

FINAL REPORT
Friends of Hawaii’s Urban Forest #09-DG-11052021-215
NUCFAC Grant
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Urban Forestry Emergency Operations Plan Template for Storm Response

State:	Hawai`i
Organization:	Friends of Hawaii’s Urban Forest
Grant Program:	Urban & Community Forestry
Grant Year:	Federal fiscal year 2009
Grant Number:	09-DG-11052021-215
Grant Beginning Date:	September 18, 2009
Grant Expiration Date:	December 31, 2012 (Revised)
Reporting period:	September 18, 2009 - December 31, 2012

PROGRAM STATUS/Accomplishments

This project was extended beyond the original date because of the unexpected high response to the survey and interviews that far surpassed our goals. The interviews were far more in-depth than originally considered and the guide needed to be reviewed by experts more extensively.

Presentations:

- ▲ Society of American Foresters Conference, Honolulu, November 2011
- ▲ WCISA Conference, Pacific Grove, CA, May 2012
- ▲ National Arbor Day Foundation Partnership Conference, November 2012

Methodology:

This project includes four phases which are described in this report:

- ▲ Phase one - survey
- ▲ Phase two - interviews
- ▲ Phase three - a meeting of experts
- ▲ Phase four - compilation of data

The process:

Phase 1: Survey

- ▲ Alan Yue assisted the team with the development of the survey. He brought years of experience in survey development and walked the team through a detailed process that included:
 - The survey process.
 - Matrix of tasks.

Urban forestry emergency managers need to be at the table when decisions are being made about the management, selection, planting and storm preparedness for trees in their community.

- Identification of our primary goals.
- Identification and expansion of the target audiences.
- Development of a survey scope document that coupled with interviews with 10 industry experts allowed the development of a comprehensive survey.

▲ **Survey Goals:** The survey was developed to gain an understanding of the essential practices, training and experiences of urban forestry storm responders. The survey data formed the basis for creating the guide and subsequent planning materials and helped the team answer the questions: “What are the features of an *Urban Forestry Emergency Operations Planning Guide* that would be of value to the industry; and how would the guide help the industry prepare for a storm”?

“The more you train and plan for disasters, the less you bleed in battle.”

Thomas Munn
City of Hudson, Ohio
City Arborist

▲ The survey was launched on March 14, 2011 to a receptive audience. Key contacts and organizations supported the project by emailing survey invitations to members and associates. Results were tracked through survey collectors. ISA, Davey Resource Group, WCISA, SMA, Arbor Global, Aloha Arborists, and others were successful in getting the word out.

▲ Questions were asked about preparedness, types of certifications, experiences in storm response, plans in place, training and drills, contracts and mutual aid agreements, incident command in the urban forest, safety protocols and communication strategies.

▲ The survey closed on April 14th and more than 550 surveys were initiated and 367 completed.

Phase 2: Interviews

Between May 1 and August 15, 2011 seventy interviews were completed. The responders came from a variety of industries including municipal, utility, and private organizations, and small and large cities.

The purposes of the interviews were to:

- ▲ Dig deeper into someone’s skills and expertise.
- ▲ Ask questions about their storm planning and training.
- ▲ Find out more about existence of inventories and how they were used.
- ▲ Determine if ICS was in place for urban forestry storm response.
- ▲ Ask for recommendations regarding storm response.
- ▲ Ask about what would be important inclusions for the urban forestry emergency operations planning toolkit for storm response.

If you manage or are responsible for trees in the urban forest you must have a seat at the ICS table during planning, exercise, and response; not just as a tertiary component.

Of particular concern was the growing number of municipalities and cities without forestry departments or certified arborists. Many communities do not have up-to-date inventories, contracts or mutual aid agreements, and urban forestry is not part of ICS.

The most interesting observation was the fate of small communities. As one contractor stated, “They are at the bottom of the barrel in terms of response”.

Conclusion: Selection of the Guide Components:

Without the interviews a complete picture of storm readiness would not have been understood. Discussions were essential to the creation of the storm guide.

Analyzing the comments and recommendations, identifying topics in terms of relative importance and the number of times topics were discussed or recommended provided the basis for the selection of the guide components.

The guide components include:

- ▲ Planning
- ▲ Safety
- ▲ Communications
- ▲ Contracts
- ▲ Hazards and vulnerabilities
- ▲ Incident Command System
- ▲ Inventory
- ▲ Mutual aid agreements
- ▲ Trainings and drills
- ▲ Vegetative debris

Key concepts from the interviews:

- ▲ Trees are the common resource among everyone and can impact your life.
- ▲ See the big picture.
- ▲ Work, plan and think safety.
- ▲ Know what to expect when a big storm hits.
- ▲ Focus on exactly what you need to have in place and from whom.
- ▲ The more you train and plan for disasters the less you bleed in battle.
- ▲ Utilize the expertise of the industry, and don't reinvent the wheel.
- ▲ Know how to inform the public about the storm in the urban forest.
- ▲ Understand your trees. Know the scope of what you are dealing with.
- ▲ Work more effectively and efficiently in changing unpredictable circumstances.

Our industry experts suggested the guide can be the basis and foundation for an Urban Forestry Storm Response BMP.

Phase 3: Team of experts review document at a May 3, 2012 meeting in Monterey, CA.

The meeting in Monterey allowed the Friends to take advantage of industry experts that attended the Western Chapter Conference earlier in the week. The goals for the expert meeting were to insure the urban forest storm response document was sufficient, scalable, and user friendly; gaps were filled in; and next steps were identified. Additionally there were topic areas, such as safety, that needed broader oversight from the committee.

Experts included Stephen Cieslewicz, CN Utility Consulting, CA; Dave Dockter, City of Palo Alto, CA; Kevin Eckert, Arbor Global and Smart Trees Pacific, HI; Bill Heriford, Davey Tree Surgery Company, CA; Sandy Macias, USDA Forest Service Pacific Southwest Region, CA; Gordon Mann, Mann Made Resources, CA; Mark Mead, City of Seattle, WA; Jack McCabe, Davey Resource Group, CA; Teresa Trueman-Madriaga, Smart Trees Pacific, HI. The workshop was facilitated by Alan Yue, CA; and Colleen Carroll, Scribe, HI.

The experts made specific recommendations for the guide which included:

1. Urban forestry emergency managers need to be at the table when decisions are being made about the management, selection, planting and storm preparedness for trees in their community.
2. An appropriate effective safety program must be developed to properly address safety issues during and immediately following a storm event.
3. Planning will help an organization mitigate, respond to, and recover from a natural disaster in a timely and cost effective manner.
4. A strong communications plan must be developed to communicate within and outside the department, company and/or municipality.
5. Contracts ensure adequate support with sufficient personnel, proper equipment, and adequate qualifications to address storm conditions.
6. Mutual Aid Agreements (MAAs) allow for the procurement of resources when needed. Urban forestry should be included in the mutual aid agreements that are made by the municipality. Additionally urban foresters need to be at the table when municipalities/cities negotiate MAAs.
7. If you manage or are responsible for trees in the urban forest you must have a seat at the ICS table during planning, exercise, and response; not just after the fact.
8. Have an inventory of trees in your community. Know what you have and for what you are responsible. To effectively manage and address tree related damage you have to know the tree's composition, location, and condition.
9. Training ensures competent personnel who can safely and cost effectively prepare for, reduce risk and damage, and respond to tree related problems resulting from natural disaster events.
10. Natural disasters can generate exceptionally large volumes of debris containing trees, toxic materials and other waste. All urban forestry managers must be prepared to cost effectively manage vegetative debris.
11. Have an understanding of predicted weather events and patterns and consider more recent extreme weather events and how they can impact your community. This will help organizations prepare for and respond to a storm event.

Phase 4: Final compilation of information, editing, review, and web documents.

In this last phase sections were sent to industry experts to review and revise, then the document was edited by three partners with document editing experience and then finalized and sent to the webmaster for the creation of the web document.

The marketing effort will be completed by the end of January or early February.

Next Steps:

- ▲ Develop an urban forestry storm response BMP for utilities and municipalities.
 - Initiate joint discussions between professional associations (for example, ISA, UAA and SMA) to facilitate mutual collaborations.
 - Work with a team of experts to develop the BMP.
 - Develop an urban forestry ICS.
- ▲ Communicate and promote the BMP.
- ▲ Implement the BMP.

Conclusion:

The results of this study illustrated a need for an urban forestry emergency operations planning guide for storm response. No organization or municipality has the luxury of working and responding to storms independently. Collaboration is the key.

UPDATED TIMELINE: Starting date of October 2009 and completion December 2012.

Activity	Timeline	Completion Date	When Completed
Assess Current Situation	10/09 - 09/10	September 2010	Done
Develop survey tool	7/10 - 1/11	January 2011	Done
Survey open	03/14/11– 4/14/11	April 2011	Done
Survey Interviews	5-1 - 8-25-11	August 2011	Done
Analyze survey data	5-1 - 1-1/12	January 2012	Done
Analyze Interview data	12-1-11 - 3-1-12	March 2012	Done
Draft materials for workshop and WCISA presentation	1/1 - 5/3	May 2012	Done
WCISA Conference Presentation	May 2, 2012	May 2012	Done
Review topics with team of experts	May 4, 2012	May 2012	Done
Complete topic write up Timeline adjusted	5/5 - 7/30/2012	August 2012	Done
Document handed off to editors	October 2012	December 2012	Done
Document completed	December 2012	December 2012	Done
Document handed off to web developer	November 2012	December 2012	Done
Proof web document	December 2012	December 2012	Nearly Complete
Marketing and CD production	12/29/2012 - 1/15/2012	January 2013	In production
<i>Marketing Plan implemented</i>	December		

PROBLEMS ENCOUNTERED: Not really a problem and hopefully a welcomed opportunity - the project has created a good deal of attention and the outcomes far surpassed the requirements of the grant. While the funding has been exhausted as of 12/31/2012 and all costs were covered, a few final details will be completed in January 2013.

CHANGES PLANNED AND OTHER COMMENTS:

None the project is at the end.

STATUS: The project was reprogrammed and given an additional \$20,000 for a total grant amount of \$70,000, and an additional year to complete the project. The final match is \$116,423.63 for a total project cost of \$186,423.63.

It was an honor and privilege to work on this project. The team hopes it will lead to the development of a future BMP.

Team:

- ▲ Teresa Trueman-Madriaga - team leader
- ▲ Kevin Eckert, advisor
- ▲ Jack McCabe, advisor
- ▲ Alan Yue - survey developer and co-interviewer
- ▲ Colleen Carroll - survey development, editing, and experts meeting
- ▲ Mary Steiner, editing
- ▲ Cindy Turner, web Development

If there are any questions please contact Teresa Trueman-Madriaga at 808-672-3383 or by email at ttm@hawaii.rr.com.

Cc: About this Project

Final Budget: Proposed and Actual Budget

Activity	Proposed	Actual	Plus or Minus
Personnel	24000	24958.31	958.31
Travel	7000	3731.69	-3268.31
Equipment	3000	400	-2600
Supplies	3000	760.55	-2239.45
Contractual	24000	29900.5	5900.5
Other	9000	10248.95	1248.95
	70000	70000.0	