

Project Title: Construction and Demolition Materials Diversion Training in the United States Virgin Islands

Submitted By: Island Green Living Association

Address: 5000 Estate Enighed #38, St. John, VI, 00830

Website: www.islandgreenliving.org

Contact Information:

Kelly Lawson, Executive Director

kelly@islandgreenliving.org

(340) 998-4446

Funding Requested from the EPA: \$95,232.00

Total Project Cost: \$95,232.00

Project Dates:

July 2020 – June 2021

DUNS #: 967353496

Project Summary/Approach

This proposal addresses the need for greater awareness and proven, specialized training to increase the effective and efficient management of Construction and Demolition (C&D) materials in the US Virgin Islands (USVI). Island Green Living Association got its start 16 years ago with the goal of expanding green building practices of St. John, particularly as they pertain to reclaiming used building materials during construction and renovations. From there we have grown our mission to all areas of sustainable island living.

We believe that efficient use of these salvageable materials is critical to the environmental and economic health of a community. Unfortunately, some hurricane damaged buildings still exist from 2017 and pose health and safety risks. Guided by EPA's Sustainable Materials Management (SMM), we reinforce the dual priorities of salvage and redistribution. There are a handful of Master Trainers certified by the Build Reuse Association. We will partner with one of these Master Trainers to ensure the best possible long-term outcomes, including:

- Forge an alliance of leaders with solid C&D SMM skills to inform policies and practices in the USVI. These leaders can be deployed when there is a disaster that results in damage to structures to ensure materials are both salvaged and redistributed.
- Develop skills and practices that become the daily practice of SMM for every kind of C&D materials.
- Realize a significant drop in the volume of C&D materials going to the landfill and more resources to be used for economic and environmental gain.

The prudent use and redistribution of material assets helps to ensure sufficient supplies to meet current and future needs. A key aspect of our proposal focuses on the development of markets for usable C&D materials including energy-intensive raw materials (concrete, wood, steel, bricks), hardware and products created from the reclaimed salvage. We will use the well-established training materials and resources from Build Reuse (formerly the Building Materials Reuse Association) to provide high level training on best practices associated with C&D waste repurposing. We do not expect that training materials and resources designed for a large swath of the US to be scaled down and relevant for an island community. Rather, our program begins with deep research on the three main islands in the USVI: St. John, St. Thomas, and St. Croix.

After Hurricanes Irma and Maria devastated the US Virgin Islands, it became clear that including C&D Sustainable Materials Management in preparatory activities for another disaster would be greatly

beneficial to the resilience and health of the Islands. Now, facing a global pandemic, it is even more compelling to care for potential resources for the long-term.

Project Phase One – Research and Outreach (Timeframe: July 2020)

Thorough research and information-gathering will take place before the training begins. While Island Green Living Association has many local partners, the research phase allows for refreshed learning from others and serves to provide outreach for the more advanced training in sustainable C&D materials management we will provide.

The Research Phase will be an intensive onsite review of destroyed and unsafe buildings and residences, landfills, resources, interviews with government officials, contractors, architects, workforce development and public works leaders. Leading the research will be Kelly Lawson, Executive Director of Island Green, along with the Commissioners of Public Works and Property and Procurement, with the purpose of creating training priorities in the specific challenges, materials, and resources in the Islands.

Outreach has already begun as we have been engaging partners to ensure the strength of this project when funded. We will continue to reach out to the key leaders to encourage their participation in this important SMM training.

Phase Two – Development (July-December)

We will avoid scheduling the onsite trainings during hurricane season (July through November). This will allow us time to prepare and produce training materials that address the unique concerns and resources of each island. We will engage with partners and participants through these months with pre-training questionnaires and preparation tools. We will engage in onsite logistics planning for the training programs. This will include outreach and securing registrations for 10 participants for each of three programs.

The Master Trainer will work with an experienced sustainability colleague to create focused materials and a handbook that will address the unique concerns and resources of the USVI. They will create a Train-the-Trainer curriculum for a total of 30 high-level leaders to ensure the best principles and practices are passed on to work forces, teams, and colleagues – setting a new standard for SMM on all three islands.

Phase Three – The Train-The-Trainer Programs (January – April 2021)

With our partners, we will host three two-day trainings followed by an optional third day offering advanced training, innovation, and 1:1 coaching. Training sessions will be held on each of the three main islands.

The trainings will engage the participants in the use of non-hazardous secondary materials in construction projects, sustainable management of C&D materials, increased access to references and resources, and best practices for sustainability. We will train the key personnel to make material use decisions based on the available resources and the waste management hierarchy with preference for

- Source Reduction and Reuse
- Recycling/Composting

The attendees will learn to establish and maintain Built Environment best practices in their workplaces. Another key element of our training is to change perceptions about waste's environmental impact. The value of C&D materials as assets for the communities at large is not always widely understood. We will challenge training attendees to re-think C&D waste as a valuable resource that can reduce environmental impacts when used more productively over the material's entire life cycle by saving landfill space and reducing the mining of virgin resources, conserving finite resources and reducing costs associated with mining, packaging and transporting these materials. We believe that by keeping education around this core value at the heart of all that we do, we can get to a tipping point of becoming net zero waste, carbon-neutral communities.

The first day of training will be in the classroom, using well-established basic principles and practices endorsed by Build Reuse. This includes covering the Ten Core Competencies:

1. Introduction to Deconstruction
2. Evaluating a Project Site
3. Jobsite Safety
4. Environmental Hazards
5. Tools
6. Site Plan, Schedule, and Work Plan
7. Non-structural Salvage
8. Full Deconstruction
9. Materials Management
10. Job Close-Out

After the end of the first day's training, the public, including college students and public high school students enrolled in the Construction Pathway curriculum will be invited to a free evening workshop with the Master Trainer. There will be an informal informational workshop followed by Q&A.

The second day of training will be at a work site. Participants will be able to watch and participate in real-time activities, reinforcing the classroom learning. Throughout the trainings we will emphasize sustainable materials management; the impact of building waste on the environment, the economy, and the health of the community; the conversion of waste into valuable community resources; and best practices for the management of materials that are not reusable and toxic waste.

The third, optional, day consists of advanced training, innovative markets for reclaimed materials, and 1:1 coaching with the Master Trainer.

To continue the education and encourage continued commitment to SMM best practices, each participant will receive:

- The industry standard Build Reuse Manual
- The C&D SMM Handbook for the US Virgin Islands
- A one-year membership to the Build Reuse Association
- Access to a C&D SMM Facebook Group
- Access to refresher video resources
- A local Materials Match database, maintained by Island Green
- Local experts on retainer to advise leaders

Description of the associated work products to be developed

- C&D SMM Handbook for the US Virgin Islands
- USVI-specific training materials
- Public workshop materials
- Online resources including a Materials Marketplace, a Facebook Group connecting available resources to future projects, and refresher video resources
- Regular newsletter and "Reuse News" from Island Green. Reuse News will highlight key concepts from the training and showcase salvaged materials available for construction products.

Explanation of project benefits to the public, and specifically the potential audiences serviced

By conducting Train-the-Trainer programs for selected influential leaders in the USVI, we ensure that they are armed with the best principles, practices, and ongoing support to benefit the Island communities. They will have the resources to train their own work teams and colleagues, including government officials that can have tremendous impact for the general public as policy decisions are informed by the trainings. As Federal money continues to funnel into the Territory following the 2017 hurricanes many road and infrastructure projects are in the pipeline. It is our hope these trainings will spark conversation to require a percentage of salvaged construction material be used in these Territory-wide projects. In addition, we will provide these leaders with informational material they can transfer on to associates, workers, home and building owners. Our hope is that a synergistic effect will be the establishment of reuse centers on all three islands.

Executing new practices will result in reduced virgin material consumption, a reduced carbon footprint associated with transporting material to the Islands, increased material diverted from the landfill, economic benefits for home and building owners, and raised awareness of the community benefits of environmental stewardship.

Description of the roles of the applicant and partners, if any

Island Green was originally established in 2004 by architects and builders concerned with volume of C&D material that was being sent to the landfill. Alleviating that issue was our founding mission and remains key to our principles. This grant will help us educate and teach best practices of repurposing C&D through sustainable materials management. We will be able to expand the concept territory-wide with the assistance of UVI and other non-profit partners.

With the assistance of organizations like the Build Reuse Association, U.S. Green Building Council, Solid Waste Association of North America and the EPA, Region 2, Island Green will select a Master Trainer to facilitate the trainings. Post-training, we will continue to engage participants and their referrals with newsletters, a Facebook group, a Materials Marketplace database, and the establishment of best practices at Island Green. We will make refresher videos available on the Island Green website.

Island Green Living Association will coordinate the trainings on the three main Islands. We have begun the work of developing partnerships to engage in this work with us. We will build awareness of the training through media releases including on social media platforms.

In addition to using current available data from Virgin Island Waste Management Authority, waste analysis report, as well as additional research, we will identify destruction, demolition, toxic materials, and resources to create the USVI SMM Handbook to accompany the Build Reuse Manual. The Master Trainer will facilitate the classroom module, the field module, certification, advanced training, and one-on-one coaching.

With Island Green's successful track record of educating decision makers, government officials and procurement departments with regard to banning plastic bags, banning burning of brown and green organic material, banning plastic straws and toxic sunscreen, we will propose to the legislature an initiative to stipulate that future construction seek to include 15-20% from demolition or repurposed material.

Description of the applicant's organization and experience related to the proposed project

Island Green Description:

Island Green Living, a registered 501(c)(3) not for profit on St. John, has been a trailblazer in initiating meaningful change on St. John and throughout the territory including establishment of the island's ReSource Depot. The organization also launched Green Building and Green Villa Certificate programs that encourage builders to use eco-friendly practices. Island Green launched the Preserve St. John initiative to combat recycling issues on the island. To date, nearly half a million aluminum cans have been collected, crushed and recycled. Green education and reward programs with both private and public schools and local organizations have been created. Island Green has also been a leader in education programs aimed at legislators and the community on the importance of banning straws, plastic bags and now toxic sunscreen, leading to green laws. One of our proudest accomplishments was preserving the air we breathe with the "Ban the Burn" campaign to prevent the burning of hurricane debris on all three islands following the devastating effects of Irma and Maria and our efforts to improve the territory's readiness for future storms through sustainable practices including waste management.

The Island Green advantage is that we guarantee results. Unlike many other boards, the Island Green board is hands-on with a track record of being engaged to deliver results. The board has in depth intellectual acumen and know-how to make things happen and achieve goals. Highlights of our board member roles include:

Dr. David Minner is personally spearheading the composting/chipping grant execution along with the Island Green Executive Director.

Mark Lichtenstein, founder of the Recycling Partnership of VI and Puerto Rico and currently Chief of Staff, Chief Sustainability Officer at SUNY College of Environmental Science and Forestry, has been part and parcel of this grant application process and intends to participate in a supportive role.

Harith Wickrema, our Board President, is engaged on a full time basis and has been instrumental in executing Island Green's sustainability initiatives and setting the course for the organization. He was honored with the EPA Environmental Champion Award for his volunteer work.

Support of board member Dr. David Hall, President of the University of the Virgin Islands, underscores our credibility and provides valuable faculty engagement.

The ReSource Depot:

Island Green operates a ReSource Depot in which excess material, construction salvage and gently used household items are donated by community members, contractors, builders, hotels and villa management companies and then sold at a reasonable price to St. John residents. A fundamental asset to the St. John community, the ReSource Depot has kept nearly 300,000 lbs. of materials from going to our over-extended landfills. The Depot accepts and resells leftover construction materials, usable building materials from renovations, and used furniture, appliances, kitchen cabinets, plumbing and electrical fixtures, thus repurposing "waste" as a valuable resource and extending the life cycle of this material. The ReSource Depot is one of the only facilities of its kind in the Virgin Islands and is considered a Construction and Demolition Recycling Center.

The ReSource Depot provides many benefits to the community of St. John. Currently the territory operates two landfills, one in St. Croix and the other in St. Thomas, which are at capacity. St. John spends \$1 million annually from its capital improvement funds to haul waste from St. John's Susannaberg Transfer Station to the Bovoni Landfill in St. Thomas. The huge economic cost associated with hauling waste, the strain on landfills and carbon footprint are all reduced by putting these resources to further use on St. John.

Further, the Resource Depot helps the community by reducing personal costs. Household materials are particularly expensive and difficult to find on St John. St John residents often endure the time and expense of a trip to St. Thomas to acquire basic household items or end up purchasing online creating further waste with the discarded packaging material. The ReSource Depot provides a low-cost alternative for the people of St. John and keeps additional packaging items from entering the territory.

Green Building Certification Program:

Island Green got its start back in 2004 as the Island Green Building Association. Our founding principle was the expansion of sustainable building and construction practices on St. John, which we grew to include all aspects of island living a decade later and became Island Green Living Association in 2014. Our original purpose is still primary to our mission. The Green Building Certification program provides sustainable design and construction guidelines including waste minimization and recycling.

Descriptions of staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them, to successfully achieve the goals of the proposed project

Island Green has 16 years of experience as a leader in sustainability in the Virgin Islands. Our knowledge is vast, and our experience is deep in these Islands. However, we do not have a local trainer/thought leader from organizations like the Build Reuse Association, U.S. Green Build Council, Solid Waste Association of North America or similar organizations. We believe having a certified Master Trainer is paramount in successfully achieving the goals of this proposal. Given our leadership position related to sustainability and green initiatives, we are uniquely qualified to rectify this situation. We have identified Build Reuse as the preferred source of the few Master Trainers of C&D waste repurposing in the US.

Local partners include the organizations below. These partners will assist in providing space and communication resources to support the trainings.

- University of the Virgin Islands Green Technology Center
- St. Thomas Long Term Recovery Team – St. Thomas
- St. Croix Foundation – St. Croix
- Virgin Islands Waste Management Authority
- Virgin Islands Department of Public Works

Project Program Manager:

Kelly Lawson, Executive Director at Island Green Living Association

Since joining Island Green Living Association as executive director in 2019, Kelly has made remarkable progress toward achieving long term sustainability goals and setting the strategy for future success in the Virgin Islands. She hit the ground running and within two months of her arrival, orchestrated the recycling of 440,000 aluminum cans that had been collected and crushed by the organization. This included procuring free transport aboard a shipping container that was returning to Puerto Rico empty, thereby assuring carbon emissions were kept to a minimum.

She identified key sources of funding for nonprofit initiatives and was able to secure \$100,000 in grant money as well as nearly the same amount in private donations for a municipal composting pilot program. The aim of the USVI Zero Waste Composting Pilot Program is to keep a vital resource – vegetative debris – from filling the territory’s already overflowing landfills while cutting the island’s carbon transportation footprint. Moreover, the program gained the attention of the Clinton Foundation and has been designated as a Clinton Global Initiative Call to Action.

Another key area where Kelly excels is in identifying partners across government, NGO and business sectors to work together toward common goals, thereby strengthening the collective impact on sustainability and the environment.

Environmental Results – Outcomes, Outputs, and Performance Measures

STRATEGIC OBJECTIVE 1: Identify and engage influential contractors, public works leaders, and waste management professionals in St. John, St. Thomas, and St. Croix with the purpose of registering them for Built Environment training.

Outputs:	Targeted communications to leaders on three islands. Register 10 leaders per Island.
Outcomes:	A critical group of waste management, contracting, government and public works personnel will receive intensive training from a Build Reuse Association Master Trainer.
Short Term Goal:	Raise awareness of environmental impacts of C&D waste with skills to reduce negative impacts.
Long Term Goal:	Forge an alliance of leaders to create C&D SMM policies and practices in the USVI. These leaders can be deployed when there is a disaster that results in damage to structures to ensure materials are both salvaged and redistributed.
Performance Measures:	Track Registrations. Track Attendance per Training Day.

STRATEGIC OBJECTIVE 2: Each participant will demonstrate competence in the areas of identifying reusable materials, deconstruction best practices, techniques for ensuring the highest

use possible for salvaged materials is maintained, use of the environmental hierarchy principles, safe disposal of unusable and toxic materials.

Outputs: High level classroom and skills training.
Provision of training materials and resources.

Outcomes: Participants will demonstrate competence in new learning and techniques related to C&D materials management.

Short Term
Goal: To teach C&D SMM skills to leaders that they can use them with confidence.

Long Term
Goal: These skills and practices become the daily practice of SMM for every kind of C&D waste.

Performance
Measures: There will be periodic quizzes and demos. To show competency, participants must have a 90% or higher score on competencies.

STRATEGIC OBJECTIVE 3: Participants will make a commitment to use a high level of environmental stewardship in their ongoing work with reused building materials.

Outputs: Consistent reinforcement of the SMM hierarchy with preference for (1) source reduction and reuse, and (2) recycling/composting.

Outcomes: Awareness of and commitment to this principle will represent a significant shift in perceptions about the value of reused materials, which will be passed on to teams and workers hands-on with materials.

Short Term
Goal: SMM becomes a priority to these participants in regulations and policies.

Long Term
Goal: Significant drop in the volume of C&D materials going to the landfill and more resources to be used for economic and environmental gain.

Performance
Measures: Favorable changes in regulations and policies related to SMM.
Pre- and Post-Questionnaires re: perceptions of building materials value using a Likert scale to track changes.
Additional questionnaires to determine changes in practices and resources.

STRATEGIC OBJECTIVE 4: Participants will understand the value of and engage in collective action for maximum environmental impact.

Outputs: Membership to the Build Reuse Association.
Material Marketplace Online Resource
Regular email newsletters reinforcing principles
Facebook Group to continually encourage collective action and shared responsibility.
Island Green will serve as a hub for information, best practices and serving as a model for others on the Islands.

Outcomes: Participants will continue to engage with one another on best environmental practices, reach out to others in the building community to pass on new learning and hold one another accountable for exercising best practices.
Reduction of waste going to the landfill.
Increase in demand for reclaimed building materials.
Increase in access to needed reused building materials.

Short Term
Goal: Stronger and wide-spread collective action for maximum environmental impact.

Long Term
Goal: The USVI becomes a zero net waste, carbon neutral territory.

Performance

Measures: Monitor the volume of usable building materials going into the landfill.
Monitor the volume of usable materials being exchanged on the Materials Match.
Monitor Google Analytics for website, Materials Match, and Facebook Group interactivity.

Programmatic Capability and Past Performance

While we have 16 years of experience doing this work, Island Green does not have past federally funded assistance agreements including Federal grants and cooperative agreements.

Island Green has operated for the most part by the very active board without an executive director to invest funds directly to causes. However we hired our first full time executive director last April and our productivity is on the uptick. With very low overhead, we have operated on charitable contributions vs on federal grants.

We have a proven track record as a trailblazer for sustainability for the Virgin Islands.

Sustainability

Our proposal sets up this influential group of leaders to engage beyond the grant period through a Facebook Group, widely used in this community. The Group would be established by Island Green for those who have successfully completed training and their trainees. Those who have completed the course will receive the Build Reuse Association Manual, a USVI-specific handbook, and access to refresher videos. We will also identify key attendees in the training who are currently Involved In the local construction Industry. These people will become advisors to their community on the best practices learned and adopted at the trainings.

Innovation

The training program we are proposing has several innovative elements. First off, C&D sustainable materials management is an innovative approach to disposal of materials remaining after a destructive hurricane and for the deconstruction of a building or residence in general. Our training is informed by our commitment to helping establish a resilient community. For all the reasons already stated in this proposal, the sustainable management of C&D materials adds to the health of our Island communities. There have been territorial disasters in the past and will be again. The training we propose leads to a plan of preparation for what to do with C&D waste when a disaster occurs. With resilience and preparation as our guides, we ensure that there are materials and resources available for future incidents.

As one of the key tenets of our SMM program, we propose including an education session and panel discussion featuring the Governor, senators and select commissioners with the Master Trainer and the Build Reuse Association. This will further engage and inform them on the benefits and value of Sustainable Materials Management and ways these procedures can be incorporated into supporting legislation.

Budget Narrative

NOTE: Island Green has a 16-year history of fiscal prudence, oversight, and accountability. We use an off-site bookkeeper and a CPA and follow generally accepted accounting principles.

PERSONNEL	REQUESTED FROM EPA	COST SHARE	TOTAL

Salaries and Wages			
(1) Project Manager @ 40/hr x 520 hrs	\$ 20,800.00		\$ 20,800.00
<i>Narrative Note 1</i>			
TOTAL	\$ 20,800.00		\$ 20,800.00
FRINGE BENEFITS			
	REQUESTED FROM EPA	COST SHARE	TOTAL
Rate/Base/Composition			
30% of Personnel costs (FICA, Retirement, Vacation, Sick Leave)	\$ 6,240.00		\$ 6,240.00
TOTAL	\$ 6,240.00		\$ 6,240.00
TRAVEL			
<i>See Narrative Note 2</i>	REQUESTED FROM EPA	COST SHARE	TOTAL
Research and Three Day Trainings for Project Manager on Stj, Stt, Stx including lodging, air, car, per diem	\$ 2,395.00		\$ 2,395.00
TOTAL	\$ 2,395.00		\$ 2,395.00
SUPPLIES			
	REQUESTED FROM EPA	COST SHARE	TOTAL
Tool Rental <i>See Narrative Note 3</i>	\$ 1,500.00		\$ 1,500.00
Printing (handbooks, schedules, releases, etc)	\$ 900.00		\$ 900.00
TOTAL	\$ 2,400.00		\$ 2,400.00
CONTRACTUAL			
Certified Master Trainer <i>See Narrative Note 4</i>	\$ 23,900.00		\$ 23,900.00
Training Project Manager <i>See Narrative Note 5</i>	\$ 3,900.00		\$ 3,900.00
Local Expert Support <i>See Narrative Note 6</i>	\$ 3,000.00		\$ 3,000.00
Partner Org Stipends <i>See Narrative Note 7</i>	\$ 2,000.00		\$ 2,000.00
Master Trainer Travel <i>See Narrative Note 8</i>	\$ 8,297.00		\$ 8,297.00
Videography	\$ 2,500.00		\$ 1,500.00
Build Reuse Access to Training Manual and Membership	\$ 4,500.00		\$ 4,500.00
TOTAL	\$ 48,097.00		\$ 48,097.00
OTHER			

TYPE	REQUESTED FROM EPA	COST SHARE	TOTAL
Catering	\$ 10,800.00		\$ 10,800.00
Attendee Scholarships <i>See Narrative Note 9</i>	\$ 4,500.00		\$ 4,500.00
TOTAL	\$ 15,300.00		\$ 15,300.00
	\$ 95,232.00		\$ 95,232.00

Narrative Note 1: The Project Manager for this proposal is Kelly Lawson, Island Green's Executive Director.

Narrative Note 2: Travel is based on DOD 2020 per diem rates. This travel budget reflects the Project Manager's round trip travel by plane (to Stx) and ferry (between Stj and Stt), lodging/meals in Stx and Stt.

Narrative Note 3: Tool rental is included in this proposal because there are few resources in the USVI for renting the tools we will need for the field work we will conduct with the participants. Some participants may have their own tools, but many may not.

Narrative Note 4: A certified Master Trainer will need to be secured from the Mainland US because there are no C&D certified Master Trainers in the USVI. The hourly rate of \$100/hr is advised as a base rate from Build Reuse.

Narrative Note 5: A sustainability training project manager will be secured to manage the front-end of the training project, preparing educational materials, editing, proofing, managing re-writes, and book research.

Narrative Note 6: We will secure three local authorities on C&D SMM as a local touchpoint for ongoing development of training participants.

Narrative Note 7: We will partner with St. Croix Foundation and St. Thomas Long-term Recovery Team and provide support of \$1,000 each for their contributions to the project.

Narrative Note 8: As there are no Master Trainers in the USVI and we are providing training programs on three islands, the Master Trainer will require travel fund for transport from the Mainland US to the USVI and between islands to provide service. Travel reimbursement will be based on DOD 2020 per-diem rates.

Narrative Note 9: We would like to offer scholarships to local government representatives to attend the trainings. We believe that engaging these important leaders will help to bring SMM to a higher level in the USVI.