

09-DG-11052021-215

66 RS-BP.015

**U.S Forest Service: Urban and Community Forestry Program
NUCFAC 2009 Challenge Cost Share Grant**

Application Cover Sheet

Proposals are due by 11:59 PM Eastern Standard Time February 17, 2009

INNOVATION GRANT CATEGORY: (Total amount available is \$500,000)
(Select only one per application)

- ENERGY AND URBAN FORESTS
 CLIMATE CHANGE AND URBAN FORESTS
 PUBLIC HEALTH AND URBAN FORESTS

BEST PRACTICES GRANTS. (Maximum amount per application is \$50,000 of a total amount available of \$500,000)

PROJECT CONTACT:
NAME OF ORGANIZATION:
MAILING ADDRESS 1:
MAILING ADDRESS 2:
CITY: STATE: ZIP CODE:
PHONE NO. CELL PHONE (OPTIONAL)
FAX NO.
E-MAIL

Is this project being developed to reach a minority or underserved population? Yes No

Is this pre-proposal being submitted by a minority or underserved population
(owned/operated/directed) business, organization or college/university? Yes No

PROJECT TITLE:

A 50 percent match is required of non Federal, cash, donated materials and/or volunteer time.

REQUESTED: \$ + MATCHING: \$ = TOTAL PROJECT: \$

PARTNERS:

NAME Kevin Eckert LETTER OF SUPPORT INCLUDED: YES NO

NAME OF ORGANIZATION: Arbor Global, Inc.

MAILING ADDRESS 1: 326 Iliwahi Loop

MAILING ADDRESS 2:

CITY: Kailua STATE: HI ZIP CODE: 96734

PHONE NO. 8082544161 CELL PHONE (OPTIONAL)

FAX NO. 8082544082

E-MAIL keckert@arborglobal.com

NAME Dr. Colleen Carroll LETTER OF SUPPORT INCLUDED: YES NO

NAME OF ORGANIZATION: NatureTalks

MAILING ADDRESS 1: P.O. Box 510016

MAILING ADDRESS 2:

CITY: Kealia STATE: HI ZIP CODE: 96751

PHONE NO. 8086343021 CELL PHONE (OPTIONAL) 8086343021

FAX NO.

E-MAIL colleen@naturetalks.net

NAME Jack McCabe LETTER OF SUPPORT INCLUDED: YES NO

NAME OF ORGANIZATION: Davey Resource Group

MAILING ADDRESS 1: 7627 Morro Road

MAILING ADDRESS 2:

CITY: Atascadero STATE: CA ZIP CODE: 93422

PHONE NO. 8009662021 CELL PHONE (OPTIONAL)

FAX NO. 8054618591

E-MAIL jack.mccabe@davey.com

PROPOSAL OUTLINE: (The Innovation proposal is not to be more than 10 and the Best Practices is not to be more than 5 single spaced pages.) Please make sure each page is numbered and has the project title.

Project Title: Urban Forestry Emergency Operations Plan Template for Storm Response

ABSTRACT: Summarize the proposed project in 200 words or less.

The Friends of Hawaii's Urban Forest is submitting a 2009 Best Practices Grant proposal to develop an Urban Forestry Emergency Operations Plan Template for Storm Response. This project will guide urban foresters when planning for emergencies or disasters such as hurricanes and ice storms resulting in vegetative debris. With ninety-one percent of the population living in areas at a moderate to high risk of a disaster we must accept the fact that urban and community forests will be damaged in storms, that vegetative debris is usually the most voluminous debris stream generated by these types of storms, and preparedness is a necessity. An emergency operations plan for urban forestry is a major step towards understanding the fundamental principles behind preparedness and planning for emergencies, accepting the common language of disaster management, familiarizing urban foresters with the accepted FEMA guides, models and tools, and understanding their relationship and role in protecting the resiliency of the energy sector through expeditious vegetation debris removal. Finally urban forestry can connect with the Energy Sector and FEMA in new ways using appropriate tools and language making their roles relevant and important.

1. **Scope and Applicability/Justification- Proposal objectives:**
2. **Literature Review: (discussion)**
3. **Organization/Methodology:**
4. **Product:**
5. **Collaboration:**
6. **National Distribution/Technology Transfer of Your Findings:**
7. **Project Evaluation:**
8. **Experience/Personnel/Adequacy of Resources:**
9. **Project Evaluation:**

Attachments:

SF 424 and SF 424 (a). (Make sure DUNS number is on SF424 form)
Copy of indirect cost rate or negotiated rate with cognizant Federal agency
List of Literature reviewed and cited
Letters of Support from Partners

When uploading this form to grants.gov, please upload your narrative as a PDF or Word document. Remember that Best Practices proposals should be no more than 5 pages long, and Innovation proposals should be no more than 10 pages long.

SCOPE AND APPLICABILITY/JUSTIFICATION

This project is national in scope and directly addresses these 2 Council's priorities:

- *Make best practices/latest science in urban forestry accessible to practitioners and Addresses other challenges to the U&CF community.*

After a comprehensive literature review, we found that there wasn't a comprehensive Best Management Practice that deals with emergency operation plans for disasters or emergencies that impact the urban forest. *Storms Over the Urban Forest* was written in 1994 and helped build momentum for planning, however a more current and comprehensive model as this project suggests is needed that includes strategic emergency management and mitigation tools. This project is the groundwork for future projects focusing on trees and disasters.

Project objectives: There are two project objectives: First to assess the current situation and to connect the resiliency of the energy sector to vegetative debris removal. Second to develop an appropriate Emergency Operations Plan template for urban and community forestry.

1. *Assess the current situation*

- Interview response organizations (i.e. state, local, response teams, and utilities) to assess planning, mitigation, response and readiness capabilities
 - Link the urban forest and the resiliency of the energy sector through readiness and improvements.
2. *Develop an Emergency Operations Plan* template that addresses preparedness for an emergency or disaster that affect urban and community forests.
- Identify the plan's purpose, relevance and importance, goals and objectives, scope of emergency and disaster response to which the plan applies, and measurements to assess and quantify the effectiveness of the plan.

National Audience:

This product will offer a strategic planning tool adaptable to many sectors across our nation: specifically local units of governments, private vegetation removal response organizations, and perhaps utility vegetation managers.

Other national organizations that may benefit from the project:

Other entities include state urban and community foresters, non-profit organizations such as the Society of Municipal Arborists (SMA), U.S. Conference of Mayors, International Society of Arboriculture (ISA), National Association of State Foresters (NASF), National Arbor Day Foundation (NADF), and American Forest (AF).

Why the Project Should be Done Now

Can we afford to wait any longer? FEMA encourages States, local governments and private non-profits to take a proactive approach to emergency management. According to Amanda Ripley in "Why We Don't Prepare for Disaster", urbanization is increasing in coastal areas at an alarming rate with 53% of the population living there. Ninety-one percent of Americans live in areas at a moderate to high risk of a disaster. Lesson learned from past storms and disasters have not altered population trends. With more frequent and intense storms urban foresters must act now and plan for these events.

LITERATURE REVIEW

A comprehensive literature review was conducted and includes the Urban Forestry Research Stations and Centers, Universities such as Dr. Gilman's research on trees and hurricanes, urban forestry websites: ISA, SMA, NADF, TreeLink, and UFind the Urban Forest Index. Emergency management sites such as: Department of Energy, FEMA, EPA and the USACE. While there is substantive information on trees and hurricanes, reducing storm damage in urban forests, and management practices about hazard trees there is little referencing emergency operation plans for urban forests. Here is a sample:

Burban, Lisa, et al. Storms Over the Urban Forest, 1994.

<http://www.na.fs.fed.us/Spfo/pubs/uf/sotuf/sotuf.htm>

Gilman, E. et al. Trees and Hurricanes. University of Florida, 2008.

<http://treesandhurricanes.ifas.ufl.edu/>

Hartel, D.R.. Gulf Coast Tree Assessment 2006 Presentation to ISA. 2006. UFind Urban Forestry Index.

O'Brien J. Urban Tree Risk Management, A Community Guide to Program Design and Implementation.

I-tree Storm Damage Assessment Protocol Utility.

ISA books, brochures, best sellers for Hazard Trees. Kane, Brian C.P., Harris, J. Roger., and Day, Susan D.

U.S. FEMA, EPA, USACE tools and website links:

National Planning Scenarios: Executive Scenarios created for use in National, Federal, State and Local Homeland Security Preparedness Activities, April 2005.

USACE Hurricane Debris Estimating Model.

U.S. EPA Planning for Natural Disaster Debris.

U.S. FEMA. CPG 101 Producing Emergency Plans.

U.S. FEMA 141 Emergency Management Guide for Business and Industry.

U.S. FEMA 329 Debris Management Brochure.

U.S. FEMA Publication 386-2 Understanding Your Risks: Identifying Hazards and Estimating Loss.

ORGANIZATION/METHODOLOGY

This team will undertake the project using the following methods and approach.

Step 1— Link the urban forestry and the energy sector: Link the urban forest with protecting and improving the resilience of the energy sector through readiness and improvements for woody debris removal in response to natural disasters. Any prolonged interruption of the supply of basic energy—electricity, petroleum, or natural gas—would do considerable harm to the U.S. economy and the American people. *Energy: Critical Infrastructure and Key Resources Sector-Specific Plan as input to the National Infrastructure Protection Plan May 2007.*

Step 2—Understand vulnerable communities, timeliness for preparedness and storm preparedness planning tools: Understand storm response, vegetative debris volumes, and the impacts to urban forests and the energy sector. Develop a survey tool to capture information from responders and local governments. Follow up interview with arborists, responders and utilities to clarify and formulate the plan response.

Step 3—Develop the Emergency Operations Template: Identify the plan’s purpose and structure, include the scope of emergency and disaster response to which the plan applies, the relative probability and impact of the hazards, vulnerable critical areas, and population distribution. Develop a Hazard Profile. Develop analysis criteria, prioritize the risks, and profile the hazards. Identify the priorities, goals and objectives, maintenance section, training process, testing of plan and measurements of plan effectiveness.

Step Four—Marketing, Product Distribution and Assessment: Develop marketing materials, website product, product announcement letter, flyer, and the assessment and evaluation tool. Disseminate the product and assess end-user satisfaction.

TIMELINE: Starting date of October 2009 and completion by December 2011.

Activity	Timeline	Completion Date
Assess Current Situation	10/09 – 01/10	January 2010
Develop survey tool	12/09 –01/10	January 2010
Send survey and assess	01/10—05/10	May 2010
Follow up interviews with arborists, responders and utilities	05/10—10/10	October 2010
Emergency Operations Plan Template	09/10—03/11	March 2011
Develop website/marketing products	04/11-08/11	August 2011
CD’s produced	09/11	September 2011
Marketing Plan implemented	09/11 – 12/11	December 2011

PRODUCT: The products include (1) A downloadable “*Urban Forestry Emergency Operations Plan for Storm Response*” template available at the *Friends* website. (2) A limited number (100) of CD’s for any state or territory without access to the internet. (3) A **Final Report** to the USDA Forest Service/NUCFAC with a link to the product.

COLLABORATION: The *Friends of Hawaii’s Urban Forest* has created a team structure with *Arbor Global LLC*, an international arboricultural organizational, *NatureTalks* an urban forestry organization specializing in qualitative research, program evaluation, and publications. *Davey Resource Group* an urban forestry consulting group, and *Integrated Solutions Consulting, Inc.* a crisis management company. We feel this team composition has the best chance of success for completing the project.

NATIONAL DISTRIBUTION/TECHNOLOGY TRANSFER OF FINDINGS:

Every effort will be made to directly target communities at risk and organizations who find this product useful. The **marketing plan** is outlined in detail below and includes the target markets, objectives, strategies and measurement criteria.

MARKETING PLAN:

Target Markets: *Target One:* Local units of government and the U.S. Conference of Mayors.

Target Two: responding companies who participated in discussions. *Target Three:*

Arboricultural organizations such as SMA, NASF, ISA, NADF, and UAA. **Marketing**

Objectives: Introduce a storm response emergency operations planning tool for the urban

Three: Arboricultural organizations such as SMA, NASF, ISA, NADF, and UAA.

Marketing Objectives: Introduce a storm response emergency operations planning tool for the urban forestry industry utilizing emergency management principles and accepted planning tools, models and effective arboricultural principles.

Marketing/Communications Strategy: *Strategy One:* The product will be announced via a letter and marketing flyer to *targets one and two* in fall 2011, timed to coincide with the off season for storms such as hurricanes and prior to storms such as ice storms.

Strategy Two: Announcements and marketing information to *targets three* in late 2011.

Key words of electronic searches – urban forestry emergency operation plan, storm planning, urban forestry planning, risk assessment and management.

Marketing Measurements: Criteria include: Timeliness of product launch, tracking product usage, number of hits at the website, number of questions and emails about the product, number of responses to pre-evaluation product launch.

PROJECT EVALUATION: The goal is to develop metrics or measurements to assist the team and the end users gauge the effectiveness of the product. *Product metrics* will measure the effectiveness of development, timeliness, budget accuracy, development costs, and efficiency of time and resources. *End-user acceptance:* A pre-release version of the template will be assessed by targeted organizations for review prior to release nationally. Additional online assessments will be developed and posted at the website.

EXPERIENCE/PERSONNEL/ADEQUACY OF RESOURCES

Our project team has strong qualifications and the commitment needed to carry out this project. There are more than adequate resources to complete the project in terms of personnel, facilities, equipment, supplies, and time.

Friends of Hawaii's Urban Forest is a non profit organization based in Hawai'i with program targets of natural disaster mitigation, technical education and research, carbon off-set programs, community greening and energy conservation. It has completed a number of projects with the National Football League and Hawaiian Electric Company, Inc. Board members have completed many similar or greater size projects of this scope and approach. The primary project coordinator with the Friends is **Teresa Trueman-Madriaga**. She has worked in the urban forestry industry for 17 years, received eight urban forestry awards, and in 2007 returned to school at the University of Illinois at Chicago for a graduate certificate in *Emergency Management and Business Continuity*. Her focus has been on the urban forest and storms, debris management and emergency operations plans. She will coordinate the development, distribution and analyze of the project, and serve as one of the primary authors and project manager.

Arbor Global, Inc. is an international arboriculture firm. **Kevin K. Eckert** is the founder, president and managing director with over 20 years of active, hands-on program research, design, implementation, and management experience. He is an International Society of Arboriculture (ISA) Certified Arborist and ISA Certified Utility Specialist. Arbor Global will provide arboricultural services and links to arborists and utilities, conduct interviews of arborist and utility arborists in storm prone areas.

NatureTalks offer educational programs, site-specific curriculum, qualitative research, program evaluation, and publications. **Dr. Colleen Carroll**, founder of NatureTalks, has over 20 years of experience in urban forestry and environmental education, and is a past recipient of a NUCFAC grant. Dr. Carroll will assist with qualitative research, product development, interview and survey strategies.

Integrated Solutions Consulting Inc. is comprehensive crisis and consequence management organization. **John Rogan** has agreed to provide oversight and guidance of the emergency management strategies.

Davey Resource Group is the leader in urban forestry consulting services. They provide a full range of urban and utility forestry and natural resource consulting services. **Jack McCabe**, Regional Operations Manager, will serve in an advisory capacity.

BUDGET AND FUNDING of \$50,000 with a \$50,000 match.

Category	Explanation	Cost	Matching
Personnel: Primary	312 hours @ \$90 per hour. 167 billed and 144.5 matched.	\$15,000	\$13,000
	Fringe Benefits matched		\$3,300
Contractors: Arborist	70 hours @ \$120 per hour Matching 42 hours	\$8,400	\$5,000
Contractor: Survey/Interview Write Up	132 hour @ \$80 per hour Match- reduced billing rate value of \$40 per hour.	\$10,600	\$5,280
Contractual Match:	Value of time by at least 100 cooperators for 3 hours each @ \$60 per hour		\$17,720
Travel Costs:	Follow up interviews.	\$7,000	
Equipment/Supplies	Computer/paper/printer/copier supplies and match.	\$3,000	\$5,000
Other:	Product Template for the web	\$3,900	\$500
	Website updates	\$1,000	
	CD duplication and formatting	\$500	
	Marketing materials – 1,000 product announcement letters.	\$600	\$200
	TOTAL	\$50,000	\$50,000

Our project and team will develop new bonds and partnerships with disaster response agencies at federal, state and local levels, and develop a useful template for urban forestry as well as introducing acceptable disaster planning tools for the industry. By placing the Emergency Operations Plan template on the web we will provide access to this information to a wide range of organizations, and we see this plan as a catalyst for future projects.

Thank you for reviewing the proposal and the opportunity to present our project ideas.



ARBOR GLOBAL
Arboriculture & Vegetation Management Consulting

February 10, 2009

Ms. Teresa Trueman-Madriaga
Friends of Hawaii's Urban Forest
92-963 Hunekai Place
Kapolei, HI 96707

Dear Teresa,

I am pleased to partner with the Friends of Hawaii's Urban Forest for the proposed project *Urban Forestry Emergency Operations Plan Template for Storm Response*.

I see this as a positive contribution to the urban forestry industry and one that is needed to adequately prepare for and recover from storms.

For this project, in addition to spearheading the arborist tasks, Arbor Global will donate in-kind services, technical advice and contacts with a national network of arborists.

Best of luck with the proposal. Please contact me with any questions and to direct me how to proceed to support this project

Very truly yours,

A handwritten signature in cursive script that reads "Kevin K. Eckert".

Kevin K. Eckert
President and Managing Director

February 9, 2009

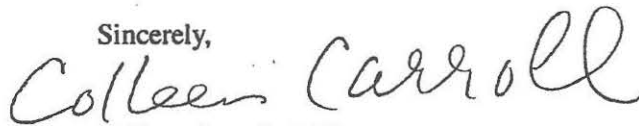
Ms. Teresa Trueman-Madriaga
Friends of Hawaii's Urban Forest
92-963 Hunekai Place
Kapolei, HI 96707

Dear Teresa,

I am very interested in working with you as a partner on the proposed project *Urban Forestry Emergency Operations Plan Template for Storm Response*. I see this as a positive contribution to the urban forestry industry and one that is needed in preparing for storms.

As a partner I will assist with qualitative and quantitative research, product development, interviews and survey strategies and provide in-kind services. I may also provide assistance with contacts that will be helpful to you in the course of the project. Best of luck with the project as proposed.

Sincerely,



Colleen Carroll, Ed.D.
Director, NatureTalks

DAVEY
RESOURCE GROUP



A Division of The Davey Tree Expert Company

February 10, 2009

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Kent, OH 44240-5193

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Toll Free 1-800-445-TREE

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Western United States

Regional Office

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Atascadero, CA 93422

Toll Free 1-800-966-2021

Fax: 805-461-8591

Regional Operations Manager

Jack McCabe

jack.mccabe@davey.com

Ms. Teresa Trueman-Madriaga
Friends of Hawaii's Urban Forest
92-963 Hunekai Place
Kapolei, HI 96707

Dear Teresa,

I am pleased to act in an advisory capacity for the proposed project *Urban Forestry Emergency Operations Plan Template for Storm Response*.

I see this as a positive contribution to the urban forestry industry and one that is needed for preparing for storms.

For this project I will act in an advisory capacity to the project team and contribute in-kind advice. I may also provide assistance with contacts that could be helpful to you in the course of the project.

Sincerely,

Jack McCabe
Regional Operations Manager
Western Region