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**Company Representative**  
Kimberly (Kim) King



# Request For Qualification

## **RFQ**

Single Occupancy Tiny Dwelling Equipped with Eco-Sanitary Dry Compost Toilet System & REST in Urban Agriculture

Teresa Stephens

**Director, Neighborhood Development and Outreach**

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Proposal Issued:

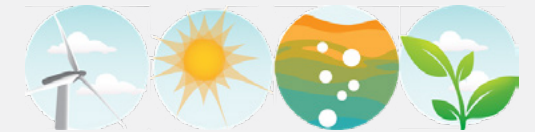
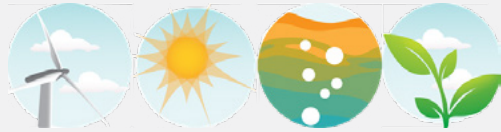
**7.17.2023**

Proposal Valid to:

**10.16.2023**

## **Statement of Confidentiality**

- This proposal and supporting materials contain confidential and proprietary business information of Kimberly King and Out Think The Box. These materials may be printed or photocopied for use in evaluating the proposed project, but are not to be shared with other parties.



# Purpose of the RFQ

*REST (Renewable Energy Systems Technologies) in Urban Agriculture + S.E.E.C. (Sustainable Energy Efficient Comfortable) Home*

The [homeSTEADy & REST in Urban Agriculture + S.E.E.C. Home](#) opportunity can support citizenry that would like to become tiny dwelling inhabitants, where the tiny dwellings/homes are located on vacant lots.

This offering can provide these stakeholders with resilient, reliable and innovative, sustainable development urban adaptation planning and implementation strategies including renewable energy systems technologies (REST), ecological sanitation (eco-san) dry compost toilet systems, water-resource management, and hyper-intense/bio-intense urban farming opportunities.

## Business Case

- [Renewable energy systems technologies \(REST\)](#)
  - Off-grid photovoltaic (PV) array for normal day-to-day electricity needs, and for support of vital services during disaster-relief events, such as:

- Communications – telecommunications, internet
- Building security
- Lighting, Refrigeration, Heating/Cooking (Propane is optional.)
- [Eco-sanitation \(Eco-san\)](#) where human excreta (toilet waste) and other compostables i.e. kitchen refuse, are fully recycled in a process that ideally produces food, and enhances the health of the entire ecosystem.
- [Water resource management](#) for bathing and hygiene, potable, and purification for drinking water offsets:
  - Passive solar hot water
  - Water reclamation of rainwater
  - Extraction of atmospheric water
- [Urban agriculture](#) using hyper-intense/bio-intense methods for fortifying food security.



*This offering provides energy, ecological sanitation, water management, and food security opportunities...*

# Purpose of the RFQ (Cont'd)

*The problem, challenges and needs addressed by this proposed activity.*

Prior to the occurrence of a natural disaster, it has been demonstrated time and time again the citizens of the USA think little about the reliability and importance of un-interruptible power, sanitation, clean water or food access, until it's not there. Society is dependent on commodities over which individuals ultimately have minimal control. Whether it's electricity, gasoline, diesel, natural gas, buildings and communications devices that require constant access to energy. Without energy, or access to potable water, the citizenry of the 21st century can barely survive.

The short-term consequences of disaster-related events come with damaging economic effects that can linger for a very long time. Livelihoods have been hampered by major events that have destroyed or compromised their electricity generation, sanitation service, potable water options and food access.

Energy, sanitation, water and food systems need to be agile, adaptable, resilient, and as robustly designed as possible. These systems need to stand the test of time post-disaster, requiring adaptation employing *'everyday brilliance for disaster resilience.'*

A way to provide short-term contingencies that can also have long-term beneficial effects is to invoke contingency plans that prepare the local citizenry to address the short-term, immediate energy, sanitation, water needs, and locally grown food, but also provide a long-term means to adapt.

Adaptation includes fortifying the energy system by designing and building with greater redundancy by incorporating, where appropriate, resources based on geographic predisposition. This includes configuring the renewable energy devices to be autonomous when the grid goes down—hence usable when they are needed most. Implementing self-sufficient sanitation, water management and locally grown food.



*This offering provides [everyday brilliance for disaster resilience](#)*

## Who we are

- Out Think The Box designs and fosters the development of day-to-day, unconventional, place-based, pragmatic, mindful, agile urban adaptation strategies that adhere to the mantra [PREPARE. RESPOND. ADAPT.](#), because the 'indifference' and 'undesirables of Mother Nature are only going to continue to escalate...

## What we do

We offer:

- ▶ Sustainable, Energy Efficient Comfortable (S.E.E.C.) Homes
- ▶ Renewable Energy, Ecological Sanitation, Water Management
- ▶ Urban Agriculture Best Practices

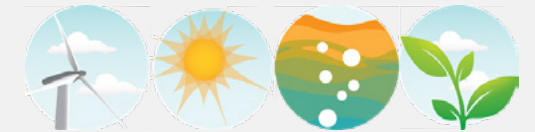
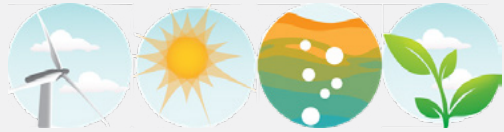
## The Problem

- As the frequency and magnitude of climate instability, and natural disasters increases, financial establishments or other unexpected/unanticipated events become increasingly more tenuous, where livelihoods currently powered by sub-par 'conventional' energy, sanitation and water services are likely to experience interruption.

## Strategies

Strategies we offer:

- ▶ Short-term contingencies with long-term benefits
- ▶ Adaptation and agility
- ▶ Autonomy and self-sufficiency



# Farmer, Principal Innovator

**Kimberly King**



**Position:** Farmer, Director of Engineering  
**LinkedIn profile:** <https://www.linkedin.com/in/kimgerly/>

Transformative and innovative change agent Kimberly (Kim) obtained her BSc in engineering mathematics, minoring in biology. Equipped with a PGDipl/MSc post-graduate degree in renewable energy systems technology (REST) engineering from the [Centre for Renewable Energy Systems Technology \(CREST\)](#) at Loughborough University in the UK. She possesses comprehensive knowledge of current research and trends being conducted in the field of renewable energy, sustainability development, and eco-sanitation; nationally and internationally.

For the past 18 years, Kimberly has researched and designed hybrid renewable energy (RE) systems and components i.e. solar, wind, hydro-kinetic, biomass, geothermal and storage (battery, hydrogen fuel cell). The RE technologies recommended and/or selected depend on one's geographical predisposition, resource availability, and the end-use need. In 2016, Kim was on the original design team for the Laney College SMUD Tiny House Competition award-winning entry, [The Wedge](#).

Kim's comfort zone is taking bold, decisive and definitive action, identifying and revealing solutions others don't realize—[out thinking the box](#) developing and implementing *everyday brilliance for disaster resilience*. This includes offering unconventional, day-to-day place-based, pragmatic, agile adaptation strategies for urban farm stewards, including several single user, dry, ecosan toilet systems installed in California.

“Specialties: farming, systems engineering, user innovation, renewable energy systems technologies in urban applications, technical writing”

# Nat'l & Int'l WASH Specialist

**Alisa Keeseey**



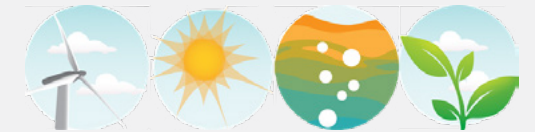
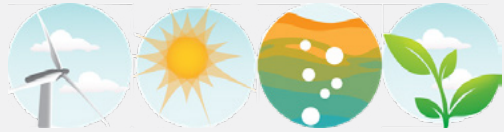
**Position:** Water, Sanitation and Hygiene (WASH) Specialist  
**LinkedIn Profile:** <https://www.linkedin.com/in/alisakeeseey/>

Alisa is a WASH specialist and development expert with 25+ years that includes international experience in program design and implementation, strategic planning, stakeholder engagement and capacity building, with expertise Resource Recovery and Reuse, emergency response, container-based sanitation (CBS), organic fertilizer production and composting, community-led sanitation, behavior change approaches, and gender analysis.

Alisa holds a Bachelor's degree in International Relations and Affairs, a MSc in International Agriculture Development from University of California, Davis, and an MA in Cultural Anthropology. She is also Program Director and WASH Specialist for [GiveLove.org](#) —WASH & Waste2Resource East Africa. She is Compost Operations certified by the US Compost Council, and was the 2018 recipient of the U.S. Composting Council H. Clark Gregory Award.

In 2018-2019, Kimberly and Alisa collaborated to bring ecological sanitation (ecosan) as an attainable, obtainable, sustainable offering to the cities of Oakland and Berkeley, as well as engage the Alameda County Department of Environment, and the CA Water Quality Board in Sacramento. During the bitter winter and blizzard of 2016-2017, Alisa spent five months at Standing Rock, ND, replacing chemical toilets by applying extreme composting with an ecosan, a CBS toilet system for the thousands of indigenous activists, water protectors, and supporters.

“Specialties : program design, capacity building, WASH/EcoSan advocacy, behavior change, urban sanitation, global health and water scarcity”



# Farmer, Geographer

**Marc Martin**



**Position:** Farmer, Geographer

**LinkedIn Profile:** <https://www.linkedin.com/in/marc-martin-2278041b4/>

Marc is a Farmer with unique experience in animal husbandry. Marc holds a Bachelors in Geography, Environment and Land Planning from [Campus Henry Christophe de l'Université d'Etat d'Haiti à Limonade](#), Haiti. He is currently pursuing his MS/ISBA at Park University in Kansas City, Missouri.

Marc is a contributor to the Groupe Jaden 99 of Makouti Agro Entreprise based at Lory, Haut-du-Cap (Cap-Haitian, Haiti). He works with farmer associations, helping them with animal husbandry. He specializes in raising chickens, rabbits, and goats. Marc also interned for the Haiti Feed the Future North-AVANSE Project/USAID (Cap-Haitian, Haiti). Additionally, Marc worked on COPEAT : Communauté pour la Promotion de l'Environnement et l'Aménagement du Territoire (Limonade, Haiti) where he engaged the stakeholders in Limonade and Cap-Haitian on the management of the environment and household waste.

In 2022, Kimberly and Marc worked together focusing on animal husbandry raising rabbits, and chickens for consumption at [Devils' Gulch Ranch](#) in Nicasio, CA. They also researched alternative methods and designs to grow habitats to supplement animal feedstock.

“ *Specialties: animal husbandry, stakeholder engagement, land planning, geography, training* ”

# Farmer, Agroecologist

**Julie Laudick-Dougherty**



**Position:** Farmer, Agroecologist

**Web site:** <https://www.oxbowfarm.net/>

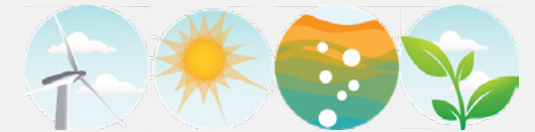
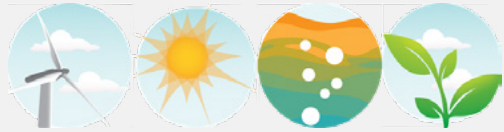
Julie holds an MS in Agroecology from Ohio State University. After graduating, she worked in organic certification as the Materials Review Specialist for the Ohio Ecological Food and Farm Association, performing soil quality consulting for composting facilities, landscapers, and homeowners.

Part of her inspiration for starting woman-owned [Oxbow Farm](#) in Parkton, MD, came from working with an indigenous farming community through a non-profit in rural Panama. The deep connection that the indigenous people have to the land and their strong sense of community inform her practices today.

Julie offers training and education on ecological farming practices. She also offers sliding scale CSA shares of her fresh produce accessible and affordable to those who need it most; selling at the Govans Farmers Market, and donating to local pantries and organizations. In addition to growing a wide variety of mixed vegetables, Julie and her husband also have various berries, fruit trees, chickens, dairy goats, and a team of oxen in training.

Since October 2022, Julie has provided Kim space to further develop best-practices for successful urban farming.

“ *Specialties : farming, agroecology, stakeholder engagement, land management, training* ”



# Artist, Storyteller

## Shawn Shafner



**Position:** Artist, Storyteller

**LinkedIn Profile:** <https://www.linkedin.com/in/shawn-shafner-922a4a2/>

Shawn graduated with honors from NYU's Tisch School of the Arts, was a 2005 Spielberg Fellow, and was invited to join the Charles and Lynn Schusterman Foundation's ROI Community in 2015. He is currently pursuing his Master's degree at George Washington University.

Shawn founded [The People's Own Organic Power \(POOP\) Project](#) in 2010. As Executive Director, he has since created numerous theatrical works, educational programs, online videos, installations and community-based projects, podcast episodes, a book, and more.

Shawn has been featured as a Waste Warrior on CBC Radio One, interviewed for articles in the New York Post and DNA Info. The POOP Project has been profiled in The Huffington Post, BuzzFeed, American Hipster, Good.com, TreeHugger, and Broadway World. He has even performed on the floor of the United Nations for the inaugural World Toilet Day celebration in 2013. From 2018-2019 as a National Fellow, Shawn completed training in Diversity, Equity and Inclusion, and Creating Learning Organizations.

Kimberly and Shawn first crossed paths in 2017 in Portland, OR at the [FLUSH Documentary](#) screening.

“Specialties: art, storytelling, stakeholder engagement, training”

# Goals and Activities

## Project Milestones

▶ Research: Preliminary Site Analysis Review Criteria	<b>Step 1</b>
▶ Research: Rate and Select Tiny Dwelling Site Location(s)	<b>Step 2</b>
▶ Technical Design: Tiny Dwelling and Sustainable Development Support Systems Installation	<b>Step 3</b>
▶ Development: Detailed Analysis for Short-term Emergency Preparedness and Long-term Benefits	<b>Step 4</b>

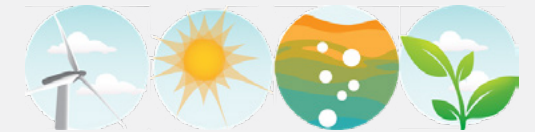
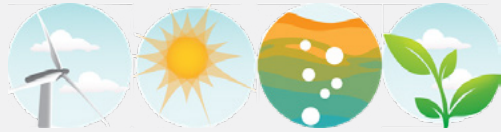
*So you to feel informed and empowered during the project progression, milestones and steps involved follow...*

### 1 Preliminary Site Analysis Review Criteria.



The purpose of Step 1 is to screen for potential locations to identify appropriate sites for the installation of an autonomous mobile tiny dwelling to house urban farmers. Filters are applied to evaluate potential sites that would preclude an installation for a tiny dwelling using a solar photovoltaic (PV) system and eco-san, dry toilet system; screening criteria filters include:

- **Insufficient cover material resources and insolation** | Economically viable compost projects and solar electric systems can be developed using 'marginal' cover material and solar resources as a preliminary filter for identifying sites.
- **Setbacks** | Insufficient set backs from property lines, residences, buildings or other sensitive receptors. In Stage 1, conservative 'rule of thumb' and safety setbacks will be used.
- **Access** | Available access pathways for siting of the tiny dwelling.
- **Stakeholder engagement** | Successful projects are embraced by the community, if the community is included in the design process. Potential interference with scenic view sheds must be considered. Conducting a meeting for community comment is prudent.
- **Permitting** | Successful permitting of a sanitary compost system is dependent on a number of factors, so enumerating definitive filters in advance of determining potential sites and locations is difficult. An Authority Having Jurisdiction (AHJ) to sign-off on milestones is recommended. As a part of Stage 1, identified sites will be scored for presumed complexity in permitting.



## Goals and Activities (Continued)

“ **Step 1 Deliverable:** A summary describing the sites reviewed, the findings, and site recommendations for a mobile tiny dwelling utilizing solar PV and an eco-sanitary (eco-san) dry toilet compost system installation.

### 2 Rate and Select Tiny Dwelling Site Location(s)

- ■ ■ ■ The second step toward implementing this offering requires obtaining a vacant, city owned, or tax-defaulted lot for the tiny dwelling(s) and hyper-intense urban farm. In Step 2, a work session will commence to review the findings of Step 1, so the sites under consideration for a final installation can be identified. During this step, a review estimate of the requirements and cost will be conducted at the proposed site, and a public information plan and schedule will be adopted. The aim is to create an effective communication tool to conduct at public stakeholder meetings.

A couple of prospective locations follow:

Prospective Location 1 Details	
▶ Parcel IDs 154 (8584, 8967, 9378)   508-512 N. Arlington Ave, Baltimore, MD 21223	<b>Location</b>
▶ 0.12 acre (5,227.1 ft <sup>2</sup> )	<b>Lot Size</b>
▶ City of Baltimore	<b>Owner</b>

Prospective Location 2 Details	
▶ Parcel IDs 0392 (024, 025, 026)   711-715 W. Lafayette Ave, Baltimore, MD 21217	<b>Location</b>
▶ 0.12 acre (5,227.1 ft <sup>2</sup> )	<b>Lot Size</b>
▶ City of Baltimore	<b>Owner</b>

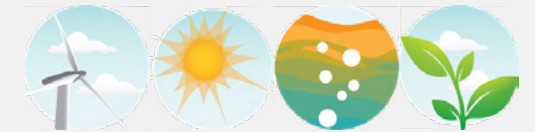
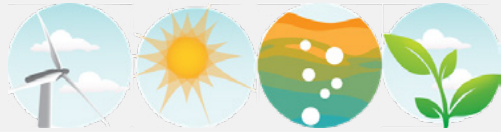
“ **Step 2 Deliverable:** A preliminary report describing the sites reviewed, the findings, and site recommendations for a mobile tiny dwelling utilizing solar PV, and an eco-sanitary (eco-san) dry toilet compost system installation. The most promising site identified in Stage 2 will be recommended. Budgetary limitations will likely be the driving factor for determining the most viable sites for an installation.

## Goals and Activities (Cont'd)

### 3 Tiny Dwelling and Sustainable Development Support Systems Installation.

- ■ ■ ■ During the technical design stage of the project, any difficulties in construction and installation at the proposed site will be assessed. The logistics, security, availability of appropriate cover material availability for the eco-sanitary compost, system and solar insolation for the proposed site will be re-evaluated.
- ▶ Site preparation: Police location for debris and other, legacy issues that may arise
  - ▶ Security: Establish and fortify a secure site perimeter and install security system
  - ▶ Deliver tiny dwelling: Position dwelling optimally for best solar opportunity and to minimize any neighborhood visual impediments
  - ▶ Infrastructure installations: Solar PV, Eco-san Compost Processor, Grey Water Collection System, Atmospheric Water Generator, Carbon cover material delivery
  - ▶ Stakeholder engagement: Invite local community for a tour and for feedback

“ **Step 3 Deliverable:** A summary of the steps taken to install the mobile tiny dwelling, solar PV system, eco-sanitary (eco-san) dry toilet compost system and water management system(s).



## Goals and Activities (Continued)

### 4 Detailed Analysis for Short-term Emergency Preparedness and Long-term Benefits.

- ■ ■ ■ The final analysis will provide detailed production data demonstrating the tiny dwelling inhabitant can be assured a reasonable quality of life will not be interrupted because of lack of electricity, sanitation, and water during a disaster event, or in the long-term. The outcomes can become the tool and reference for engaging technical consultants in the design and construction for future locations hosting tiny dwelling inhabitants. The analysis will include the following:
  - ▶ Power generated by an autonomous photovoltaic (PV) solar system become part of the contingency planning rubric.
  - ▶ Successful, safe, eco-sanitary composting of human excreta management to be provided as a soil amendment and carbon sequestration opportunity.
  - ▶ Grey water recovered, water harvested and generated from the atmosphere providing drinking water offsets, for hygiene, and drip irrigation.
  - ▶ Year round hyper-intense urban farm using methods that improve soil quality.
  - ▶ Anything else?

“ **Step 4 Deliverable:** A final report describing the production outcomes of the autonomous, mobile tiny dwelling utilizing a sanitary compost system, atmospheric water generator, and off-grid renewable energy system. This will include the energy and water production, and the percentage of the municipal load that could be serviced through the solar energy at the respective location. Data will be compared to existing energy, municipal sanitation, and water, uses for these calculations. Fresh produce grown will be documented.

## Tiny Dwelling 1



**The METRO 20'x 8'4"**

*The METRO is a nod to the mid-century curved travel trailers, with aluminum siding and exposed fasteners. Designed by Patrick Sughrue.*

#### EXTERNAL DESIGN

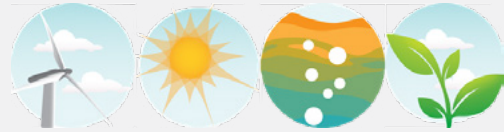
Built on a custom tiny house trailer from Great Northern in southern Oregon With two 5,000 lb. axles. Unique exterior with redwood and aluminum siding.

#### INTERNAL DESIGN

The Park Model code ANSI a119.5 used as a guide for designing and building. Redwood loft and window trim. Invested \$37,000 in materials to show model reflected a commitment to green building.

#### Basic Information

▶ ~8,600 lb	<b>Weight</b>
▶ 169 ft <sup>2</sup> + 45 ft <sup>2</sup> in loft	<b>Living space</b>
▶ Dry toilet, 4-1/2" Structural Insulated Panels (R16), plug-n-play all electric w/50 amp panel, LED lighting, refrigerator and freezer, 1,000-watt heater, shower, built-in storage closet	<b>Some features</b>



# Tiny Dwelling 2



**The Byron Tiny House 24'7" x 9'10"**

*Modern. The extra width combined with the generous use of windows give it a very open, spacious feel. Designed by Nadia Marshall.*

## EXTERNAL DESIGN

Architectural-profile cladding used to give this dwelling modern look. Treated with an aging stain for a more 'organic' look. Tiny eaves for the roof were incorporated to protect the windows and avoid the box-like look.

## INTERNAL DESIGN

Spacious. Ample use of glass to create a sense of continuing space. Used black to frame the windows but also the whole house to yield a Japanese framing effect.

## Basic Information

▶ ~9,000 lbs	<b>Weight</b>
▶ 343 ft <sup>2</sup> includes loft and window box	<b>Living space</b>
▶ Dry toilet, washer/dryer, shower, built-in storage	<b>Some features</b>

