan?

This answer cannot be modified.

The project would improve physical infrastructure associated with sustainable waste management and reduce the demand on traditional waste management infrastructure. This would be an economic benefit to private waste hauling customers (commercial and residential) as well as to municipalities which collect and dispose of solid waste.

This project would strongly support the agricultural business sector (through food scrap disposal and availability of high quality finished compost to be used as soil amendment) as well as contribute to the environmentally oriented quality-of-life of the region as recognized in the Mid-Hudson Region Strategic Plan.

This project proposal would educate a variety of stakeholders, including inmates at the Ulster County Law Enforcement Center and other food service workers, on organics diversion and collection.

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Q\_3766 Is this a Global NY Project?

This answer cannot be modified.

No

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Q\_3768 If this is a Global NY Project, please describe how this project relates to the identified goals of your region's Global Marketing and Export Strategies as part of the Global NY initiative?

This answer cannot be modified.

N/A

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Q\_4200 Does your project provide opportunities for Veterans' to participate in the workforce, or improve services to the Veterans' and military families in New York?

This answer cannot be modified.

No

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Q\_4201 If Yes, please explain how your project impacts the Veterans' and military families in New York.

This answer cannot be modified.

N/A

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## Project Description

Q\_575 Project Description. Concisely describe the project, indicating the location, what will be planned, designed, acquired, and/or constructed, the issues/opportunities to be addressed, and expected outcomes and deliverables. Additional details will be collected later in the application process.

This answer cannot be modified.

The Mid-Hudson region does not have a single regional MSW landfill and waste from Ulster County is trucked over 250 miles away at great economic and environmental cost. By enhancing the existing the existing municipally operated composting facility (Ulster County Resource Recovery Agency, 999 Flatbush Road, Kingston NY) GHGs and costs diminish. We propose a 10-fold expansion of composting capacity; a subsidy to eliminate/reduce tipping fee for organics for 3 yrs; totes & technical assistance for commercial generators of organics; purchase of a compost bagging machine to create a market for finished compost product and production of education and outreach materials. The expected outcome is to create sustainable market for organic recycling while making it easier for customers and haulers to compost.

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Q\_976 Statement of Need

This answer cannot be modified.

Regional composting would divert organic waste to the County's compost facility, avoiding the environmental and economic costs of hauling and landfill disposal. However, economic and market barriers continue to impede its adoption. Private waste haulers charge comparable rates to haul organics as solid waste creating little incentive for customers to source

separate. Haulers require a robust customer base to reach a critical route density as well as other capital investments in equipment to service routes. Large institutional customers face similar barriers, including costs for new collective totes and staff training resulting in low participation. In addition, there must be adequate capacity at the County's compost facility to service the required "critical mass" customer base for commercial collection.

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Q\_930

Explain what makes your project a regional economic priority - for example creates jobs, economic investment, sustainability and community revitalization, government efficiency or consolidation etc.

This answer cannot be modified.

This project seeks to reduce barriers to wide-scale implementation of municipal composting by promoting more sustainable waste management, reducing GHG emissions, lessening waste disposal costs, and increasing reuse of waste material, while providing a local opportunity for food producers and food hubs to acquire high quality compost to enhance their production methods. This project captures a number of the "green" circle industries that are meaningfully tied to the land and our natural infrastructure and are important to retain and attract employers and employees in all sectors. This project is also in alignment with the goals of the New York State "Beyond Waste" program, working to reduce consumption and waste, increasing reuse, recycling and composting, and decreasing use of land fill and incineration.

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Q\_2366

How does your project align with the Regional Economic Development Council's Strategic Plan? (strategic plans are located at <http://www.nyscfaprojectdata.ny.gov/> )

This answer cannot be modified.

This innovative, non-mandated project supports many of the goals of the Mid-Hudson Regional Development Council's Strategic Plan by creating infrastructure which will help to preserve the environment, create green jobs, and a sustainable market for organic recycling as well as a market for locally produced, nutrient-rich compost for agricultural soil improvement. This project truly fosters the green Hudson Valley economy and green brand that our region is known for, while simultaneously promoting smart growth, which are all important aspects of attracting new businesses and tourism to the area and preventing "brain drain" or "youth flight."

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Q\_929

Current State of Project Development (i.e. planning, preliminary engineering, final design, etc. You may enter N/A for non-project related applications)

This answer cannot be modified.

Facility currently exists and plans exist for expansion.

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Q\_975

Estimated Project Timeline: including project start/completion dates, estimates for design, permitting and construction or other major steps. (You may enter N/A for non-Project related applications)

This answer cannot be modified.

Jan-March 2016- Finalize contract

April 2016- Project Start Date; Waive tipping fee

April-June 2016- Final design of expansion; Purchase compost bagging machine; purchase/distribute organic material totes; begin design/production and continued distribution of ed materials

Oct-Dec 2016- UCRRA applies/receives new NYSDEC Part 360 Permit for expanding operation to more than 1000 tons/year

April 2017- March 2018- Continue production and continued distribution of ed materials; production of wood chip material (manage ash)

April 2018- March 2019 - reduced tipping fees (\$11/ton); continue to produce wood chip material; education/technical assistance continues; project admin

March 2019- Set new market appropriate tipping fee; Project Complete

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Q\_580

Provide a list of all federal, state, and local reviews, approvals, or permits needed or completed, including the dates when they are expected to be completed or were completed. If Not Applicable, indicate "NA".

This answer cannot be modified.

Application (by UCCRA) for expansion of their NYSDEC Permit Part 360 for composting increasing capacity/storage from less than 1,000 tons/year to greater than 1,000 tons/year. We expect to have the modified permit by early 2017.

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Q\_2364

What is the status of State and/or Federal Environmental Review? If review of the project is underway or completed pursuant to the State Environmental Quality Review Act (SEQRA) or National Environmental Policy Act (NEPA), please indicate the lead agency (if applicable).

This answer cannot be modified.

At this time, it has not been determined if a SEQRA review would be required for the expansion of the UCRRA's organics recovery facility. If it is determined that one would be necessary, the UCCRA would most likely be the lead agency.

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Q\_1054

If National Environmental Policy Act (NEPA) Record of Decision has been issued, please explain (include date of Record of Decision).

This answer cannot be modified.

This project would not require review under NEPA.

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## Prior CFA Funding

Q\_2362

If funding was awarded in prior CFA rounds, what were the CFA numbers for which funding was awarded? (separate multiple CFA numbers with commas)

This answer cannot be modified.

N/A

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Q\_4160

For each program to which you are applying under the CFA, explain your strategy for proceeding if the full amount of requested funding, required matching funds, and temporary financing are not secured as expected, or committed sources become unavailable. This explanation must address any proposed project phases, and both CFA and non-CFA sources of funds.

This answer cannot be modified.

For this project, funding is only being sought from NYSERDA Cleaner, Greener Communities Program. No other CFA sources or grants are being sought.

The match is County of Ulster funding which is predominately staff time of existing staff as new staff would not be hired for this project. Other non-eligible match would be provided by UCRRA in the form of staff time. As such we are confident of the availability of the match.

If the full funding request is not granted by NYSERDA, the project team will reevaluate the proposal and determine if a scaled down project will be feasible. However, our project requests \$538,750 from NYSERDA and the minimum award for this grant is \$500,000. It is our understanding that partial awards will not be granted under the \$500,000 which would likely still be adequate to implement the the proposal with adjustment.

---

## Standard Question

### Cleaner Greener Communities (CGC), Phase II Implementation Grants, Category 3: Community-Scale Sustainability Projects - Round 3 (CFA Round 5)

Q\_3487

Does the applicant pay into the System Benefit Charge (SBC) for electricity?

This answer cannot be modified.

yes

---

Q\_3488

Does the applicant pay into the System Benefit Charge (SBC) for gas?

This answer cannot be modified.

yes

---

Q\_3489

Please provide the name of the utility that provides or will provide electric service to your project, if applicable.

This answer cannot be modified.

Central Hudson

Q\_3490

Please provide the name of the utility that provides or will provide natural gas service to your project, if applicable.

This answer cannot be modified.

N/A

Q\_3505

Is the project located in a Climate Smart Community?

This answer cannot be modified.

yes

### ***Net New Jobs***

No job answers necessary due to your associated programs.

### ***Qualified Investments***

No investment answers necessary due to your associated programs.

### ***Total Project Cost***

Total project cost: \$ 753040

### ***Funding Requested from Program***

Program	Amount Requested	
Cleaner Greener Communities (CGC), Phase II Implementation Grants, Category 3: Community-Scale Sustainability Projects - Round 3 (CFA Round 5)	\$ 538750	maximum funding allowed: \$5,000,000

### ***Program Budget***

**Cleaner Greener Communities (CGC), Phase II Implementation Grants, Category 3: Community-Scale Sustainability Projects - Round 3 (CFA Round 5)**

Use	Source	Amount	Indicate Source / Comments
Salaries and Wages	In-Kind	\$75500	County- salary associated with Tasks 2-7
Other	In-Kind	\$39500	County- in kind associated with Task 1: Grant administration (contractual, financial, legal)
Fringe Benefits	In-Kind	\$43790	County- Fringe benefit on salary associated with Tasks 2-7
Contractual Services	In-Kind	\$19500	County- Estimated cost of compost hauling for demonstration project. Task 7
Supplies/Materials	In-Kind	\$10000	County- Supplies required for Task 2,5, and 7
Salaries and Wages	Other	\$26000	UCRRA- salary associated with Tasks 2-7
Supplies/Materials	State	\$36000	Requested CGC funds-totes, Task 3
Other	State	\$233750	Requested CGC funds-tipping fees, Task 3.
Construction/Renovation	State	\$210000	Requested CGC funds-facility expansion, Task 4
Equipment and Machinery	State	\$45000	Requested CGC funds-bagging machine, Task 5
Contractual Services	State	\$7000	Requested CGC funds-demonstration organics recovery at County facility
Supplies/Materials	State	\$7000	Requested CGC funds-printed materials, program supplies

## Legend

[x] = Expired Program

# SUSTAINABLE

## ULSTER COUNTY

— COUNTY EXECUTIVE MICHAEL P. HEIN —

### GREENER BY EXAMPLE

**Greener by Example** is an initiative of Ulster County Executive Mike Hein in which the County has sought ways to substantially reduce the environmental footprint and increase the sustainability of county government operations while seeking projects that:

- Demonstrate measures in County buildings which are replicable by other municipalities, businesses and the general public;
- Support infrastructure and further deployment of sustainable technologies and smart growth across the community; and,
- Create valuable educational opportunities which cultivate community-wide sustainable practices and awareness.

#### **Greener by Example Projects Include:**

**Renewable Energy-** Ulster County purchases 100% of its electricity from renewable sources and is developing a 4MW solar installation for on-site energy generation

**Electric Vehicle Charging stations-** Ulster County installed a network of nine charging stations throughout the County that are powered by 100% renewable energy and are available to Ulster County fleet electric plug-in hybrids, employees and the public.

**Green Infrastructure & Stormwater Infrastructure-** Green Infrastructure demonstrations which include native plant rain gardens for stormwater management are located at the Ulster County Office Building Complex and SUNY Ulster Extension Center

**Biodiesel in UCAT Fleet-** Ulster County converted all public transit buses to biodiesel

**Interior and Exterior LED Lighting Upgrades-** LED retrofits at County facilities have improved facility operations and dramatically reduced the County's electricity cost and energy load

**Carbon Neutral Government Operations-** Ulster County's commitment to energy efficiency, purchasing and generating renewable energy, and offsetting over 100% of all direct and indirect carbon emissions has resulted in the first carbon neutral county government

**Green Fleet Policy-** County developed policy and vehicle purchasing guidelines and SOP for a sustainable government fleet

**Food Service Waste Reduction Act-** County-wide law bans all food service providers from using expanded polystyrene foam

**Emerald Ash Borer Assessment of County Roads-** County conducted survey of all road right-of-ways and provides technical assistance to municipalities and other stakeholders regarding this invasive pest and its impact on ash trees

**Ulster County's Food Service Waste Reduction Act was enacted for the following reasons:**

- Polystyrene foam (commonly referred to as Styrofoam, a Dow Chemical Company trademarked form of polystyrene foam insulation) is a common environmental pollutant and non-biodegradable substance commonly used as food service ware.
- Polystyrene foam is non-renewable, non-recyclable, and non-compostable.
- Environmental Protection Agency has found that the polystyrene manufacturing process is the fifth largest creator of hazardous waste in the United States.
- Evidence suggests that a component of polystyrene foam, styrene, is a carcinogen and neurotoxin. According to EPA studies, styrene is now detectable in the fat tissue of every man, woman and child in the United States.
- Alternative cost-effective biodegradable, compostable and/or reusable food service ware is readily available. Such alternatives are less toxic and more environmentally friendly than polystyrene foam.
- Use of biodegradable, compostable food, and/or re-useable service ware will reduce the waste stream and reduce waste costs.

**It is your responsibility to know the entirety of the law:**

The information provided in this pamphlet is only a summary of Ulster County's Food Service Waste Reduction Act, Local Law Number 12 of 2014: A Local Law regulating the Use of Polystyrene Foam Disposable Food Service Ware By Food Service Establishments in Ulster County. Please refer to the law in its entirety.

**Note:**

A Chain Food Service Establishment or Food Service Establishment may seek an exemption from the prohibition due to a "unique packaging hardship" under Subsection A due to a "financial hardship" under Subsection B of Section 5 of Local Law Number 12 of 2014, County of Ulster.



**UC Department of Health  
Dr. Carol Smith, Commissioner  
(845) 340-3150**

**UC Department of the Environment  
Amanda LaValle, Coordinator  
(845) 338-7287**

[ulstercountyny.gov](http://ulstercountyny.gov)

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**BUILDING A HEALTHIER  
ULSTER COUNTY**

A Summary of Ulster County's  
**Food Service Waste  
Reduction Act**

**Local Law Number 12 of 2014**



Regulating the Use of Polystyrene Foam Disposable Food Service Ware By Food Service Establishments in Ulster County



COUNTY EXECUTIVE  
MICHAEL P. HEIN

### What does this law do?

The Food Service Waste Reduction Act bans all food service establishments from using expanded polystyrene foam (commonly referred to as Styrofoam) when preparing, selling or providing food and beverages in Ulster County.

### Who does this law apply to?

A. Chain Food Service Establishments

**Effective: November 1<sup>st</sup>, 2015**

B. Food Service Establishments

**Effective: May 1<sup>st</sup>, 2016**

C. County Permitted Events & County Sponsored Events

*\*County permitted events & County sponsored events shall also no longer use non-recyclable plastic.*

**Effective: November 1<sup>st</sup>, 2015**

### Examples of unacceptable products:

- Expanded polystyrene



**NOT ACCEPTABLE**

### Examples of acceptable products:

- Plastics made from non expanded polystyrene (preferable recyclable and compostable)
- Paper products (preferably recyclable and compostable)
- Cardboard (preferable recyclable and compostable)
- Metal (preferable recyclable) and aluminum/tin foil
- Glass (preferably recyclable)



**ACCEPTABLE**

Products made from non expanded polystyrene may be used. Products that are recycled, recyclable and compostable are preferable. For a list of products that are certified compostable, visit the Biodegradable Products Institute website:

<http://products.bpiworld.org/>

### Definitions:

#### Chain Food Service Establishment

Any food service establishment or food service establishments operating in Ulster County that is or are part of a group of fifteen or more food service establishment.

#### Food Service Establishment

Any establishment, located or providing food within the County of Ulster, which sells or otherwise provides prepared food and/or beverages for public consumption on or off its premises and includes, but is not limited to, **any store, shop, sales outlet, restaurant, bar, pub, coffee shop, cafeteria, caterer, convenience store, liquor store, grocery store, super market, delicatessen, catering truck, mobile food truck, cart or vehicle, or any other person who provides prepared food;** and any organization, group or individual which regularly provides food as a part of its services.

#### Prepared Food

Any food or beverage which is (1) served in Ulster County or (2) which is packaged, cooked, chopped, sliced, mixed, brewed, frozen, squeezed, or otherwise prepared on the premises. Prepared food does not include raw meats, poultry and/or seafood sold for the purpose of cooking off premises.

\* See a complete list of definitions under Section 3 of Local Law Number 12, County of Ulster.



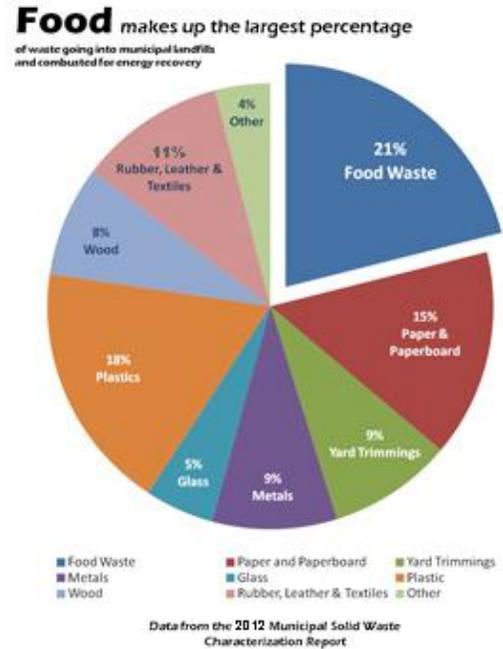
# ULSTER COUNTY RESOURCE RECOVERY AGENCY

## ORGANICS RECOVERY PROGRAM OVERVIEW

### MUNICIPAL SOLID WASTE: ORGANICS DIVERSION

Nationwide, food waste accounts for an estimated 21 percent of municipal solid waste (MSW) disposed<sup>1</sup>. At a time when many recycling programs have hit a plateau like that of Ulster County, food waste is commonly the next segment of MSW to be tapped for diversion. However, collecting food waste is often more challenging than collecting typical recyclable materials. Some of the hurdles to collecting food waste from both residential and commercial generators include space considerations, the costs of collection containers and vehicles, route density and the distance to the composting/processing facility.

About 75 percent of the waste that goes to the landfill comes from the business community. Studies show that food scraps, food contaminated paper and waxed corrugated cardboard make up nearly 30 percent of that total. By recycling food waste, businesses can have a positive impact on the environment. Food scraps in landfills produce methane, a greenhouse gas 21 times more harmful than carbon dioxide. By composting, whether at work or at home, we can divert food waste from landfill disposal while creating nutrient-rich material highly valued by gardeners, farms, nurseries and other businesses that contribute to the vitality of our community.



*Organics, defined for this program, consist of commercially generated food waste (vegetable scraps, coffee grounds, kitchen prep, bakery items, meat, chicken and fish trimmings, cheese, etc.), approved compostable packaging, waxed cardboard, landscape trimmings, plant material, or untreated wood.*

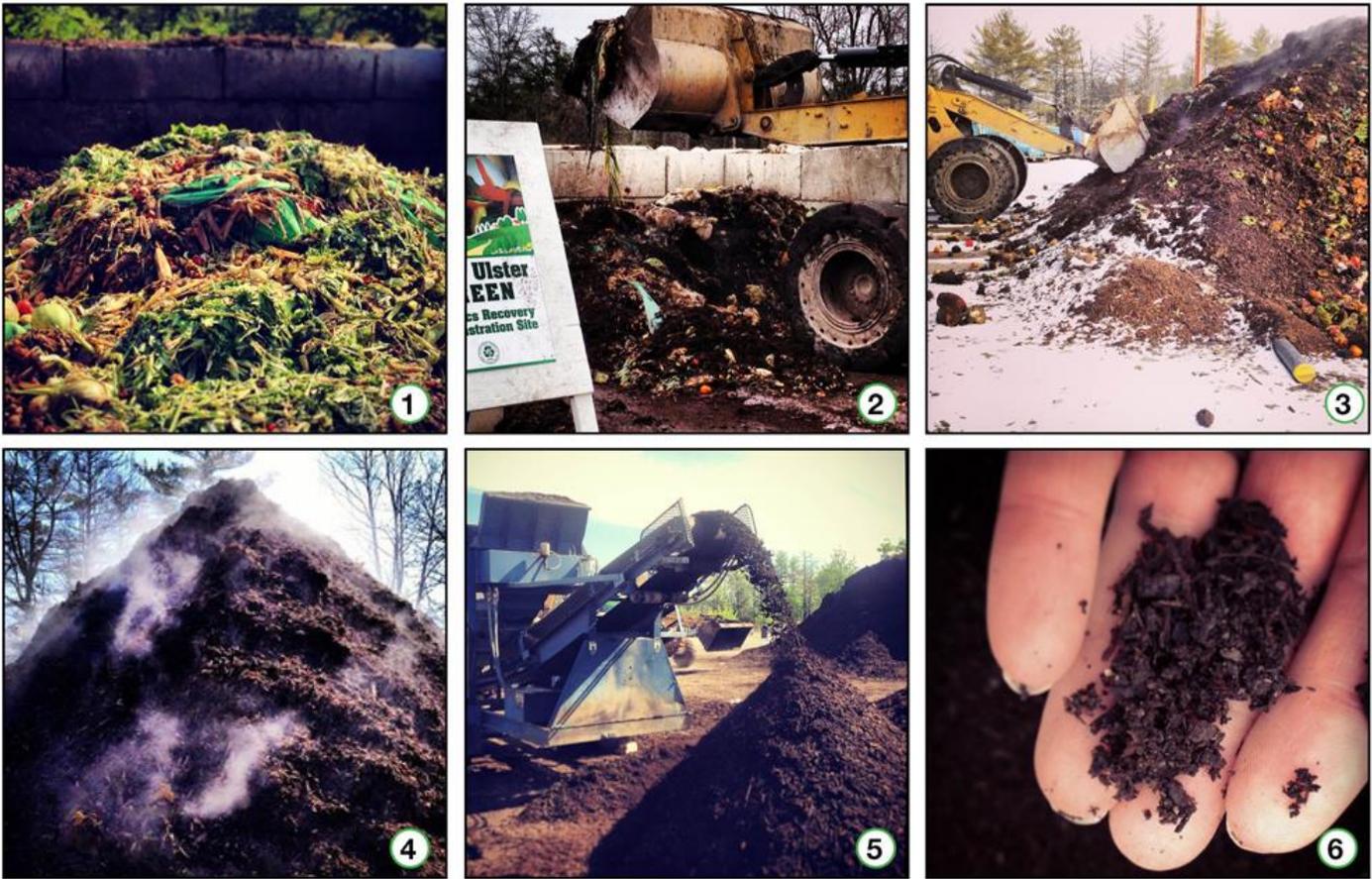
As of August 2012, there were no large-scale facilities in Ulster County that actively composted postconsumer food waste or co-compost food and yard waste. The Ulster County Resource Recover Agency (UCRRA) decided to move forward with creating an opportunity to divert food waste from landfill disposal by establishing a food waste composting operation. The project, known as the **Organics Recovery Facility**, is located at UCRRA (999 Flatbush Road in Kingston, New York), and accepts both food and yard waste from large quantity waste generators such as grocery stores, institutions, hospitals and other establishments for processing. The processing method

employed at UCRRA's Organics Recovery Facility is known as the "extended aerated static pile" method of composting (EASP).

### EXTENDED AERATED STATIC PILE (EASP) METHOD OF COMPOSTING

The EASP method is a process where source-separated organics are received (#1 see images below) and mixed with green waste (#2) and placed on an aeration pad for processing (#3). The pad includes a system of perforated pipes and aeration blowers that regularly feeds air from the bottom of the piles through the organic materials to control the rate of decomposition and compost production. This method does not require

the material to be turned, and generally completes the active phase of composting within 30 days. The material can then be removed from the pad and cured in windrow piles (#4) for final processing (#5). The final result is a high-quality compost material (#6).



#### TAKING THE INITIATIVE

An example of commitment to the Ulster County composting program and in recognition of International Compost Awareness Week, UCRRA's Board of Directors unanimously passed a resolution for the Agency to conduct a food waste composting pilot project using the extended aerated static pile method of composting at the 999 Flatbush Road facility in Kingston. To bring positive attention to the possibilities that composting can provide to communities, International Compost Awareness Week was designed to rally composting advocates and build awareness in every community and the Agency plans to do just that. The Agency board says it's a win-win situation: less waste ends up in a landfill, which helps Ulster County meet its increasing waste diversion goals and reduce Agency's expenses associated with transporting the waste to distant landfills. Also, it's good for the environment.

It was the composting expertise of Peter Moon, President & Principal Engineer of O2 Compost that led the Agency to contract with O2 Compost as the consulting / engineering firm for the system design of the Agency's Organic Recovery Facility and pilot project. Agency staff saw Peter Moon present at the Federation of New York Solid Waste Associations Conference a few years prior and discussed possible opportunities for developing a composting system and program for Ulster County. O2Compost staff has over 50 years of consulting experience in the combined fields of civil and environmental engineering, with 35 years specifically devoted to the composting industry. O2Compost also offered a comprehensive training program. Agency staff

(Recycling Coordinator, Operations Manager and Compost Operator) participated in this training which included a thorough classroom review of composting basics combined with practical hands-on field exercises, all with a focus on Extended Aerated Static Pile (EASP) Composting. O2Compost also provided the following:

- A Complete Set of Design Drawings (Plans, Specifications, Materials List and Bid Sheet);
- Concise yet thorough Training Manual with step-by-step instructions;
- Technical Support throughout construction, startup, and long-term operation;
- Aeration Equipment Package, including: electric blower – high impact plastic or steel industrial grade, with warranty; variable setting cycle timer to operate the blower; 4-inch diameter gate valves; and 36-inch long temperature probe.

The Agency recently completed a pilot test program utilizing the static aerated piles to compost food waste with excellent results. Since the inception of the composting program, the staff perfected their processing method and marketing strategies and most importantly, created a quality, stable compost product for the community. The Agency is now a member of the US Composting Council and has enrolled in their Seal of Testing Assurance (STA) program for compost testing. The Agency is also registered with the New York State Department of Agriculture and Markets and has a license to distribute commercial compost. In addition to the license, the Agency is a participant in their Pride of New York program; a program that supports locally produced products and buying local in New York.

#### **SUPERIOR PRACTICES RESULT IN BIG ENVIRONMENTAL BENEFITS**

Ton for ton, composting reduces greenhouse gas (GHG) emissions from organics management over any other management option.

Compostable organics make up 30% of New York's overall waste stream, contributing over 3 million tons annually to our state's and other state's landfills. In landfills, this material undergoes anaerobic decomposition and produces significant quantities of methane if not captured by a landfill gas system. Composting, on the other hand, is a fundamentally aerobic process, and well managed compost facilities do not produce methane.



- Composting organic material reduces GHG emissions compared to landfilling with energy recovery systems.
- Compost can significantly reduce agricultural energy demand. Plants grown in compost-rich soil require less irrigation because of the increased infiltration and storage capacity of root systems and the reduction of water runoff, evaporation, and water usage by weeds. Research has shown that the application of compost can reduce the need for irrigation by 30-70%.
- The application of compost greatly increases the amount of carbon sequestered in soil. Experimental studies have shown that increased carbon sequestration in soil from composting application was 6 to 40 tons of carbon per hectare.
- Composting also provides a cost effective alternative to commercial fertilizers as it provides excellent soil amendments. The application of compost results in a reduced need for GHG producing petroleum-based chemical fertilizer, pesticides, herbicides, and additives. These chemicals are carbon-intensive in their production and emit large quantities of global warming pollutants during application and as they decompose in the soil. The use of compost can reduce the need for fertilizers for vegetable crops by 33-66%.

- Composting provides nutrient-rich soils, which multiple studies have shown results in greater carbon storage in crop biomass.
- Compost improves soil structure and texture, while allowing the soil to hold more moisture and prevent erosion. The organic materials provided in compost also stimulate healthy root development in plants and keeps the soil itself healthy through microorganisms prevalent in compost.
- All of these benefits listed above highlight that composting organics is a superior practice to the standard technique of landfill disposal. The Agency's compost product is made available to our local community thereby reducing the need for purchasing an imported compost product.

#### **ULSTER COUNTY PARTNER IN COMPOSTING PROGRAM**

Ulster County Resource Recovery Agency's Recycling Coordinator has established an organics collection program that is cost effective for all parties involved. Through collaboration with municipalities, several businesses, and local groups, the Recycling Coordinator has developed a **Partner In Composting** program. An example of this new program exists in the town of Woodstock. In response to the efforts by the Recycling Coordinator, and the creation of the Organics Recovery Facility, the Woodstock Town Board unanimously passed a resolution supporting diversion through the implementation of a voluntary organic waste composting program for the restaurants, food purveyors and other businesses in the town. The resolution also requires that all town agencies and offices source separate their organic waste for on-site composting or for transport to the Facility for composting.

In this instance, the **Partner In Composting** program is a collaboration between the UCRRA, local hauling companies and food related businesses that offers a greener alternative that converts food scraps, food-soiled paper and other organic waste into valuable compost for home gardens and local agriculture.

#### **OTHER COMPOSTING INITIATIVES**

The Agency provides education about benefits of compost use and compost application at public events, festivals and farmers' markets in Ulster County. The Agency also provides event participants with a sample of our compost product with instructions on best compost application practices. The Agency also processes the food waste generated from participants at these events and assists with organizing the collection.

The Agency employees also participate in an office food waste collection program. The kitchen is equipped with recycling bins for all recyclables materials and a kitchen caddy bucket for the collection of all food waste generated in the office. The kitchen caddy is taken to the Organics Recovery Facility when it is full. All employees are required to participate.



Commitment is shown by providing the public with opportunities to visit the facility and see the composting operation firsthand. At right is a photo of a Girl Scout troop that recently visited the Agency. Over 1,500 visitors tour the Agency's facilities annually.

Additional composting partnerships include:

- NYSDEC – provide regulatory support, educational resources and funding through the Municipal Waste Reduction & Recycling (MWRR) grant reimbursement program
- City of Kingston – conducted a survey for business community, preliminary discussions about including commercial composting program for city
- Ulster County Schools/Universities – PARTNER IN COMPOSTING program participants and on-site composting programs, school gardening programs, composting education programs Towns- provide mulch (bulking material) for Organics Recovery Facility
- Cornell Cooperative Extension/Cornell Waste Management Institute – Hosted an Agency facility tour for group of professionals participating in the Southeastern New York Compost Workshop and Facility Tour & Survey of local farms about compost
- Northeast Recycling Council (NERC) – Conducted an Ulster County Commercial and Institutional Food Waste Composting Summit, a gathering for decision makers, municipal officials, commercial and institutional food waste generators, haulers and others interested in advancing food waste composting in Ulster County.
- Hudson Valley Regional Council Solid Waste Committee - is an intergovernmental forum with seven member counties - Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester. The Council's mission is to foster cooperation in resolving problems of mutual concern and to pursue opportunities of mutual benefit across the region.



### **MID-HUDSON REGIONAL FOOD SYSTEM**

Our food system, which encompasses the full cycle that food takes from field to fork - and back to the field, is simultaneously regional and national in scale. Our region's food businesses export, import and conduct business locally. Hudson Valley residents and businesses benefit from this trade, whether through the growth of local winemakers and cheesemakers distributing their products across the nation or through our access to imports into the region.

To capture more of the economic and environmental benefits of agricultural land, the UCRRA supports reducing the negative environmental impacts of the regional food system. A stronger regional food system offers not only the benefits of preserved agricultural land and economic development but also the potential for greater reduction of greenhouse gas emissions through food waste diversion. When food waste decomposes in a landfill, it releases methane, a greenhouse gas 21 times more potent than carbon dioxide. When food waste is composted, which is a different biological process, it generate substantially less greenhouse gas emissions. Additionally, this compost can then be beneficially reused as a soil amendment to improve agricultural soils of the farms in the region. There are many opportunities for application of locally produced compost since the Hudson Valley is home to more than 3,100 farms and 474,000 farmland acres. These farms collectively produce more than \$322 million of food each year.<sup>2</sup>

While the west coast of the United States may be considered the pioneers in food waste diversion practices, there are available opportunities in New York State to capture food waste, with Ulster County being one of them. In Ulster County, UCCRA has created a diversion program, with developed infrastructure, that anticipates expansion. It is estimated that Ulster County alone sends more than 20,000 tons of commercially generated food waste to landfills each year. If all of this food waste were sent to compost facilities instead, carbon dioxide equivalent emissions would fall by at least 11,350 metric tons -- the same impact as taking 2,400 cars off the road for a year.<sup>3</sup>

There is data to support the environmental benefit of certified organic and sustainable farming methods in contrast with “conventional” methods. A survey of the literature regarding diversified farming systems — as opposed to industrial farms with single crops — showed that these agricultural practices consistently provided better soil management, carbon sequestration potential, weed control, biodiversity and more efficient energy use.<sup>4</sup> Similarly, a National Academy of Sciences study concluded that while there are many challenges to expanding sustainable agricultural practices, the benefits to the environment and society are numerous.<sup>5</sup> Working with the certified organic farms in the Hudson Valley region, which consist of more than half of the existing farms, by providing education on compost use along with a source for purchasing locally produced compost use would be mutually beneficial to the Agency, farm and our regional food system.



In addition to providing jobs and employment growth potential, a stronger regional food system provides economic benefit to the Hudson Valley area by emphasizing local buying and selling rather than relying solely on imports and exports. When companies and consumers direct more of their dollars toward locally produced goods and services, including local compost, rather than counterparts from farther away they reduce the amount of money that leaks out of the Hudson Valley economy.

A regional food system that utilizes composting and other food waste diversion methods, as the Hudson Valley area has begun to do (Organics Recovery Facility at UCRRA), helps reduce the region’s carbon footprint and closes the

resource loop by turning food waste into compost that supports local food production. Residents, businesses and local governments reduce the region’s carbon footprint by diverting food waste from the landfill and producing compost sold to local farms. Alongside these measurable benefits, the regional food system

provides the intangible but powerful benefits of promoting ecological awareness, preserving cultural heritage and fostering a unique sense of place.

#### **TRANSFERABILITY TO OTHER USERS**

The Ulster County Organics Recovery Facility is also in line with New York's *Beyond Waste Plan*. New York's *Beyond Waste Plan* outlines strategies to further reduce the amount of waste going to disposal through better materials management. Organics diversion offers an enormous opportunity toward that end and is considered one of the critical keys to success. The composting program currently being conducted at the Agency will carefully evaluate all aspects of collecting and processing food waste from large quantity generators in Ulster County and determine the feasibility of a much larger composting operation or replication of the program in several centralized locations to better serve the entire Mid-Hudson Region and beyond. Some of our neighboring states including, Vermont, Massachusetts and Connecticut have similar long term goals to that of New York State regarding the implementation of better organics management practices and have already taken action by passing of legislation mandating composting or other beneficial use applications of organic materials.

The Agency is also sharing our experience with the development of our current program through many other forums including hosting an Ulster County Commercial and Institutional Food Waste Composting Summit in cooperation with NYSDEC and the Northeast Recycling Council (NERC) funded with a grant from United States Department of Agriculture (USDA), conducting presentations at the New York State Association of Reduction, Reuse and Recycling (NYSAR3) conference, and workshops with Cornell Waste Management Institute and Cornell Cooperative Extension.

The Agency is leading by example and showing other rural communities/counties in New York State that composting food waste from large quantity generators is possible. Rural communities are frequently situated to be able to properly manage this material stream and focusing on organics material management present rural communities with low-cost opportunities to beneficially develop these resources. The Agency's composting operation is one example of an organics management program that focuses on reduction and community-based diversion that has been successfully implemented in semi-rural Ulster County. Success often involves the following strategies, including:

- Implementing a variety of management approaches that are relatively low-cost, manageable within existing staffing limitations, drawing upon existing resources.
- Identifying an organics management system that fosters the importance of the organics management hierarchy, with an emphasis on reducing materials at their source and keeping organics on-site – that is where generated – when possible.
- Developing a system that meets state requirements and helps the community comply with state waste diversion goals.
- Implementing collection and organics processing options, as necessary, and that fit within existing waste handling practices.
- Considering centralized composting – developed locally or regionally through partnerships with farm, regional, or private operations – as a viable organics management option for increased diversion of yard trimmings and food waste.

## REFERENCES

- 1 Source: "MSW Generation, Recycling, and Disposal in the United States: Facts and Figures for 2012," U.S. EPA. [http://www.epa.gov/waste/nonhaz/municipal/pubs/2012\\_msw\\_fs.pdf](http://www.epa.gov/waste/nonhaz/municipal/pubs/2012_msw_fs.pdf)
- 2 Source: "Hudson Valley Food Hubs Initiative, Executive Summary," Local Economies Project: The New World Foundation. <http://www.localeconomies-hv.org/documents/food-hubs-initiative-executive-summary.pdf>
- 3 Source: Waste Reduction Model (WARM) Calculator 2012, U.S. EPA  
[http://epa.gov/epawaste/conserves/tools/warm/Warm\\_Form.html](http://epa.gov/epawaste/conserves/tools/warm/Warm_Form.html)
- 4 Source: Claire Kremen and Albie Miles, "Ecosystem Services in Biologically Diversified Versus Conventional Farming Systems: Benefits, Externalities and Trade-Offs," Ecology and Society 17, no. 4 (2012), 40,  
[www.ecologyandsociety.org/vol17/iss4/art40](http://www.ecologyandsociety.org/vol17/iss4/art40)
- 5 Source: Committee on Twenty-First Century Systems Agriculture, Toward Sustainable Agricultural Systems in the 21st Century (National Research Council of the National Academies, 2010), 519–533,  
[www.nap.edu/catalog.php?record\\_id=128](http://www.nap.edu/catalog.php?record_id=128)

# Ulster County Commercial Composting Guide

Put these items in your composting container

## FOOD SCRAPS AND LEFTOVERS

Meat, fish, dairy, fruit, vegetables, shells, bones, pasta, rice, eggshells, nutshells, bread, grains



## FOOD-SOILED PAPER

Coffee grounds and filters, tea bags, waxed cardboard, soiled paper bags, kitchen paper towels, paper napkins, paper egg cartons, uncoated paper plates (**Absolutely no plastic**)



## PLANTS, FLOWERS AND APPROVED COMPOSTABLE PACKAGING\*

Plants and flowers, landscape vegetation, holiday trees, untreated wood scraps



\*Look for this logo on your food service items and packaging!



## THESE ITEMS ARE NOT ACCEPTED IN COMPOSTING PROGRAM

No glass, metals, coated paper or plastics (utensils, wrappers, bags, plastic foam, etc.)



## Garbage

Put these items in your garbage container



## Recycling

Put these items in your recycling container



For more information, contact the Ulster County Resource Recovery Agency  
 999 Flatbush Road, Kingston, New York 12401  
 Recycling Hotline — (845) 336-3336 or [www.ucrra.org](http://www.ucrra.org)

The Ulster County Commercial Composting Guide is partially funded by the NYS Department of Environmental Conservation



Find us on facebook!

# Ulster County PARTNER IN COMPOSTING Program

This collaboration between the Ulster County Resource Recovery Agency, local hauling companies and food related businesses offers a greener alternative that converts food scraps, food-soiled paper and other organic waste into valuable compost for home gardens and local agriculture.

Whether you work in a restaurant, grocery store, hotel, office building or school, the Ulster County **PARTNER IN COMPOSTING** program may be available to you. About 65 percent of the waste that goes to the landfill comes from the business community. Studies show that food scraps, food contaminated paper and waxed corrugated cardboard make up nearly 30 percent of that total.

By recycling food waste, your business can have a positive impact on the environment. According to the Environmental Protection Agency (EPA), food scraps in landfills produce methane, a greenhouse gas 21 times more harmful than carbon dioxide. By composting at work, we are diverting food waste from landfill disposal while creating nutrient-rich material highly valued by gardeners, farms, nurseries and other businesses that contribute to the vitality of our community.

Environmental preservation is an issue of paramount importance to Ulster County residents. Citizens want to know that the businesses they patronize are doing all that they can to help protect our environment. Join the Ulster County **PARTNER IN COMPOSTING** program today!

## GETTING STARTED

Take these simple steps to join the **PARTNER IN COMPOSTING** program.

1. Contact the Ulster County Resource Recovery Agency at (845) 336-0600 or [mleg@ucrra.org](mailto:mleg@ucrra.org)
2. Schedule a free site visit to discuss the program and staff training
3. Get your employees involved. See our resources below

## BUSINESS RESOURCES

- Free signs, decals and employee training for all **PARTNER IN COMPOSTING** participants
- Free promotional material to promote your efforts with customers
- Potential cost savings by reducing waste, donating and composting
- Assistance in purchasing acceptable compostable service ware



## DONATE THE BEST, COMPOST THE REST

Can your high-quality leftover food be donated to hungry people or used for animal feed? Before you compost food that has not been served, consider donation options. The Ulster County Resource Recovery Agency has partnered with local food pantries to ensure your donation safely gets to people in need and reduces disposal costs for your business. For additional information on how to donate food contact the **PARTNER IN COMPOSTING** program.

## WASTE REDUCTION

Food costs money to purchase and prepare. When it becomes food waste it also costs money to haul it away. By doing your best to minimize food waste and divert it from landfills to composting, you can reduce your operating expenses and help the environment.

## REDUCE, DONATE the Best, COMPOST the Rest

## BENEFITS OF COMPOST

- Compost provides valuable nutrients and organic matter to the soil.
- Compost reduces the need for chemical fertilizers and pesticides.
- Compost improves soil structure, improving the soil porosity and bulk density to ensure a healthier root environment for your plantings.
- Compost filters and breaks down pollutants, protecting our groundwater supply. Compost increases the water retention of soil, reducing watering needs.

## COMPOST FOR PURCHASE

The Ulster County Resource Recovery Agency is a member of the US Composting Council and a participant in the Seal of Testing Assurance (STA) program. The STA program is recognized as the nation's leader in compost testing and sets the standard for compost quality. STA certified compost products are routinely analyzed for the following properties: pH, soluble salts, nutrient content, moisture content, organic matter content, maturity, stability, particle size, pathogen, trace metals (Part 503 regulated metals)

**Visit the Ulster County Resource Recovery Agency at 999 Flatbush Road in Kingston to purchase your STA certified compost product and improve your soil today. *If it isn't STA compost... What is it?***



For more information, contact the Ulster County Resource Recovery Agency

999 Flatbush Road, Kingston, New York 12401

Recycling Hotline — (845) 336-3336 or [www.ucrra.org](http://www.ucrra.org)

The Ulster County Commercial Composting Guide is partially funded by the NYS Department of Environmental Conservation



Find us on  
facebook!

## The Emerald Ash Borer (EAB) Infestation in Ulster County

**Emerald Ash Borer** - The Emerald Ash Borer, commonly referred to as "EAB", is an invasive wood-boring beetle. Native to Asia, the beetle's first North American populations were confirmed in the summer of 2002 in southeast Michigan and in Windsor, Ontario. Emerald Ash Borers feed on and eventually kill all native ash trees. In New York, it was first detected near Saugerties in 2010, indicating that EAB has likely been in Ulster County since 2004-05. The EAB "Death Curve" (shown below, right) depicts what the future of ash is for our area (using the research done in the mid-West). **The RED arrow shows about where northeastern Ulster County is on the curve.** (Disregard the specific years at the bottom – the span of time and years since infestation is what is important)

### ULSTER COUNTY EAB TASK FORCE

Since 2012, Ulster County Department of Environment coordinates and convenes the Ulster County EAB Task Force to help communities plan, prepare, manage, and ultimately recover.

As part of this Task Force, workshops have been held each of the last two years for municipal highway officials on the management and disposal of EAB material – more than 45 municipal highway managers from nearly 20 municipalities have participated.

Mid-Hudson Regional Sustainability Plan – *"The rapid spread of invasive species, particularly the Emerald Ash Borer, may impact the way organic waste (in particular woody waste) is managed in the Mid-Hudson Region. Currently, Orange and Ulster counties are in the NYSDEC Emerald Ash Borer quarantine zone. This restricts "the movement of ash logs or wood (such as tree trimmings), ash nursery stock and all firewood out of the respective counties, unless done under a Compliance Agreement from NYS Department of Agriculture and Markets." This demonstrates the need to develop local markets and disposal/reuse facilities for woody biomass and other organic waste within the Region."*

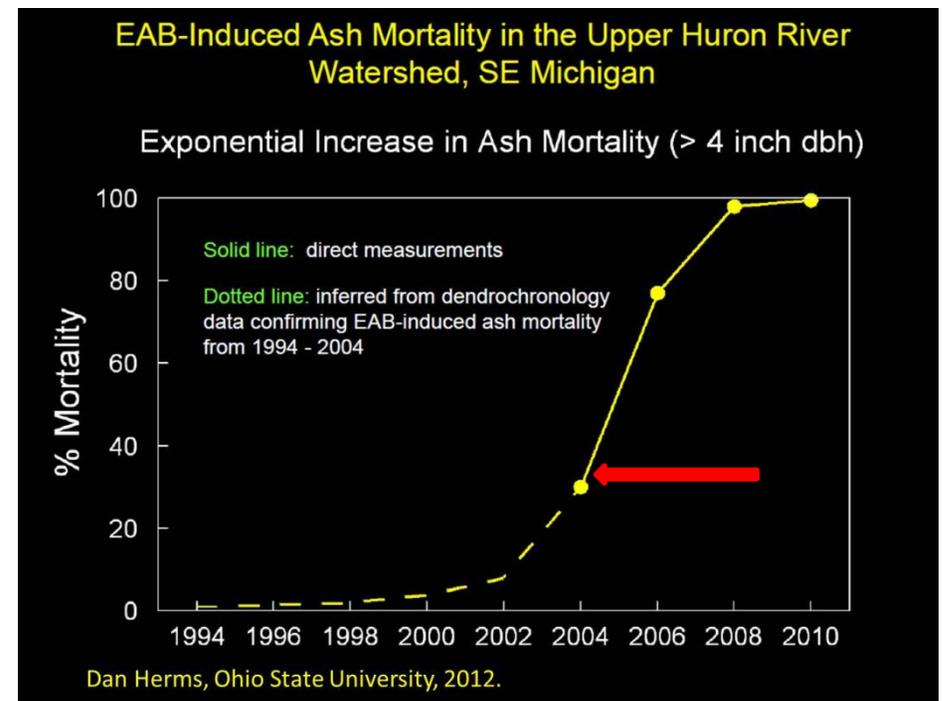
### FUTURE OF ASH IN ULSTER COUNTY

While ash is not as prevalent here as in the western part of the State, thousands of infested ash can be seen along our roads that will need to be removed in the immediate future.

As ash colonizes wet and recently-disturbed environments, countless ash exist along our roadways in the valley bottoms. We expect a near 100% mortality rate.

There are 2,225 miles of road in the County – nearly 4,500 "lane miles" - 1,530 miles maintained by local municipalities; 425 miles of Ulster County maintained; 270 miles maintained by NYSDOT. There are an 800 additional miles of private roads / driveways

We know a dramatic die-off will occur in the next year or two, meaning abundant hazard ash trees (and subsequently abundant ash material/chips) we be available and need to be disposed of properly.



# Ulster County Resource Recovery Agency and the Proximity to the Emerald Ash Borer (EAB) infestation



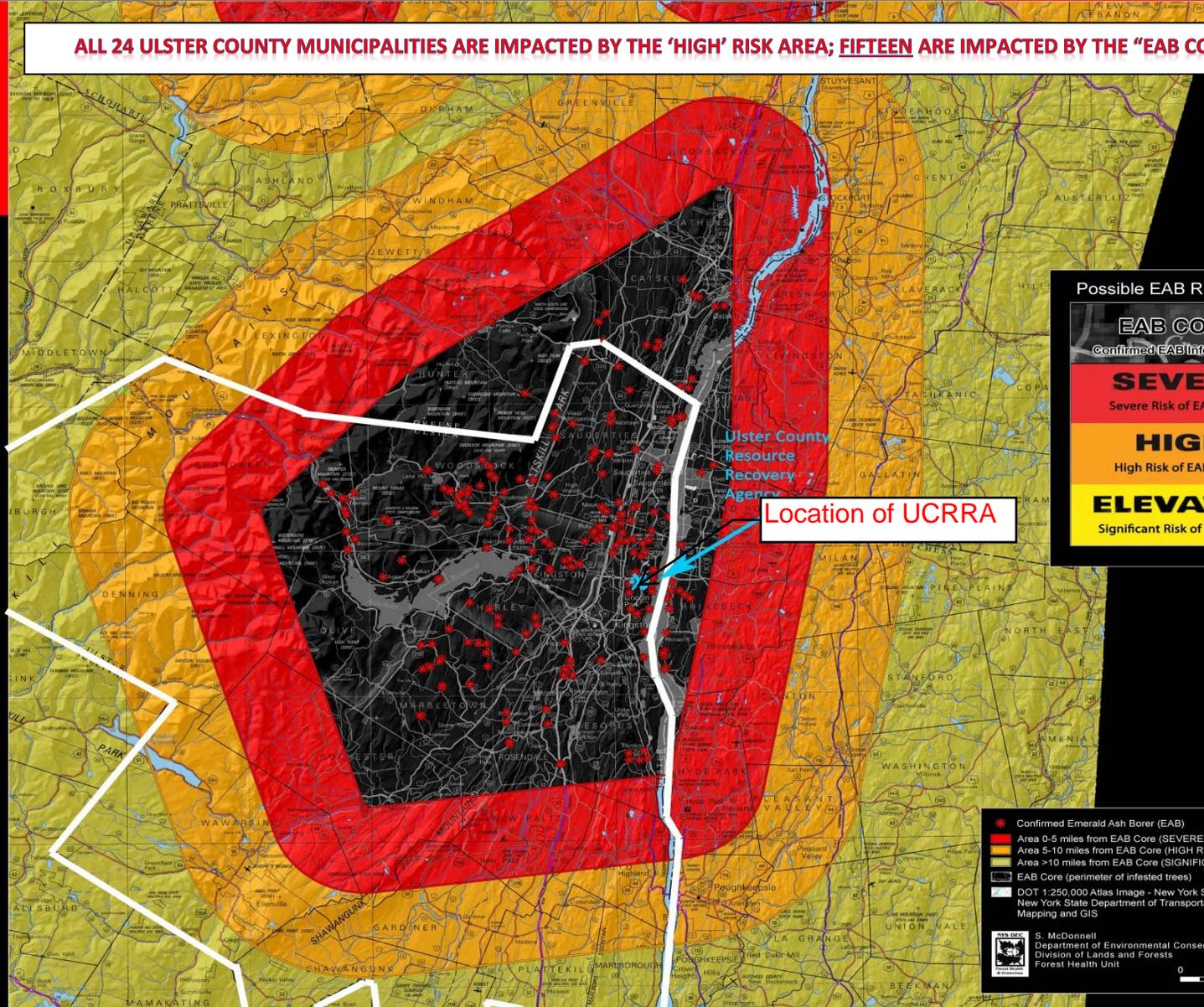
**Emerald Ash Borer (EAB)**  
Management Response Plan  
Mid-Hudson (Tier 3)

Last Updated 05/2014

**RESPONSE  
PLAN**

**R I S K**  
**B o r e r**  
**A s h**  
**E m e r a l d**

**ALL 24 ULSTER COUNTY MUNICIPALITIES ARE IMPACTED BY THE 'HIGH' RISK AREA; FIFTEEN ARE IMPACTED BY THE "EAB CORE"**



Possible EAB Risk Levels

- EAB CORE**  
Confirmed EAB Infested Trees
- SEVERE**  
Severe Risk of EAB Attacks
- HIGH**  
High Risk of EAB Attacks
- ELEVATED**  
Significant Risk of EAB Attacks

**Location of UCRRA**

- Confirmed Emerald Ash Borer (EAB)
- Area 0-5 miles from EAB Core (SEVERE RISK)
- Area 5-10 miles from EAB Core (HIGH RISK)
- Area >10 miles from EAB Core (SIGNIFICANT RISK)
- EAB Core (perimeter of infested trees)
- DOT 1:250,000 Atlas Image - New York State  
New York State Department of Transportation,  
Mapping and GIS

S. McDonnell  
Department of Environmental Conservation  
Division of Lands and Forests  
Forest Health Unit

0 5 Miles

**Exhibit A – Statement of Work**  
**Cleaner, Greener Communities (CGC) Program, Phase II: Category 2**  
Greener by Example: Removing Barriers to Community  
Organics Recovery in Ulster County  
CFA 56017

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**Project Background**

Ulster County, in partnership with the Ulster County Resource Recovery Agency (UCRRA), is submitting a proposal to NYSERDA under the *New York Cleaner, Greener Communities* program to expand and remove market barriers to regional composting.

Since the Ulster County and the Mid-Hudson Region do not have a municipal solid waste (MSW) landfill, UCRRA currently transports MSW to landfills in Western and Central New York, at substantial economic and environmental costs. At the same time, Ulster County is fortunate to have one of the two municipally-operated composting facilities in New York State, operated by UCRRA. This facility accepts organics, including food scraps, yard waste and other compostable waste materials generated in the area and creates a finished compost product which can be used as a soil amendment. This process eliminates the need for transporting organic waste across the State and reduces methane emissions that would occur if materials anaerobically decompose at a landfill facility.

The UCRRA organics recovery facility currently processes 500 tons of organics annually. Considering that approximately 12.5% of the municipal solid waste stream is food scraps which could be diverted to the County's composting facility, there is substantial opportunity to expand the volume of waste diverted from landfills for disposal to the UCRRA facility. UCRRA estimates that in Ulster County's commercial waste stream there are 20,000 tons of food scraps disposed of as MSW annually.

UCRRA has worked to increase incentives to encourage communities to separate organics for composting to the greatest extent possible by discounting its fee to approximately one-third for organic material versus MSW (\$33/ton versus \$103/ton). Additionally in 2014, UCRRA reduced the tipping fee to \$20/ton in order to attract more haulers to utilize the facility. However, economic and market barriers continue to impede broader adoption of community composting and waste diversion. Most notably, private waste haulers are unable to offer a lower rate for the collection of organics than that of MSW under existing business models. Haulers require economies of scale. They need robust customer base to reach a route density that makes collection of organics cost efficient. They also require capital investments in new equipment to handle the pick-up of organic materials. Large institutional customers similarly face barriers to composting, including costs for new containers to collect organics, funding to train staff, and investment in establishing systems and procedures for the separation of organics. As a result of these barriers to both haulers and customers, few commercial customers have established organics collection programs. A critical mass of customers is necessary to make collection cost-effective for haulers and as well as customers.

**Definitions**

**Contractor Team:** At the beginning of the Project Period, the Contractor Team for this Agreement shall consist of the Contractor and its Subcontractors Ulster County Resource Recovery Agency. Any additional Subcontractors shall be identified and selected in accordance with Article V of this Agreement

and shall be promptly communicated to the NYSERDA Project Manager. The Contractor shall have the sole responsibility for satisfactory completion of all Tasks and Deliverables outlined in this Agreement.

**NYSERDA Project Manager:** NYSERDA shall assign a staff member as the NYSERDA Project Manager, designated to oversee and serve as the main point of contact for the Contractor. The NYSERDA Project Manager shall review deliverables and provide direction to the Contractor in a streamlined fashion. The NYSERDA Project Manager shall be responsible for approving deliverables and ensuring compliance with this Statement of Work.

**Cost Share:** In kind or financial contributions by the Contractor, excluding grants or incentives from NYSERDA and other New York State agencies.

**Performance Metrics:** The standards of comparison, determined and documented as outlined in Exhibit F, NYSERDA shall use to: assess activities in the project, capture the extent of benefits delivered, and gauge performance of the project and of the CGC Program.

### **Deliverable Review Process**

The Contractor shall submit all Deliverables outlined in this Agreement to the NYSERDA Project Manager once a Task is completed. The Contractor shall submit all Deliverables in Microsoft Word and PDF format (or other format as identified in the Tasks below). Within fifteen (15) business days of receipt of each Deliverable, the NYSERDA Project Manager shall provide comments to the Contractor or, if the Deliverable is acceptable, the NYSERDA Project Manager shall provide final approval. The Contractor shall prepare revisions to the Deliverable reflecting the NYSERDA Project Manager's comments, and resubmit the revised Deliverable in Microsoft Word and PDF format (or other format as identified below), within fifteen (15) business days after receipt of these comments.

The NYSERDA Project Manager may provide additional comments and requests for information following receipt of the Contractor's revisions. In the event that NYSERDA requires additional time for considering approval, NYSERDA shall specify the additional amount of review time necessary up to fifteen (15) business days. All Deliverables shall not be considered final unless approved by NYSERDA in writing to the Contractor.

### **Tasks**

The total NYSERDA award amount for all tasks shall not exceed \$ 538,750.00. The Contractor team shall be required to provide a cost share of \$ 214,290.00. The total project cost is \$ 753,040.00. Any modifications to this amount shall be by mutual agreement. All cost overruns shall be the sole responsibility of the Contractor.

Regardless of any subcontracting arrangements, the Contractor is solely responsible for all tasks in this Statement of Work. The Contractor shall conduct all work as outlined in the following tasks:

#### **Task 1: Contract Management**

The Contractor shall be responsible for overall Contract management and coordination of all Tasks in this Agreement. Contract management activities shall include, but not be limited to, the following tasks:

##### **Task 1.1: Draft Project Benefits Metrics Report**

The Contractor shall prepare and submit a draft Project Benefits Metrics Report (PBMR) with proposed performance metrics and projected benefit values, including methods for data collection and calculations as described in Exhibit F.

**Deliverable:**

1.1 Draft PBMR

**Task 1.2: Contract Management and Quarterly Progress Reports**

The Contractor shall participate in conference calls and meetings as outlined below; prepare and submit quarterly reports as outlined below; coordinate and manage all Subcontractors; provide documentation and information as requested by NYSERDA for creation of press releases or case studies to showcase the success of the Tasks completed in this Agreement; and review all Deliverables prior to submission to the NYSERDA Project Manager. The Contractor shall submit quarterly progress reports within 30 days after the end of each quarter, in a template provided by NYSERDA. During each calendar year, quarter start and end dates are as follows: Quarter 1: January 1-March 31, Quarter 2: April 1-June 30, Quarter3: July 1-September 30, Quarter 4: October 1-December 31.

**Conference Calls and Meetings:** The Contractor shall participate with NYSERDA in monthly calls and face-to-face meetings as needed to gauge project status. NYSERDA shall schedule and conduct on an as-needed basis in-person visits, conference calls, or face-to-face meetings to verify project requirements and the completion of project milestones.

Each Contract Management and Quarterly Progress Report shall include:

- A summary of progress and accomplishments over the previous quarter, including a discussion of major tasks and deliverables completed in the prior quarter;
- Explanation of Contract management activities completed in the previous quarter with backup documentation including timesheets showing hours worked, hourly rate, staff person, and title;
- Explanation of current quarter's activities and plans, including tasks and deliverables to be completed; and
- Discussion of any major issues or problems encountered during the prior quarter, deviations from schedule and budget and other issues related to the successful outcome of this Agreement.

If the Project timeline is extended past the end of the Project Period as specified in the Payment Schedule, the Contractor shall continue to submit quarterly reports but no additional payments shall be allocated for those deliverables.

**Deliverables:**

- 1.2A Contract Management and Quarterly Progress Report #1
- 1.2B Contract Management and Quarterly Progress Report #2
- 1.2C Contract Management and Quarterly Progress Report #3
- 1.2D Contract Management and Quarterly Progress Report #4
- 1.2E Contract Management and Quarterly Progress Report #5
- 1.2F Contract Management and Quarterly Progress Report #6
- 1.2G Contract Management and Quarterly Progress Report #7
- 1.2H Contract Management and Quarterly Progress Report #8
- 1.2I Contract Management and Quarterly Progress Report #9
- 1.2J Contract Management and Quarterly Progress Report #10

- 1.2K Contract Management and Quarterly Progress Report #11
- 1.2L Contract Management and Quarterly Progress Report #12

**Task 1.3: Final Report and Technology Transfer**

The Contractor, in conjunction with the rest of the Contractor Team, shall prepare a comprehensive Final Report, in a template provided and limited to no more than 25 pages plus attached final products, which describes the work performed and the results associated with the tasks outlined in this Agreement.

To further NYSERDA’s goal of transferring technology or knowledge amongst all NYS communities, the Contractor shall make all final project deliverables available for public use and agree to work with NYSERDA to promote the project throughout its implementation through NYSERDA’s outreach outlets. The Contractor shall also honor any reasonable request made by NYSERDA to provide any additional information necessary to create a press release or case study showcasing this project.

Minimum Final Report Content:

- Table of Contents;
- Brief overview of CGC Program;
- Project overview and description;
- Summary of tasks completed;
- Narrative describing activities that took place;
- Summary of lessons learned;
- Table outlining tasks that received NYSERDA funding, total cost of tasks as implemented, and NYSERDA funding amounts;
- Appendices including:
  - Documentation outlined in Tasks 2 through 8 of this Statement of Work;
  - Names, contact information and roles for project participants; and
  - Performance Metrics – Include final PBMR as described in Exhibit F.

NYSERDA reserves the right to request additional analysis, clarification on certain tasks, or other content for inclusion in the draft or Final Reports.

**Measurement & Verification (M&V):** The Contractor shall comply with reasonable requests made by NYSERDA to perform M&V activities on the UCRRRA Organics Recovery Facility projects for a period of up to 10 years after completion. The costs of any M&V activities, aside from typical building operating costs and Contractor staff time incurred during the activities, shall be borne by NYSERDA. M&V activities initiated and covered by NYSERDA may include, but are not limited to, hiring a Professional Engineer to inspect or test equipment on the Ulster County Resource Recovery Agency Organics Recovery Facility project sites as well as costs of any potentially necessary sub-metering equipment borne by the Contractor for M&V activities may include, but are not limited to, staff time spent showing NYSERDA or its Contractor where relevant equipment is located or time spent gathering and drafting necessary documentation to demonstrate equipment performance.

**Deliverable:**

### 1.3 Final Report including the Final PBMR

#### **Task 2.0: Project Management**

##### **Task 2.1 Management Plan**

The Contractor shall submit a Management Plan that identifies all entities/team members collaborating in the proposal, including the names of the Contract Manager and Subcontractor who will be responsible for the success of the project. The Contractor shall provide resumes and a clear description of the roles and responsibilities of each key person in completing the Statement of Work. The Management Plan shall include the following components.

- An organizational chart for the team
- Description of organizational qualifications to execute the program
- Explanation of how coordination with the NYSERDA Project Manager, other independent contractors to NYSERDA, and strategic partners in the region will be accomplished.

Contractor changes to team member positions and personnel are subject to NYSERDA's approval. NYSERDA holds the Contractor solely responsible for performance. If NYSERDA finds a team member's performance unsatisfactory, on the grounds of non-performance, poor representation, or any other reason related to program outcomes, NYSERDA will notify Contractor of its concerns and the Parties will work to resolve the performance issues in an expeditious manner; resolution may include replacement of the team member with an individual(s) acceptable to NYSERDA and Contractor.

##### **Deliverable:**

2.1 Management Plan as outlined in Task 2.1 above

##### **Task 2.2 Project Oversight and Coordination**

The Contractor will conduct regular coordination meetings between the Subcontractor and the Contractor. Meeting will be held on a monthly basis. Also, on a quarterly basis for the first year, and a biannual basis thereafter, the Contractor will organize meeting in which other users or stakeholders, such as waste generators or waste haulers, will be invited to review the project progress and to coordinate on education and outreach efforts. This information will be used to both inform the implementation of the program and to better involve stakeholders in the project.

##### **Deliverable:**

2.2 Log of meetings as outlined above. Copies of any mailing materials or outreach materials produced.

##### **Task 3.0 Incentivize Municipal Composting**

Under this work item, the Contractor will work with the Subcontractor reduce existing market barriers and lower the cost to compost. Also, an analysis will be performed to inform a new tipping fee when the subsidized fee is phased out.

##### **Task 3.1 Buy totes for compost collection**

The Contractor, through its Subcontractor, will buy approximately 500 organic material bins (totes) necessary for establishing a composting program. The totes will be distributed to commercial clients who contract for organic waste collection.

**Deliverable:**

3.1 Documentation of totes received, log and documentation of tote distribution for collection.

**Task 3.2 Waive/reduce Tipping Fee**

In Year 1, when the Contractor and Subcontractor anticipate the facility will receive 750 tons, NYSERDA will pay 100% of tipping fees (\$33/ton). In Year 2, when the Contractor and Subcontractor anticipate the facility will receive 3000 tons, NYSERDA will pay for 100% of tipping fees (\$33/ton). In Year 3, when the Contractor and Subcontractor anticipate the facility will receive 5000 tons, NYSERDA will pay 67% of the tipping fee (\$22/ton) and the haulers will pay the remaining cost (\$11/ton).

**Deliverable:**

3.2 Documentation from UCRRA of tonnage received at facility.

**Task 3.3 Perform market analysis to re-establish tipping fee**

At the end of the grant, UCRRA will need to resume collecting a tipping fee. In order to ensure that the tipping fee covers the cost of operating the facility to the maximum extent practicable yet does not result in significantly higher collection rates and erode the base of composting customers, a market analysis will be conducted.

**Deliverable:**

3.3 Report analyzing compost volumes, cost of UCRRA to operate organics recovery facility, and current cost for customers to contract for organics hauling. Report would suggest the rate to establish the tipping fee in order to best ensure continued success of the program.

**Task 4.0 Improve Capacity to Compost**

The UCRRA facility currently can process a maximum of 500 tons per year of food waste. To achieve the necessary economy of scale, the facility must expand. The initial design of the facility was completed with zones which allow an immediate expansion as well as additional more substantial expansions. Appurtenant structures and equipment are also necessary as part of the expansion. And the existing NYS DEC permit will need to be amended in order for the facility to accept more than 500 tons annually.

**Deliverable:**

4.0 Copy of amended DEC permit, documentation of site build-out

**Task 5.0 Create Demand for Composting Collection Services and Finished Compost Product**

It is a critical component of this proposal to increase the demand for composting collection and for finished compost through targeted and general education, outreach and marketing.

**Task 5.1 Generator Study- Identify, map, outreach to food waste generators**

Identify and map food service operations and institutional generators within the UCRRA service area. Produce marketing and educational materials for potential generators. Collaborate with implementation of the UC Food Service Waste Reduction Act.

**Deliverable:**

5.1 Report listing generators, mapping them with respect to the UCRRA service area. Identification of areas to cluster outreach to potential hauling customers. Log of initial outreach to food waste generators, copies of mailings and other materials.

**Task 5.2 Partner in Composting Campaign (green branding, green business)**

Outreach to all identified potential generator but specially target areas of higher customer density which would yield more cost-effective hauling routes. Collaborate with implementation of the UC Food Service Waste Reduction Act.

Identify and outreach to multi-unit residential complexes, particularly those serving low to moderate income residents, to provide education and support regarding the benefits of organics diversion.

**Deliverable:**

5.2 Log of initial outreach to food waste generators, multi-unit residential complexes, LMI complexes, copies of mailings and other materials. Copy of compost educational materials produced.

**Task 5.3 Marketing of Finished Product (bagging machine)**

Purchase and install a compost bagging machine which will greatly increase the marketability of finished compost. A lucrative market for finished compost necessary to increase the revenue associated with the compost operation and remove another market barrier to a self-sustaining program. Locally produced compost also provides greater sustainability benefits by reducing the need for energy intensive synthetic and imported soil amendments.

**Deliverable:**

5.3 Map and list of potential resellers or commercial/agricultural users of compost. Log of outreach to this identified group. Copy of any educational materials produced. Receipt and commissioning of bagging machine.

**Task 6.0 Ensure Woody Bulk**

The Mid-Hudson Region and in particular the area directly around the UCRRA facility are experiencing dramatic ash tree die off due to Emerald Ash Borer, an invasive beetle.

Woody bulk, e.g. wood chips, are necessary for a food compost operation as a carbon source. Generally three parts woody bulk is required for one part of food waste.

Establish appropriate and beneficial re-use through composting of Emerald Ash Borer-infested wood (a major material management issue in the region) as carbon-bulking material necessary for the compost process.

Coordinate with Ulster County Department of Public Works, Ulster County Cornell Cooperative Extension, the Ulster County Emerald Ash Borer Task Force, and other appropriate groups in the potential UCRRA service area (Catskill Invasive Species Partnership, Cornell Cooperative Extension of Dutchess and Columbia/Greene County). Outreach to municipalities and private arborist and landscapers regarding disposal of woody bulk (EAB)

Coordination with NYS Ag and Markets regarding the processing of EAB infected wood chips and the movement of wood within the quarantine area.

**Deliverable:**

6.0 Copy of any EAB wood chip disposal outreach materials, log of meeting attendance, log of outreach to municipalities, arborists, and landscapers regarding the ability to dispose of woody bulk at the UCRRRA facility.

**Task 7.0 Demonstrate Organics Collection at County Facilities**

Establish an organics recovery program the Ulster County Law Enforcement Center and possibly other sites which produce significant quantiles of food waste. Case study materials would be created throughout the process in order to provide information to other intuitions. The project would be developed as part of the County's **Sustainable Ulster: Greener by Example** initiative.

**Deliverable:**

7.0 Report documenting establishment of organics collection, any outreach materials developed documenting collection as well as diversion statistics.

**Payment Schedule**

The Project milestones and schedule of payments is shown below. The budget table below represents the budgets as estimated at the start of the Project Period as defined in Item 4 on page 1 of this Agreement. The Contractor, as part of a quarterly reporting package, may request a change to the NYSERDA share of the budget per task. If a budget task reallocation request is made, the Contractor must ensure that the NYSERDA share as a percent of total project cost remains the same or decreases. The NYSERDA Project Manager is authorized to transfer up to 10% of the total NYSERDA share between tasks without requiring a contract modification. The NYSERDA Project Manager must provide a written approval or rejection of the request. Changes to the total NYSERDA share of cumulative budget changes that exceed 10% of the total NYSERDA share, and any changes of the total NYSERDA share of the budget, shall require a contract modification.

The Contractor shall submit invoices for payment of a completed milestone once the associated Deliverables are approved by the NYSERDA Project Manager as outlined in the Deliverable Review Process above. Invoices shall be submitted in a template provided by NYSERDA and as outlined in Article IV of the Agreement. NYSERDA funding, when combined with the Contractor's cost-share, shall not exceed 100% of the cost of any milestone. NYSERDA is not responsible for any costs that are greater than the NYSERDA contribution not-to-exceed amount for each milestone.

The Contractor shall outline all cost-share amounts in invoices submitted to NYSERDA and shall provide the following documentation to support the NYSERDA contribution and cost share amount for each invoice:

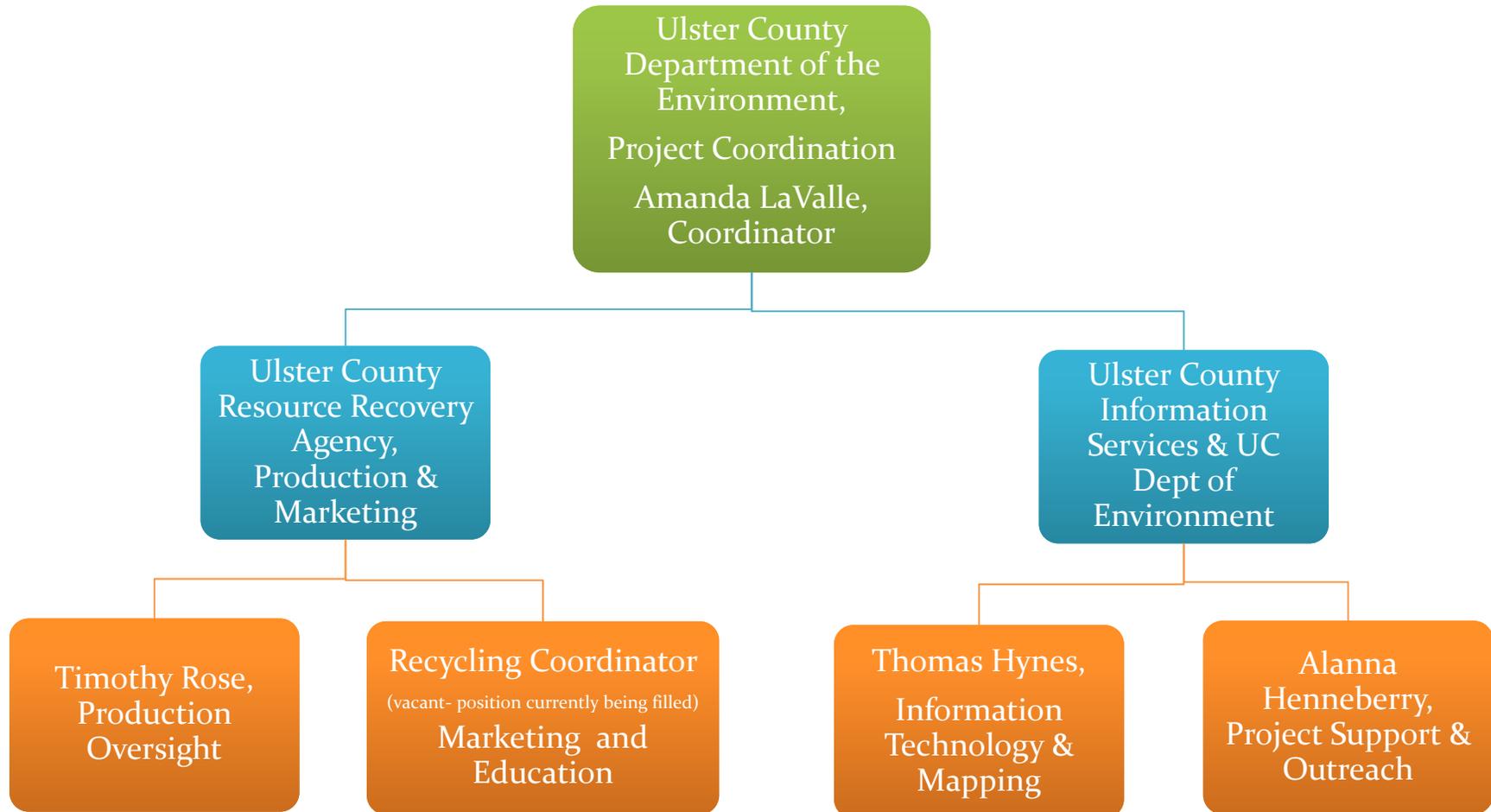
- Capital Costs: Invoice supporting total capital costs incurred.
- Labor costs (in-kind or subcontracted): Breakout of the staff that worked on this milestone and the number of hours, multiplied times the hourly rate to get the total amount.
- Document Cash Contributions from non-NYS Source: with a signed letter of commitment from the contributing entity (i.e. Federal grant award). On the milestone payment requests, the Contractor shall note the amount of money provided by the private source that is being contributed to that task.

Milestone #	Deliverable Description	Due Date	NYSERDA Contribution Not to Exceed	Contractor Cost Share	Total Cost
<b>1</b>	<b>Contract Management</b>				
1.1	Draft PBMR	Q2 2016	\$0.00	\$7,500.00	\$7,500.00
1.2A	Contract Management and Quarterly Progress Report #1	Q2 2016	\$0.00	\$2,300.00	\$2,300.00
1.2B	Contract Management and Quarterly Progress Report #2	Q3 2016	\$0.00	\$2,300.00	\$2,300.00
1.2C	Contract Management and Quarterly Progress Report #3	Q4 2016	\$0.00	\$2,300.00	\$2,300.00
1.2D	Contract Management and Quarterly Progress Report #4	Q1 2017	\$0.00	\$2,300.00	\$2,300.00
1.2E	Contract Management and Quarterly Progress Report #5	Q2 2017	\$0.00	\$2,300.00	\$2,300.00
1.2F	Contract Management and Quarterly Progress Report #6	Q3 2017	\$0.00	\$2,300.00	\$2,300.00
1.2G	Contract Management and Quarterly Progress Report #7	Q4 2017	\$0.00	\$2,300.00	\$2,300.00
1.2H	Contract Management and Quarterly Progress Report #8	Q1 2018	\$0.00	\$2,300.00	\$2,300.00
1.2I	Contract Management and Quarterly Progress Report #9	Q2 2018	\$0.00	\$2,300.00	\$2,300.00
1.2J	Contract Management and Quarterly Progress Report #10	Q3 2018	\$0.00	\$2,300.00	\$2,300.00
1.2K	Contract Management and Quarterly Progress Report #11	Q4 2018	\$0.00	\$2,300.00	\$2,300.00
1.2L	Contract Management and Quarterly Progress Report #12	Q1 2019	\$0.00	\$2,300.00	\$2,300.00
1.3	Final Report with Final PBMR	Q1 2019	\$0.00	\$4,400.00	\$4,400.00
	<b>Total Task 1</b>		<b>\$0.00</b>	<b>\$39,500.00</b>	<b>\$39,500.00</b>
<b>2</b>	<b>Program Coordination &amp; Management</b>				
2.1	Management Plan	Q2 2016	\$0.00	\$1,000.00	\$1,000.00
2.2	Project Oversight & Coord	Q1 2019	\$4,000.00	\$61,400.00	\$65,390.00

	<b>Total Task 2</b>		<b>\$4,000.00</b>	<b>\$62,400.00</b>	<b>\$66,390.00</b>
<b>3</b>	<b>Incentivize Composting</b>				
3.1	Buy Totes	Q3 2016	\$36,000.00	\$0.00	\$36,000.00
3.2	Waive/Reduce tipping fee	Q2 2016	\$233,750.00	\$0.00	\$233,750.00
3.3	Perform Market Analysis	Q3 2018	\$0.00	\$7,110.00	\$7,110.00
	<b>Total Task 3</b>		<b>\$269,750.00</b>	<b>\$7,110.00</b>	<b>\$276,860.00</b>
<b>4</b>	<b>Improve/Expand Facility</b>				
4.1	Build out UCRRRA facility	Q1 2017	\$210,000.00	\$0.00	\$210,000.00
	<b>Total Task 4</b>		<b>\$210,000.00</b>	<b>\$0.00</b>	<b>\$210,000.00</b>
<b>5</b>	<b>Create Market Demand</b>				
5.1	Generator Study	Q2 2016	\$0.00	\$15,730.00	\$15,730.00
5.2	Campaign	Q1 2017	\$0.00	\$25,355.00	\$25,355.00
5.3	Market product	Q2 2017	\$45,000.00	\$8,240.00	\$53,240.00
	<b>Total Task 5</b>		<b>\$45,000.00</b>	<b>\$49,325.00</b>	<b>\$94,325.00</b>
<b>6</b>	<b>Ensure Woody Bulk</b>				
6.1A	Coordinate with EAB outreach	Q1 2019	\$0.00	\$11,850.00	\$11,850.00
	<b>Total Task 6</b>		<b>\$0.00</b>	<b>\$11,850.00</b>	<b>\$11,850.00</b>
<b>7</b>	<b>Demonstrate at County Facilities</b>				
7.1A	Insert first project-specific Task	Q4 2016	\$10,000.00	\$44,105.00	\$54,105.00
	<b>Total Task 7</b>		<b>\$10,000.00</b>	<b>\$44,105.00</b>	<b>\$54,105.00</b>
	<b>Total Program Budget</b>		<b>\$538,750.00</b>	<b>\$214,290.00</b>	<b>\$753,040.00</b>

NOTE: As part of Contractor Cost share this budget includes \$188,290 of eligible Ulster County match and \$26,000 of non-eligible UCRRRA match.

# Greener by Example: Removing Barriers to Community Organics Recovery in Ulster County



# Amanda LaValle

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77 Main Street ♦ Kingston, NY 12401 ♦ (845) 750-6559 ♦ amanda@lavalle.com

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## ENVIRONMENTAL PROFESSIONAL

- ♦ **Experienced in program development and implementation** - Ten years of increasing responsibility as an environmental professional. Experienced technical writer and interpreter of science for governmental, public, and student audiences. Wide range of experience in government operations including organizational development, planning, program development and implementation.
  - ♦ **Strong technical and research skills**- Extensive research experience in stream ecology, fluvial geomorphology, wetland ecology, watershed science, and stormwater management. Experienced field scientist with technical skills in surveying (including total station), GPS data collection, hydrologic data collection and vegetation surveys.
- 

## PROFESSIONAL EXPERIENCE

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### **ULSTER COUNTY DEPARTMENT OF THE ENVIRONMENT – Kingston, NY**

*County level department charged with coordinating environmental policy and programs across county government.*

**Coordinator**, February 2008 to Present

- ♦ Responsible for all department operations.
- ♦ Developed Ulster County's Environmental Plan.
- ♦ Developed a county Energy Policy which was adopted by the UC Legislature.

### **NYC DEP STREAM MANAGEMENT PROGRAM – Kingston, NY**

*Innovative science-based initiative focused on stream management in NYC's West of Hudson watershed*

**SUNY Ulster Watershed Conservation Corps Coordinator**, 2004 to 2008

- ♦ Research associate for fluvial geomorphic research being undertaken by the Stream Management Program.
- ♦ Manager of the Watershed Conservation Corps- A stream science summer internship program.
- ♦ Collaborated with faculty at SUNY Ulster to incorporate stream science concepts into laboratory and field based activities for environmental science courses.

### **BARTON & LOGUIDICE, PC – Syracuse, NY**

*Multidisciplinary civil engineering firm specialized in serving municipal clients*

**Environmental Scientist**, 2002 to 2004

- ♦ Performed wide variety of office and field tasks providing support to environmental and engineering projects.

### **AMERICORPS VOLUNTEER – Kingston, NY**

*National domestic volunteer service organization*

**Program Assistant with NYC DEP Stream Management Program**, 2001

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## EDUCATION

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### **EMPIRE STATE COLLEGE – Saratoga Springs, NY**

**Masters of Arts (MA)**, Liberal Studies, July 2012

Academic focus on the use of the watershed approach in environmental policy.

### **CORNELL UNIVERSITY – Ithaca, NY**

**Bachelor of Science (BS)**, Biology & Society, May 2000

Biology & Society Peer Advisor. Dean's List.

### **ULSTER COUNTY COMMUNITY COLLEGE – Stone Ridge, NY**

**Associate of Arts (AA)**, Liberal Arts, Math and Science, June 1997

# Timothy Bryant Rose, P.E., BCEE, QEP, M.P.A.

12 Sun Mountain Road ♦ Boiceville, NY 12412 ♦ Home: (845) 657-9826 ♦ Cell: (845) 594-5227 ♦ srose23@hvc.rr.com

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## QUALIFICATIONS

Approximately 19 years of experience in the field of environmental engineering; approximately 12 years of which have been in a supervisory/management role. Licensed to practice professional engineering (P.E.) in the State of New York, Board Certified Environmental Engineer (BCEE) through the American Academy of Environmental Engineers & Scientists with a specialty in Water Supply and Wastewater, and Qualified Environmental Professional (QEP) through the Institute of Professional Environmental Practice with a specialty in Environmental Science, Management, and Policy.

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## PROFESSIONAL EXPERIENCE

**ULSTER COUNTY RESOURCE RECOVERY AGENCY – Kingston, NY**  
**EXECUTIVE DIRECTOR/ACTING EXECUTIVE DIRECTOR/DIRECTOR OF OPERATIONS AND SAFETY,**  
February 2010 to Present

**CITY OF NEW YORK DEPT. OF ENVIRONMENTAL PROTECTION – Grahamsville, NY**  
**CHIEF, WASTEWATER TREATMENT OPERATIONS,** November 2008 to December 2009

**STATE OF NEW YORK DEPARTMENT OF HEALTH – Monticello, NY**  
**REGIONAL ENGINEER / FIELD COORDINATOR/ASSOCIATE SANITARY ENGINEER/ SENIOR SANITARY ENGINEER,** May 2004-December 2008

**COUNTY OF ULSTER HEALTH DEPARTMENT – Kingston, NY**  
**SENIOR PUBLIC HEALTH ENGINEER/ASSISTANT PUBLIC HEALTH ENGINEER/ PUBLIC HEALTH ENGINEER TRAINEE,** 1995-2004

**COMMONWEALTH OF PENNSYLVANIA DEP – Harrisburg, PA**  
**CIVIL ENGINEER/CIVIL ENGINEER TRAINEE, 1994-1995**

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## EDUCATION

**MARIST COLLEGE, School of Management – Poughkeepsie, NY**  
**Master of Public Administration,** January 2008

**PENNSYLVANIA STATE UNIVERSITY AT HARRISBURG, The Capital College – Middletown, PA, NY**  
**Bachelor of Science, Environmental Engineering Technology,** May 1993

**ULSTER COUNTY COMMUNITY COLLEGE – Stone Ridge, NY**  
**Associate of Arts, Liberal Arts, Math and Science,** May 1990

**ULSTER COUNTY COMMUNITY COLLEGE – Stone Ridge, NY**  
**Associate in Applied Science, Environmental Control/Hazardous Waste,** June 1988

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## PROFESSIONAL LICENSES & CERTIFICATIONS

Certified Landfill Operator	March 2010
Qualified Environmental Professional	November 2006
Board Certified Environmental Engineer	November 2005
Professional Engineer License	February 2002

# Thomas Hynes

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140 Andrew St ♦ Kingston, NY 12401 ♦ (302) 242-7229 ♦ ThomasHynes@email.com

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## PROFESSIONAL SUMMARY

I have been working with geospatial technologies for over 10 years. I currently plan/maintain/develop/support all geospatial technologies for Ulster County, including enterprise geodatabases, GIS web services, geoprocess scripting, cartography and client side desktop support. I am interested in the integration of geospatial technologies with traditional enterprise systems. My background is geographic information systems and database development.

Specialties: Software Development (Javascript, JQuery, PHP, HTML5, Python)

Database Development: (MS SQL Server, PostgreSQL)

Geospatial Technologies: (ArcGIS, ArcSDE, PostGIS, GeoServer, OpenLayers, QGIS, WMS, WFS)

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## PROFESSIONAL EXPERIENCE

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### **ULSTER COUNTY INFORMATION SERVICES – Kingston, NY**

*County level department that provides technical guidance, expertise and support in the management of the computer and telecommunications technology.*

#### **GIS Programmer / Analyst**, July 2015 to Present

- ♦ Providing project guidance to high level personnel on geospatial integration
- ♦ Administer Enterprise ArcSDE Geodatabases on SQL Server.
- ♦ Develop Departmental GIS Workflows for data editing & analysis.
- ♦ All aspects of the GIS Technology Engineer position listed below

#### **GIS Technology Engineer**, 2008 to 2015

- ♦ Develop & Maintain GIS Web Applications.
- ♦ Develop Python Geoprocess Scripting
- ♦ Dynamic Data Driven Mapbooks including customized dynamic network objects.
- ♦ Scale Dependent Basemap Design & Map Caching.
- ♦ GIS User Support for the County & Local Municipalities

### **NYS DEPARTMENT OF HEALTH, BUREAU OF PUBLIC WATER SUPPLY PROTECTION – Troy, NY**

*State level department charged with assuring the delivery of safe public drinking water in the state of New York*

#### **GIS Analyst (intern)**, 2007 to 2008

- ♦ Statewide Water System data and metadata development
- ♦ Developed Python automation scripts
- ♦ Analyzed spatial datasets for quality control evaluation

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## EDUCATION

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### **STATE UNIVERSITY OF NEW YORK – Albany, NY**

**Masters of Arts (MA)**, Geography w/ GIS Specialization, May 2008

Graduate Certificate in GIS and Spatial Analysis, May 2008

### **MARIST COLLEGE – Poughkeepsie, NY**

**Bachelor of Science (BS)**, Information Systems, May 2001

Certificate in Systems Analysis and Design, May 2001

# Alanna Henneberry

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42 Clifton Avenue ♦ Kingston, NY 12401 ♦ (845) 901-5284 ♦ Alanna.Georgia@Gmail.com

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## PROFESSIONAL EXPERIENCE

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### **ULSTER COUNTY DEPARTMENT OF THE ENVIRONMENT – Kingston, NY**

*County level department charged with coordinating environmental policy and programs across county government.*

#### **Deputy Coordinator**, January 2015 to Present

- ♦ Oversee and support sustainable initiatives and projects which aim to reduce the County's waste generation and carbon footprint
- ♦

### **NY STATE SENATE – Kingston, NY**

*Office of Senator Cecilia Tkaczyk- Senate District 46*

#### **Director of Ulster & Greene Counties**, 2012 to 2014

- ♦ Responsible for all constituent cases and policy matters in Senate District 46-Ulster and Greene Counties
- ♦ Director of the District Office and all District office staff and interns

### **PARK & PRESERVE CONSERVATION – Hudson Valley, NY & Kartcher, Arizona**

*Mohonk Preserve, Sam's Point Preserve in New York and Kartchner Caverns Arizona State Park*

#### **Environmental Biologist**, 2009-2013

- ♦ Performed bio-inventory and mapping of caverns, analysis of tourist footprint, various conservation and preservation efforts, and discovered and described new species

### **ENVIRONMENTAL BIOLOGY – Puerto Rico, Trinidad, St. Vincent and Mustique Islands**

*Assistant to cave biologist, entomologist and geneticist Dr. Luis Espinasa*

#### **Field biologist, scientific illustrator and lab technician**, 2008-2012

- ♦ Discovered and described new species of insects, performed genetic testing, and illustrated scientific diagrams

### **CALCUTTA CHILDREN'S PROJECT – Kolkata, India & Poughkeepsie, NY**

*Project provides educational, environmental and medical support to families living and working on a garbage dump in India.*

#### **Project Director and American Liaison**, 2007-2013

- ♦ Provided on-site environmental and medical support to families living and working on garbage dump. Coordinated fundraising efforts in America for project.
- ♦ Recipient of the Eleanor Roosevelt Award and honorary speaker at the International Philosopher for Peace conference

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## PUBLICATIONS

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L. Espinasa, R.B. Pape, A. Henneberry, and C. Kinnear - A new species of Nicoletiidae (Insecta: Zygentoma) from Kartchner Caverns State Park, Arizona. *Journal of Cave and Karst Studies*, v. 74, no. 1, p. 82-89. DOI: 10.4311/2011jcks0193

Luis Espinasa, Alanna Henneberry, and Terrence Turner (2009) Cenozoic colonization of the Lesser Antilles by Nicoletiidae insects (Zygentoma, "Apterygota") and a new species of Anelpistina from Mustique Island. *Proceedings of the Biological Society of Washington*: December 2009, Vol. 122, No. 4, pp. 449-459.

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## EDUCATION

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### **Marist College – Poughkeepsie, NY**

**Bachelor of Science (BS)**, Biology 2009

# ULSTER COUNTY EXECUTIVE

244 Fair St., P.O. Box 1800, Kingston, New York 12402

Telephone: 845-340-3800

Fax: 845-334-5724

**MICHAEL P. HEIN**

*County Executive*



**ROBERT SUDLOW**

*Deputy County Executive*

**ADELE B. REITER**

*Chief of Staff*

**KENNETH CRANNELL**

*Deputy County Executive*

July 31, 2015

New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

Re: Cleaner, Greener Communities- *Greener by Example: Removing Barriers to Community Organics Recovery in Ulster County*

To Whom It May Concern:

I am pleased to provide this letter of commitment for Ulster County's local cost share for our proposal to NYSERDA Cleaner, Greener Communities program entitled *Greener by Example: Removing Barriers to Community Organics Recovery in Ulster County*. Ulster County, together with our partner Ulster County Resource Recovery Agency (UCRRA), is committed to diverting organic solid waste from MSW landfilling and significantly expanding composting across our community. The proposed three-year project will reduce current market barriers to broader adoption of composting, and the County will work in cooperation with UCRRA to ensure this project will serve as a regional and State-wide model for innovative and sustainable solutions to waste management. The project will result in a dramatic reduction in greenhouse gas emission as well as community wide cost savings.

As a Climate Smart Community, Ulster County takes seriously its pledge to reduce our greenhouse gas emission and our energy use, as well as to lead by example. *Greener by Example* is Ulster County's environmental initiative to substantially reduce the environmental footprint and increase the sustainability of county government operations. This proposal is another exciting way for Ulster County to lead the way and creates unique synergies by building on two current environmental initiatives - the Ulster County Food Service Waste Act which bans all food service providers in the county from using expanded polystyrene foam and the Emerald Ash Borer (EAB) project in which the County has developed a protocol for EAB response and provides technical assistance to municipalities and others on the issue. This proposal would also create a very important demonstration of an organics recovery program at a County operated facilities. This aspect of the proposal would provide a valuable model for the community as well as other local governments to follow.

The County pledges to contribute \$188,290 in staff support, supplies, and contractual expenses for the project as the local match to the \$538,750 in NYSERDA funds requested. Ulster County is fortunate to have staff well experienced in project management and environmental sustainability in our Department of the Environment. Department staff will be responsible for coordinating the implementation of this project and ensuring appropriate staff are stakeholders and engaged in this important initiative.

Ultimately, this project is truly about protecting and enhancing our community by helping to preserve the environment, reduce costs, create jobs, and foster the green economy and green brand for which our region is well known. This project is a unique opportunity to positively effect our community and the region to be cleaner, greener and more sustainable.

Thank you in advance for your consideration of this application.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. P. Hein', with a long horizontal flourish extending to the right.

Michael P Hein  
Ulster County Executive

# Greener by Example: Removing Barriers to Community Organics Recovery in Ulster County

CFA 56017

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## ***LETTERS OF SUPPORT***

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# ULSTER COUNTY RESOURCE RECOVERY AGENCY

## Board of Directors

Leon Smith, Chairman  
Catherine Nilsen, Vice Chairman  
Charles Landi, Treasurer  
Dominic Tagliaferro, Member  
David Gordon, Esq., Member

## Legal Staff

Kenneth Gilligan, Esq.



*Executive Director*

**TIMOTHY B. ROSE, P.E.**

999 Flatbush Road  
P.O. Box 6219  
Kingston, NY 12402

## Administration Staff

Timothy DeGraff, CPA, Controller  
Charles Whittaker, Operations Manager  
Thomas Briggs, Compliance Officer

E-Mail: [ucrra@ucrra.org](mailto:ucrra@ucrra.org)  
Website: [www.ucrra.org](http://www.ucrra.org)  
Phone: (845) 336-0600  
Fax: (845) 336-4129

July 29, 2015

New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

Re: Cleaner, Greener Communities - Ulster County Regional Composting Proposal

To Whom It May Concern:

The Ulster County Resource Recovery Agency (UCRRA) fully supports the strong and transformational regional composting proposal put forth by Ulster County, to NYSERDA's Cleaner, Greener, Communities program.

Organics diversion is the cornerstone of our waste diversion effort at the Ulster County Resource Recovery Agency. Last year, Ulster County generated over 118,000 tons of municipal solid waste that most of which was transported to landfills for disposal 250 miles away. At a time when many recycling programs have hit a plateau, food waste is commonly seen as the next segment of the solid waste stream to be tapped for diversion. According to the Environmental Protection Agency, food waste accounts for an estimated 12.5 percent of the municipal solid waste stream nationwide and UCRRA estimates that Ulster County has 20,000 tons of food waste in our commercial waste stream. By composting, food waste is diverted from landfill disposal thereby saving money while creating nutrient-rich material highly valued by gardeners, farms, nurseries and other businesses that contribute to the vitality of our community.

UCRRA is pleased to partner with Ulster County as an integral part of making this unique project reality. As is pointed out in the Mid- Hudson Regional Sustainability Plan regarding current materials management practices for the Region, our goal is to shift from the status quo, where much of the material used in the Region is shipped to other parts of NYS or the US for disposal, to a future where the Region is self-sufficient and sustainable. The plan also focuses on developing regional solutions to maximize the value of materials and extend their useful lifecycle and highlights Ulster County's existing organics recovery

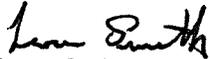
operation as a model for the region and NYS. With no operating landfills in the region, all landfill-destined waste is exported as either solid waste or as incinerated residual ash. Export requires moving huge volumes of material long distances, which results in significant GHG emissions and air pollution while expanding capacity for managing organics recycling in the region can be the solution. While our neighboring counties in the region may have some form of organics management programs in place, there is an opportunity to increase regional-scale coordination. UCRRA has been an active participant in the regional sustainability planning process in the Mid-Hudson Region with regards to materials management and collaboration for regional planning and sustainability is already ongoing in the region.

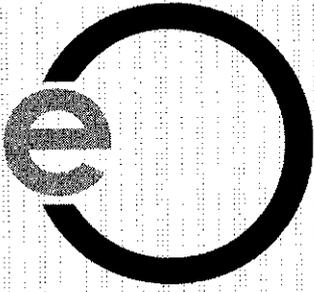
While UCRRA is on track to compost 500 tons of food waste in 2015, there remains a large gap between offering low tip fees for organics and getting material to the UCRRA Organics Recovery Facility. We believe this gap is attributable to the lack of route density. The few haulers that are offering food waste hauling services are unable to offer better pricing until more businesses are separating their food waste and businesses do not want to separate their food waste until prices for hauling come down. In addition, the lowering of tipping fees for organic waste would be an extremely powerful market driver to propel this program to wide scale implementation. This access to affordable food waste hauling services remains a barrier to many potential customers, even those that may be highly motivated to divert their organic waste stream.

This proposal put forth by Ulster County would allow us to expand on our existing composting operation. To date, UCRRA has invested over \$200,000 into the composting operation for engineering services, site construction and processing equipment. Additional resources have been dedicated through the education and outreach work performed by our Recycling Coordinator, targeting both the general public and larger commercial organic waste generators. Funding would be used to improve the operation and commercial viability of the composting operation. An increased pad area, leachate collection, and materials receiving building are necessary for the expansion of the composting site and operation. A bagging machine is necessary for marketability of the finished compost product to reach a much larger customer base.

In conclusion, UCRRA fully supports and looks forward to partnering with Ulster County's on efforts to acquire funding to expand the existing composting program and operations. We believe this effort would provide our communities with a great opportunity to advance organics recovery in the Mid-Hudson Region leading to long term environmental and economic benefits.

Sincerely,

  
Leon Smith  
Chairman



EMPIRE ZERO  
2333 Payne Rd  
Castleton, NY 12033  
(518)-526-4501  
phil@empirezerowaste.com

July 28, 2015

New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

Mid Hudson Regional Economic Development Council  
33 Airport Center Drive - #201  
New Windsor, NY 12553

Re: Cleaner, Greener Communities- Ulster County Regional Composting Proposal

To Whom it May Concern:

Empire Zero is a regional business begun in 2012 with a mission to "redefine waste." We are an organic waste recycling service and serve both institutional and residential composting programs. We have worked with businesses such as Zero to Go as well as restaurants, institutions, schools, apartment complexes and individual residents to divert thousands of tons of organic material from landfills.

The Ulster County proposal to expand the municipal composting facility at UCRRA would have tangible impacts on our business. We service clients in the Hudson Valley and often dispose of our organic material at the Ulster County Resource Recovery Agency in Kingston, New York. In fact, we have delivered more than 226 tons of compostables to the Ulster County Resource Recovery Agency facility this year alone. The proposal would immediately lower our operating costs and allow us to offer lower pricing to our customers. In our experience, one of the main barriers to attracting residential and institutional composting customers is the apparent startup costs. Often it takes a few months for customers who are

reducing their landfill waste by diverting compostables, to realize a cost savings. By reducing the costs to new clients (by reducing the tipping fee and providing totes), the entry cost would be reduced. This would allow us to solicit and likely contract more customers in the UCRRA service area (Ulster, northern Dutchess and Greene Counties) thus increasing our route density and further lower our costs.

The Ulster County proposal stands to have larger economic impacts than the expected cost savings to future clientele within the UCRRA service area. Considering that UCRRA launching the composting program allowed us to enter the Hudson Valley market we needed to expand to service the needs. We had to purchase a second truck and hire a full time employee to assist with the new work. Ulster County's proposal would allow us to expand even further and would require us to purchase a third vehicle and hire at least one more full time employee. Considering that the proposal includes marketing, this proposal will expand our composting services within the Hudson Valley, diverting more material from local landfills and into UCRRA's compost piles.

The Ulster County proposal has great promise to markedly increase the rate of composting across the community by enabling organic collection to be more cost competitive with solid waste collection and disposal. This proposal could be transformative for not only our business but the organics collection sector in the region.

Sincerely,



Tyler Holloway  
Senior Recycling Officer  
Empire Zero LLC



105 Catherine St, #6  
Beacon, NY 12508  
T 845.337.0375  
zerotogo.org

July 29, 2014

New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

Mid Hudson Regional Economic Development Council  
33 Airport Center Drive - #201  
New Windsor, NY 12553

Re: Cleaner, Greener Communities- Ulster County Regional Composting Proposal

To Whom it May Concern:

As Hudson Valley based business specializing in education-based waste management, I would like to offer this letter of strong support for Ulster County's application to the NYSERDA Cleaner and Greener program to expand municipal composting in Ulster County.

Zero to Go, was founded in 2012, and is focused on providing composting and recycling services in the Hudson Valley. We provide materials management for events such as Sheep and Wool Festival, Hudson Hop and Harvest Festival in Peekskill, Riverfest in Beacon, Beacon Jazzfest, and many more, to help their events become as close to zero waste as possible. We also provide a food waste pickup service for businesses and homes in Beacon, and are a reseller of compostable products for food service at events.

Ulster County's proposal to expand the municipal composting facility and waive the tipping fee for organics would have both direct and indirect benefits to our business. Directly, the reduced tipping fee would help us save money on disposal costs as we presently use the UCRRA composting facility for disposal of our food waste. This savings could potentially be passed on to customers, which would increase our customer base and visibility in the Hudson Valley as well as possibly allow us to grow our business.





105 Catherine St, #6  
Beacon, NY 12508  
T 845.337.0375  
[zerotogo.org](http://zerotogo.org)

Indirectly, by fostering a community culture that understands composting and its environmental value, both by residents and businesses, our educational and business mission at Zero to Go would be strongly supported. Creating a stronger infrastructure to support community wide composting is critical and Ulster County's proposal would certainly achieve this goal.

The Hudson Valley is a natural place for our business. So much of what makes the Hudson Valley attractive to businesses and residents is related back to its natural beauty and long-standing commitment to preserving natural resources. As a business based in waste management, we are a proud part of the region's green economy and part of what makes this region unique. NYSERDA's support for expanding municipal composting in the region would strongly support the region's sustainability as well as green economy businesses such as Zero to Go and we hope you fund this request.

Sincerely,

A handwritten signature in blue ink that reads "Sarah Womer".

Sarah Womer  
Owner, Zero to Go





# CITY OF KINGSTON

OFFICE OF THE MAYOR

CITY HALL

420 BROADWAY

KINGSTON, NEW YORK 12401

[www.kingston-ny.gov](http://www.kingston-ny.gov)

[mayorgallo@kingston-ny.gov](mailto:mayorgallo@kingston-ny.gov)

SHAYNE R. GALLO  
MAYOR

Phone (845) 334-3902  
Fax (845) 334-3904

July 27, 2015

New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

To Whom It May Concern

On behalf of the City of Kingston, I would like to take this opportunity to express our strong support for Ulster County's application to NYSERDA's Cleaner, Greener, Communities program to expand municipal composting in Ulster County.

Among the many services Kingston offers to its residents and businesses, the City provides trash collection. Trash collection and disposal is very costly for the City in part due to the high tipping fees for municipal solid waste. Although considered, composting to this time has not been a viable addition to trash and recyclables collections due to the prohibitive additional cost. The City has been impacted by many of the same market forces that have prevented private haulers from entering the market. However, if municipal compost collection was more cost effective for Kingston, the City would certainly consider it. The expansion of the composting facility in Ulster County and lowering of the tipping fee for compostable portions of MSW is a powerful tool for lowering the City's cost of composting and has the potential to see many new customers adopt composting.

In addition, as a certified Climate Smart Community, enhanced municipal composting would also bring us closer to our goals stated in the Kingston Climate Action Plan. It would help us to reduce the amount of waste generated, increase the composting rate, and reduce greenhouse gas emissions associated with transportation and disposal of waste.

The City of Kingston is committed to moving towards sustainability on all fronts. As a recipient of Cleaner, Greener Communities funding in 2013, the City is well aware of the unique and powerful opportunity this program presents to help communities advance towards this goal. We welcome this opportunity to move towards more sustainable waste management and appreciate your consideration of Ulster County's application to expand and enhance municipal composting.

Sincerely

Shayne Gallo  
Mayor



*Strengthening Homes,  
Communities  
and Lives*

[www.rupco.org](http://www.rupco.org)

July 29, 2015

New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

Mid Hudson Regional Economic Development Council  
33 Airport Center Drive - #201  
New Windsor, NY 12553

Re: Cleaner, Greener Communities- Ulster County Regional Composting Proposal

To Whom It May Concern:

On behalf of RUPCO, we would like to offer our strong support to Ulster County's application to NYSERDA for Cleaner and Greener funding to expand the municipal composting operation at the Ulster County Resource Recovery Agency in Kingston, New York. We believe this propose will not only strengthen the local green economy and reduce the environmental footprint associated with waste transport and disposal, but will provide capacity and infrastructure that enhances the smart growth and smart design principles we advocate and implement in our work.

RUPCO is the region's leading provider of and advocate for quality, affordable housing and community development programs aimed to provide opportunity and revitalize communities. For more than 30 years, our 501-c-3 not-for-profit agency, has led the region in creating and maintaining quality, sustainable housing and rental opportunities, inspiring understanding and acceptance of affordable housing initiatives, fostering community development and revitalization, and providing opportunity to people to improve their living standards.

At RUPCO, we believe that everyone deserves quality, healthy and sustainable housing at an affordable price and we know communities thrive when there is diversity in their economic make-up and housing stock. Housing is a critical component of effective economic development and open space policy and there is a proven connection between creation of stable housing and the positive impact on jobs, education, health, the economy,

public safety, and other important facets of American life. Our projects employ a variety of sustainable approaches and Green Building techniques including but not limited to state-of-the-art thermal heating and cooling, photovoltaic (solar) systems, energy-efficient lighting, and durable and sustainable material sourcing.

We are eager to learn about ways to further reduce the environmental impact of our facility and to provide more sustainable waste disposal to our residents through composting. We understand that if funded this proposal could assist us in creating a residential composting program with a collection service, and look forward to working with Ulster County and the UCRRA on such an initiative.

Sincerely,



Kevin O'Connor  
Chief Executive Officer



## Hudson Valley Regional Council

July 22, 2015

John Rhodes  
President  
New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, NY 12203-6399

Leonard Schleifer, MD, PhD, Co-chairman  
Dennis Murray, PhD, Co-chairman  
Mid-Hudson Regional Economic Development Council  
33 Airport Center Drive - #201  
New Windsor, NY 12553

### **RE: Ulster County Regional Composting Proposal, Cleaner Greener Communities**

The Hudson Valley Regional Council (HVRC) is pleased to offer our strong support for Ulster County's funding application to NYSERDA's Cleaner, Greener Communities program to expand municipal composting in Ulster County. This project promises to provide important benefits for the County and the region, including increasing composting rates, reducing the generation of municipal solid waste, lowering greenhouse gas emission and lessening cost associated with waste disposal. This project supports the goals of the Mid-Hudson Regional Economic Development Council's Strategic Plan, the HVRC's Comprehensive Economic Development Strategy (CEDS) and the Mid-Hudson Regional Sustainability Plan, specifically the Sustainability Plan's goal to expand organics recycling. Removing organics from the waste stream (either at the source or after collection) has multiple benefits such as reducing the volume of waste to be landfilled and reducing GHG emissions from transport of waste and anaerobic decomposition at landfills.

HVRC has an active regional Material Management Committee consisting of county solid waste professionals as well as the NYS Department of Environmental Conservation. As such we are aware of the particular challenges of managing waste in the Mid-Hudson Region. Specifically, the region lacks a municipal solid waste landfill facility. Most of the waste is shipped out of the region which is both costly and a significant generator of greenhouse gas emissions.

As pointed out in the Mid-Hudson Regional Sustainability Plan "*often organics are sent to landfills or incinerated; however, there are existing municipal organics composting programs in the Region such as those operated by...the Ulster County Resource Recovery Agency (UCRRA), which can be used as model programs that can be expanded or replicated to improve organics recovery regionally.*"

Whether a restaurant, grocery store, hotel, office building or school in Ulster County, the Region and the State composting is an important alternative to landfilling organic materials. About 65 percent of the waste that goes to the landfill comes from the business community. Studies show that food scraps, food contaminated paper and waxed corrugated cardboard make up nearly 30 percent of that total. By recycling food waste, businesses can have a positive impact on the environment. According to the Environmental Protection Agency (EPA), food scraps in landfills produce methane, a greenhouse gas 21 times more harmful than carbon dioxide. By composting at work, food waste can be diverted from landfill disposal while creating nutrient-rich material highly valued by gardeners, farms, nurseries and other businesses that contribute to the vitality of our community.

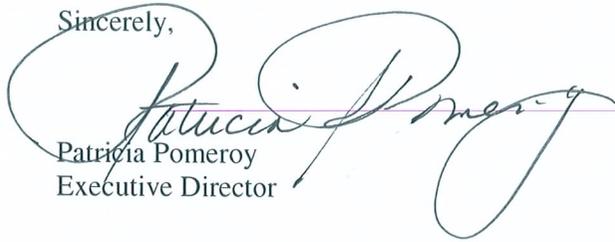
Ulster County's proposal would provide critical funding necessary for the expansion and successful adoption of composting in the region. The UCRRA facility would also be accessible to customers and haulers servicing southern Greene County and northern Dutchess County providing regional benefits. This type of program is critical in that it provides environmental benefits as well as improving the infrastructure in the area to support businesses.

The HVRC has represented the seven counties in the region since 1978. Our funding alliances and project partnerships with the US Dept. of Commerce's Economic Development Administration, NYS Dept. of Environmental Conservation and others have served to fulfill our mission of focusing on regional challenges and opportunities through collaboration, planning and advocacy.

Please give this proposal strong consideration for funding. We believe it can contribute to the overall economic and environmental vitality of the region and it will be an important, positive addition to Ulster County.

Thank you.

Sincerely,

  
Patricia Pomeroy  
Executive Director

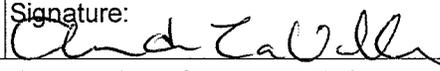


New York State Energy Research and Development Authority Contract Pricing Proposal Form			Solicitation/Contract No. 3106	Page 1	
Contractor: County Of Ulster			Name of Proposed Project: Removing Barriers to Community Organics Recovery in Ulster County		
Address: 244 Fair Street, Kingston NY 12401					
Location (where work is to be performed): 244 Fair Street & 999 Flatbush Ave Kingston NY 12401			NYSERDA funding:	\$ 538,750	
			Total Project Cost:	\$ 753,040	
Cost Element			Total Project Cost	Funding & Co-funding via NYSERDA	Cost-sharing & Other Co-funding
1. Direct Materials					
a. Purchased Parts					
b. Other					
Total Direct Materials					
2. Materials Overhead	Rate:				
3. Direct Labor (specify names/titles)	Hours	Rate/hr			
Ulster County staff (Dept of Environment, Information Services)			\$ 75,500	\$ 0	\$ 75,500
Total Direct Labor			\$ 75,500	\$ 0	\$ 75,500
4. Labor Overhead	Rate %	\$ Base			
Ulster County Fringe Rate (see attached)	58%	\$ 75,500	\$ 43,790	\$ 0	\$ 43,790
Total Labor Overhead			\$ 43,790	\$ 0	\$ 43,790
5. Outside Special Testing					
6. Equipment					
7. Travel					
8. Other Direct Costs (mailings, printed material, compostable products)			\$17,000	\$ 7,000	\$ 10,000
9. Subcontractors/Consultants					
UCRRA			\$ 550,750	\$ 524,750	\$ 26,000
Compost hauling for County demonstration sites- TBD			\$ 26,500	\$ 7,000	\$ 19,500
Total Subcontractors/Consultants			\$ 577,250	\$ 531,750	\$ 45,500
10. General & Administrative Expense	Rate %	Element(s)			
Grant administration	7.3%	all	\$ 39,500	\$ 0	\$ 39,500
11. Fee or Profit (If allowable) Rate:					
12. Total Estimated Project Cost			\$ 753,040	\$ 538,750	\$ 214,290

This proposal reflects our best estimates as of this date, in accordance with the instructions to proposers.

Typed Name and Title: Amanda LaValle, Coordinator  
Ulster County Department of the Environment

Signature:



Date:  
7/31/15

Has any executive agency of the U.S. government performed any review of your records in connection with any prime contract or subcontract within the past twelve months? \_\_\_ Yes     X\_\_ No

If yes, identify:

Supporting Schedule - Contract Pricing Proposal Form

Element No.	Item Description	Amount

**INSTRUCTIONS FOR PREPARATION OF COST ESTIMATE**

Your cost proposal may be the basis of contract negotiation; it should be specific and complete in every detail. Supporting schedules (as described in Section B) providing the basis for your estimates must be provided.

**A. GENERAL**

The schedule must be submitted on NYSERDA's Contract Pricing Proposal Form.

**B. INSTRUCTIONS AND DESCRIPTION OF REQUIRED SUPPORT DETAIL**

(Title each supporting schedule and cross-reference it to the item number on the Contract Pricing Proposal Form)

**1a. DIRECT MATERIALS - PURCHASED PARTS**

Provide the following information for each proposed item with an estimated unit cost in excess of \$15,000.

- o Description of item
- o Proposed vendor
- o Quantity needed
- o Unit cost
- o Basis for cost (i.e., catalog, prior purchase, quote, etc.)
- o Total cost
- o Evidence of a competitive selection process in accordance with the requirements of the Subcontract Procedures section of the attached Sample Agreement.

**1b. OTHER DIRECT MATERIALS**

In accordance with the requirements of the Subcontract Procedures section of the attached Sample Agreement, for all items in excess of \$5,000, provide whatever information would be necessary to understand what is being obtained, how it is being obtained, what it will cost and how the estimated cost was determined with justification for all items.

**2. MATERIALS OVERHEAD (also applicable to other Indirect Rate categories: 4. LABOR OVERHEAD and 10. G&A EXPENSE)**

- o If Government-approved indirect rates are proposed, then supply a copy of an appropriate Government document verifying those rates.
- o If Government-approved rates are not proposed, supply the following, unless previously provided, for the years comprising the proposed period of contract performance.
  - o A description (chart or other) of the organization of the indirect cost center.
  - o The budget of indirect costs, by account, for each proposed indirect expense rate.
  - o The budget for the base, for each proposed rate, (direct labor dollars, hours, costs, etc.) itemized as to contract hours or costs, research and development hours of costs, and any other direct base effort.
  - o Actual incurred rates for the prior three years, including actual base and pool amounts.

quoted rate per day. Document when/where the consultant has received the proposed rate in performing similar services for others.

10. GENERAL & ADMINISTRATIVE (G&A) EXPENSE (Same as instructions for 2. MATERIALS OVERHEAD)

11. FEE OR PROFIT

List the rate proposed for profit. No fee or profit is allowed under product development, demonstration or other certain cost-sharing projects.

### 3. DIRECT LABOR

#### a. Commercial Enterprises

- (1) Attach supporting schedules showing:
  - o Each category or type of labor being estimated
  - o Applicable labor rates per hour (straight-time)
- (2) Explain the method used for computing the rates (i.e., actual of an individual, actual average of a category or other grouping, etc.) Also identify any proposed labor escalation and the bases for it.

#### b. Educational Institutions

Provide the following for each calendar year of the contract:

- (1) For individuals not on an "actual hours worked" basis:
  - o individual's name
  - o annual salary and the period for which the salary is applicable (preferably in weeks)
  - o the proportionate time to be charged to this effort.
- (2) For individuals who maintain time records as the basis for charging costs, supply the detail as requested in Instructions 3(a)(1)

### 4. LABOR OVERHEAD (Same as Instructions for 2. MATERIALS OVERHEAD)

### 5. OUTSIDE SPECIAL TESTING

- a. Describe the effort.
- b. Provide the units of time (hours, days, weeks), cost rates, and the vendor.
- c. In accordance with the requirements of the Subcontract Procedures section of the attached Sample Agreement, provide the basis for selection of the vendor. Identify M/WBE vendors contacted for quotes and if none, explain why. Explain and justify the basis for any non-competitive selection.

### 6. EQUIPMENT

Capability to perform the work with existing facilities and equipment is assumed. It is NYSERDA's policy not to compensate for general purpose facilities or equipment. If some special purpose items are needed solely for this contract and are not available by other means (contractor assets, lease, etc.), then provide the following information for each item of required equipment.

- o vendor
- o model number
- o quantity
- o competitive selection process
- o unit cost and source of cost/price (i.e., quote, catalog, purchase history)
- o description of the use or application (NYSERDA dedicated, contract dedicated, other)

### 7. TRAVEL

- a. NYSERDA will accept as a direct charge only that travel required to perform the statement of work.
- b. Attach a schedule indicating the need for the proposed travel, the estimated number of person-trips required, destinations, mode and cost of transportation, and number of days subsistence per trip for each destination.
- c. Identify and support any other special transportation costs required in the performance of this project.

### 8. OTHER DIRECT COSTS

- a. Identify the type of cost (i.e. postage, telephone, publications, graphics, etc.)
- b. Provide cost details for the amounts estimated (hours or units, rates, etc.)
- c. If any internal service center rates are applied, provide details similar to that required in Instruction #B.
- d. For computer costs identify the make, model and type of computer, hours of service and appropriate rates, and whether the machine is company owned or leased.

### 9. SUBCONTRACTORS/CONSULTANTS

- a. Explain the specific technical area in which such service is to be used and identify the contemplated consultants.
- b. State the number of days and the hours per day of such service estimated to be required and the consultant's



This proposal reflects our best estimates as of this date, in accordance with the instructions to proposers.

Typed Name and Title: Timothy DeGraff - Controller Signature: [Signature] Date: 7/31/15

Has any executive agency of the U.S. government performed any review of your records in connection with any prime contract or subcontract within the past twelve months?  Yes  No  
If yes, identify:

Supporting Schedule - Contract Pricing Proposal Form		
Element No.	Item Description	Amount

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11. FEE OR PROFIT

List the rate proposed for profit. No fee or profit is allowed under product development, demonstration or other certain cost-sharing projects.

County of Ulster, New York  
Fringe Benefit Costs  
As of December 31, 2014

	<u>2013</u>		<u>2014</u>		<u>2015</u>		<u>2016</u>	
	Actual Costs	Actual Percentage	Actual Costs	Actual Percentage	Estimated Costs	Estimated Percentage	Projected Costs	Projected Percentage
Wages for Social Security	\$ 81,163,061		\$ 72,787,684		\$ 74,243,438		\$ 75,728,306	
Wages for Retirement	86,657,804		76,615,721		77,341,815		78,888,651	
Wages for Workers' Comp	90,109,179		74,698,297		79,138,914		80,721,692	
Employer Provided Fringe Benefit Costs								
<b>Statutory Benefits:</b>								
Retirement	17,149,338	19.79%	14,740,535	19.24%	14,568,567	18.84%	14,859,938	18.84%
Social Security	6,163,347	7.65%	5,599,213	7.65%	6,098,402	7.65%	6,220,370	7.65%
Disability - Premiums	68,949	0.08%	99,800	0.14%	131,604	0.18%	134,236	0.18%
Hospital Premiums	17,352,325	21.38%	19,846,311	27.27%	19,463,281	26.22%	19,852,547	26.22%
Workers' Comp - A1910.4	3,520,860	3.91%	2,938,623	3.93%	3,090,166	3.90%	3,151,969	3.90%
<b>(1) Sub-total Statutory Benefits</b>	<b>44,254,819</b>	<b>52.81%</b>	<b>43,224,482</b>	<b>58.23%</b>	<b>43,352,020</b>	<b>56.78%</b>	<b>44,219,060</b>	<b>56.78%</b>
Unemployment	852,982	1.05%	191,961	0.26%	201,000	0.27%	205,020	0.27%
<b>(2) Total Statutory Benefits</b>	<b>45,107,801</b>	<b>53.86%</b>	<b>43,416,443</b>	<b>58.49%</b>	<b>43,553,020</b>	<b>57.05%</b>	<b>44,424,080</b>	<b>57.05%</b>
<b>Optional Benefits: (3)</b>								
Sick Time Buyback	531,593	0.65%	589,604	0.81%	547,990	0.74%	558,950	0.74%
Vacation Buyback	203,179	0.25%	210,769	0.29%	206,574	0.28%	210,705	0.28%
Tuition Reimbursement	29,216	0.04%	34,743	0.05%	71,000	0.10%	71,000	0.09%
Meal Allowance	20,928	0.03%	20,928	0.03%	14,650	0.02%	14,943	0.02%
Miscellaneous - Uniforms	212,775	0.26%	187,521	0.26%	211,274	0.28%	215,499	0.28%
<b>Total Optional Benefits</b>	<b>997,691</b>	<b>1.23%</b>	<b>1,043,565</b>	<b>1.43%</b>	<b>1,051,488</b>	<b>1.42%</b>	<b>1,071,097</b>	<b>1.41%</b>
<b>Total Employee Benefits</b>	<b>\$ 46,105,492</b>	<b>55.09%</b>	<b>\$ 44,460,008</b>	<b>59.92%</b>	<b>\$ 44,604,508</b>	<b>58.47%</b>	<b>\$ 45,495,177</b>	<b>58.47%</b>

- (1) Most departments will only use the Sub-total Statutory Benefits percentage for claiming purposes.  
(2) Departments that are paying unemployment benefits will use the Total Statutory Benefits percentage.  
(3) Departments can only include the Optional Benefits that they actually use.

# CGC Project Benefits Report

**Program Opportunity Notice (PON) 3106  
Greener by Example: Removing Barriers to Community Organics  
Recovery in Ulster County (CFA 56017)**

JULY 31, 2015



## Section 1. Benefits Overview

Energy use reductions and greenhouse gas emission avoidance for this project, the expansion of municipal composting in Ulster County, as provided in this report are all derived from two main areas: transportation reduction and compost processing. With respect to transportation, compost would be processed at the UCRRA facility and not shipped out of the region like MSW. The tractor trailers used for hauling travel at least 470 miles per trip and have a fleet efficiency of 4.2 miles/gallon. The second major area of benefit results from the composting of waste rather than the landfilling of waste. There is significant greenhouse gas avoidance achieved through composting.

This project would also result in the production of compost which will be marketed as a soil amendment and would replace traditional, high energy input, synthetic fertilizers. Although there would certainly be GHG emission savings, these savings were not included in this analysis at this time as the exact production of compost and a reliable method for calculating the energy and GHG savings were not known at the time of preparation.

## Section 2. Expected Annual Benefits by Close of CGC Project Period

Section 2: CGC Benefits by Point of Project Close			
Type	Metric	Direct	Indirect
RPM	Permanent Jobs Created (FTE)	2	3.1
RPM	NYSERDA CGC Investment (\$)	\$538,750	N/A
RPM	Investment by Others (matching and leveraged)	\$214,290	equipment
RPM	Diesel Savings (gallons / year)	9,127 per year 27,389 total	See note
RPM	Conventional Energy Cost Savings (\$ / year)	\$36,519 per year \$109,556 total	See note
RPM	Conventional Energy Savings (MMBTU/year)	1,260 per year 3,780 total	See note
RPM	GHG Savings (MTCDE / year)	4,018 annualized 12,056 total	See note
SCM	Vehicle-Miles-Traveled (VMT) reduced	38,344 annualized 115,033 total	See note
SCM	Organic MSW, sewage sludge, or other waste Composted or Digested	2,417 annualized 7,250 tons	See note
SCM	Solid Waste Diverted	2,417 annualized 7,250 tons	See note

### Methods and Assumptions

The UCRRA facility currently accepts 500 tons of organics/year. **The following calculations are based on the increase over the three year funding term from the current 500 tons.** In Year One, 250 additional tons (750 total) would be accepted. In Year Two, 2500 additional tons (3000 total) would be accepted. In Year Three, 4500 additional tons (5000 total) would be accepted. A total of 7250 tons of additional organics (8750 tons total) would be composted and accepted over the three year term of the funding.

Where metrics request an annualized response, the total benefit over the term of the grant was calculated and then divided by three.

**Note on Indirect Benefits:** Over the term of this grant, potential indirect benefits include the following:

- Cost avoidance to commercial customers who choose to compost;
- Preservation of valuable landfill space and reduction in the demand to expand landfills (which are both environmentally and economically costly to develop);
- Greater general public awareness of composting and participation in backyard composting;
- Economic and environmental benefits of a locally produced compost product; and,
- Economic and ecological benefits of appropriate disposal of Emerald Ash Borer infested wood.

Although we believe there are real economic and environmental benefits associated with these indirect benefits, we did not feel comfortable quantifying them for this analysis.

**Metric 1:** Permanent Jobs Created. Starting in year two with the substantial expansion of the compost operation, we calculate that two additional employees would be needed at UCRRA and would be dedicated to the compost operation. In addition, it is estimated that 3.1 indirect jobs in the compost use industry would be created. This calculation is based on the Institute for Local Self Reliance's May 2013 report, *Pay Dirt: Composting in Maryland to Reduce Waste, Create Jobs & Protect the Bay*.

**Metric 2:** NYSERDA CGC Investment. The grant request is for \$538,750.

**Metric 3:** Investment by Others (matching and leveraged). Project would leverage funding in the pilot facility already made by UCRRA. In addition, it would be supported by UCRRA throughout the grant period. Ulster County is providing match to this grant through the purchase of equipment necessary for providing wood chips to the compost operation as well as staff time necessary for project administration and oversight. Indirect benefit is considered to the investment by private haulers in equipment.

**Metric 4:** Diesel Savings. For every 30 tons of waste composted, it is assumed that one tractor trailer load of waste would not be exported to a landfill out of the region. Average round trip is 476 miles. Average fleet fuel efficiency is 4.2 miles/gallon.

**Metric 5:** Conventional Energy Cost Savings. Assumes cost of diesel as \$4.00/gallon multiplied by Metric 4. Diesel prices have recently dipped lower, however we feel the \$4.00/gallon number more accurately reflects the price over the last four years.

**Metric 6:** Conventional Energy Savings (MMBTU/year). This calculation is based on the savings realized from reduced fuel consumption for exporting solid waste to out of region landfill (see Metric 4). EPA's WaRM model shows a slight increase in the energy required to handle compost versus MSW. However, the WaRM model is based on the energy required to manage windrow compost piles. The EASP method is less energy intensive and therefore no change in MMBTUs due to the compost process were included in this calculation. <http://epa.gov/epawaste/conserves/tools/warm/pdfs/Composting.pdf>

**Metric 7:** GHG Savings. GHG savings are achieved in two main areas. 1) Reduced tailpipe emissions from reduced truck traffic (Metric 4)\*(heating value)\*(emission factor). 2) GHG emissions savings from

aerobic decomposition of organics versus anaerobic decomposition in a landfill of organics (using EPA’s WaRM model and assuming 7250 tons of composted waste).

**Metric 8:** Vehicle Miles Traveled reduced. For every 30 tons of waste composted, 476 vehicle miles would be reduced. Total of 7,250 tons composted. Therefore 115,033 miles would be avoided.

**Metric 9:** Organic MSW composted. Direct measurement of 7,250 tons composted due to this project.

### Section 3. Potential for Future and/or Long Term Transformational Benefits

Section 3: Future and Long Term Transformation Benefits				
Type	Metric	by 5 years	by 15 Years	by 30 Years
RPM	Permanent Jobs Created (FTE)	9.5	13	19.75
RPM	NYSERDA CGC Investment (\$)	NA	NA	NA
RPM	Investment by Others (matching and leveraged)	See note	See note	See note
RPM	Diesel Savings (gallons / year)	28,333	37,778	56,667
RPM	Conventional Energy Cost Savings (\$ / year)	131,383	235,432	550,183
RPM	Conventional Energy Savings (MMBTU/year)	3,910	5,213	7,820
RPM	GHG Savings (MTCDE / year)	12,094	15,816	24,129
SCM	Vehicle-Miles-Traveled (VMT) reduced	297,500 total	1,884,167 total	5,454,167 total
SCM	Organic MSW, sewage sludge, or other waste Composted or Digested	18,750 total 7,000 year	108,750 total 9,500 year	326,250 total 14,500 year
SCM	Solid Waste Diverted	18,750 total 7,000 year	108,750 total 9,500 year	326,250 total 14,500 year

#### Methods and Assumptions

The UCRRA facility currently accepts 500 tons of organics/year. **The following calculations are based on assumptions regarding the increase at year 5, 15 and 30 over the current 500 tons.** In Year Five, 7,000 additional tons (7500 total) would be accepted. In Year Fifteen, 9,500 additional tons (10,000 total) would be accepted. In Year Thirty, 14,500 additional tons (15,000 total) would be accepted.

**Metric 1:** Permanent Jobs Created. These calculations are based on the Institute for Local Self Reliance’s May 2013 report, *Pay Dirt: Composting in Maryland to Reduce Waste, Create Jobs & Protect the Bay*. It reflects jobs required to process the compost as well as those created in associated compost use and landscaping industries.

**Metric 2:** NYSERDA CGC Investment. NA.

**Metric 3:** Investment by Others (matching and leveraged).The goal of this grant is to create a high tonnage, self-sustaining, organics recovery operation. As such, the operating cost of the facility (potentially see as investment by others) will be off-set by the tipping fees paid to UCRRA for the

disposal of organic material. As such, we are not calculating investment by other even though there would be a cost to clients to dispose of organics and a cost to UCRRA to operate the facility.

**Metric 4:** Diesel Savings. Assumes a tonnage of 7,000 for year 5 (total tonnage of 7,500); 9,500 for year 15 (total tonnage of 10,000), and 14,500 for year 30 (total tonnage of 15,000). For every 30 tons of waste diverted, one tractor trailer load is reduced. Average trip to export waste is 476 miles. Average fleet efficiency is 4.2 mpg. It is a possibility that the final export location of MSW could change during this period of time, leading to a greater or lesser transport trip. This would impact Metric 4, Metric 5, Metric 6, Metric 7, and Metric 8. However, it is unlikely that a landfill will be sited in the region in the near term and there will continue to be costs (environmental and economic) associated with transportation of waste.

**Metric 5:** Conventional Energy Cost Savings. This is based on a price for diesel fuel of \$4/gallon. It assumes a 3% inflation rate.

**Metric 6:** Conventional Energy Savings. This calculation is based on the savings realized from reduced fuel consumption for exporting solid waste to out of region landfill. EPA's WaRM model shows a slight increase in the energy required to handle compost versus MSW. However, the WaRM model is based on the energy required to manage windrow compost piles. The EASP method is less energy intensive and therefore no change in MMBTUs due to the compost process were included in this calculation.  
<http://epa.gov/epawaste/conservation/tools/warm/pdfs/Composting.pdf>

**Metric 7:** GHG Savings. GHG savings are achieved in two main areas. 1) Reduced tailpipe emissions from reduced truck traffic (Metric 4)\*(heating value)\*(emission factor). 2) GHG emissions savings from aerobic decomposition of organics versus anaerobic decomposition in a landfill of organics (using EPA's WaRM model).

**Metric 8:** Vehicle Miles Traveled reduce. Avoided truck transportation trips. See Metric 4.

**Metric 9:** Organic MSW composted. Total additional tonnage estimates were used (see explanation above).

**Metric 10:** Solid Waste Diverted. Total additional tonnage estimates were used (see explanation above).

## Section 4. Potential to Impact Regional and Local Sustainability Indicators

Section 4: Potential to Impact Regional and Local Sustainability Indicators			
Indicator	In RSP?	Baseline (if known)	Brief one-line description of impact
Total Solid Waste Generated per capita	Yes	3.7 lbs/person/day	Project would decrease this baseline
Solid Waste Diverted per capita	Yes	42% of waste diverted	Project would increase the percentage of diversion
GHG Emissions	Yes	350,204 MTCO <sub>2</sub> e	Project would result in a reduction in GHG emission
Annual Vehicle Miles Traveled	Yes	23.1 billion VMT	Project would result in a reduction of VMT

**Indicator 1:** Since this project would increase the diversion rate, it would directly result in a reduction of the total solid waste and therefore decrease the total solid waste generated per capita.

**Indicator 2:** This project would directly result in 8,750 tons (7,250 additional tons over baseline) of solid waste diverted and therefore increase this metric.

**Indicator 3:** Composting would reduce GHG emissions.

**Indicator 4:** This project would directly result in a reduction of vehicle miles traveled as waste would no longer be shipped from the UCRRA facility to out of region landfills.

## Disclosure of Prior Findings of Non-responsibility Form

(Mandatory)

Name of Individual or Entity seeking to enter the procurement contract: <i>County of Ulster</i>	
Address: <i>PO Box 1800 Kingston, NY 12402</i>	
Date: <i>7/29/2015</i>	
Solicitation or Agreement Number: PON2951 (Cleaner Greener Communities Phase II Implementation Funding, Round 2)	
Name and Title of Person Submitting this Form: <i>Marc Rider, Director of Purchasing</i>	
Has any Governmental Entity made a finding of non-responsibility regarding the Individual or Entity seeking to enter the Procurement Contract in the last four years? (Please indicate with an "X")	Yes
	<input checked="" type="checkbox"/> No
Was the basis for the finding of non-responsibility due to a violation of §139-j of the State Finance Law? (Please indicate with an "X")	Yes
	No
Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please indicate with an "X")	Yes
	No
If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.	
Government Agency or Authority:	
Date of Finding of Non-responsibility:	
Basis of Finding of Non-responsibility: (Add additional pages as necessary)	

Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named Individual or Entity due to the intentional provision of false or incomplete information? (Please indicate with an "X")		Yes
	X	No
If you answered yes, please provide details below.		
Government Agency or Authority:		
Date of Termination or Withholding of Contract:		

Basis of Termination or Withholding: (Add additional pages as necessary)

Offerer certifies that all information provided to NYSERDA with respect to State Finance Law §139-k is complete, true, and accurate.

By: Marc Rider Date: 7/29/2015  
Signature

Name: Marc Rider Title: Director of Purchasing