

Scope of Work

Regional Networks: Collaboration Projects in Adaptation/Resilience

1. Introduction and General Information

This scope of work is between the Western Adaptation Alliance (WAA) and University of Arizona (UA) researchers Gregg Garfin and Sarah LeRoy.

Contact Information

WAA Contact:

Tom Perrigo, Chief Sustainability Officer, City of Las Vegas;
tperrigo@lasvegasnevada.gov; (702) 229-2127

UA Researchers:

Gregg Garfin, Deputy Director for Science Translation & Outreach, Institute of the Environment; gmgarfin@email.arizona.edu; (520) 626-4372 (**Project Lead Contact**)

Sarah LeRoy, Climate Communications Specialist, Institute of the Environment;
sary21@email.arizona.edu; (520) 260-4735

Andrea Brooks, Graphic Designer, Institute of the Environment
andreambrooks@email.arizona.edu; (520) 622-9018

Undergraduate Research Assistant (to be determined)

2. Project Information

The project will begin July 1, 2014 and end June 30, 2015.

Project Overview

Purpose:

The main goal of the project is to inform the communications of WAA members as they attempt to create a sense of urgency in their respective communities for building adaptive capacity and community resilience. By focusing on the principal climate risks faced by WAA cities, the UA researchers will create a regionally coherent narrative that underscores the importance of networked collaboration among the cities.

Summary:

The project is designed to assist regional network managers of the WAA in communicating with key constituencies in their communities to broaden support for action on climate adaptation, and to improve preparedness. Specifically, this involves (a) inventorying major extreme events of five key climate impacts—temperature extremes, stormwater/floods, drought, fire, and wind—for each WAA city and across the region, (b) recording specific actions taken following those events, (c) developing narratives for each class of impact, and (d) creating a toolkit for the highest priority impact—extreme heat events.

Tasks and Deliverables:

Task 1: Define Data Collection Parameters [100-130 hours]

Objective: Produce protocols for collecting impacts and interview data.

Sub-Tasks:

- a. We will convene discussions with WAA members to define terms (e.g., “major event”), and determine key informants for interviews. We will research existing data sources approaches used in natural hazards and climate extreme events studies. [50-60 hours]
- b. We will develop interview guides, in consultation with WAA members. [8-10 hours]
- c. We will conduct interviews with WAA members and key informants to identify additional data and information sources, and to identify key thresholds of concern. [50-60 hours]

Deliverable 1: Interview Guide. A guide for interviewing key informants on their knowledge of climate extremes, including: when they occurred, where they occurred, and how extreme.

Task 2: Develop Inventory of Extreme Weather and Climate Events [575-635 hours]



Objective: Identify and catalogue iconic or major extreme events, in 5 impact categories (drought, fire, flood, temperature extreme, wind), for each of 13 communities. Document economic impacts, risk reduction activities, and efficacy of activities.

Sub-Tasks:

- a. Using data sources identified in Task 1, we will develop a database of extreme climate-related events for the 5 impact categories, associated with each of 13 communities. In addition to WAA sources, we expect to use information from the National Weather Service, National Climatic Data Center, National Integrated Drought Information System, Federal Emergency Management Agency, and University of Colorado Natural Hazards Center.
- b. We will gather impact information (as available) associated to each event, including: economic costs, damage reports, response actions and procedures, and lessons learned.
- c. We will consult with WAA members, in order to gain consensus on the best format for the inventory (e.g., spreadsheet, database program, word processing document, etc.).
- d. We anticipate spending 45-50 hours for research and data gathering related to each of the communities.

Deliverable 2: Community Extreme Event History Summaries. An inventory of major natural hazard events that have occurred in 13 WAA cities since 1960, with a focus on recent years, an emphasis on trends and iconic impacts, and a catalogue of associated actions.

Task 3: Regional Impacts Narrative Kits [375-435 hours]

Objective: For each of the five impacts categories, develop integrated products, including narratives and ancillary materials, such as PowerPoint slides, infographics, and print-ready information sheets.

Sub-Tasks:

- a. We will interview WAA members to gain understanding and consensus on desired communication media and methods to be used in the Narrative Kits. [15-25 hours]
- b. We will interview members of the regional network and key stakeholders, to garner lessons on effective approaches for engaging diverse audiences on the topic of climate preparedness. We will document these approaches. [15-25 hours]
- c. We will review climate communications literature, in order to garner lessons on effective approaches for communicating information related to climate variability and change and their impacts on U.S. communities. We will garner information on effective approaches to communicate “can do” lessons, which inspire community action and support. We will consult with key colleagues in the field of climate communication. We will briefly summarize and synthesize these

approaches and lessons. Among the sources we will consult: Columbia University Center for Research on Environmental Decisions, the Climate Literacy and Energy Awareness Network, Yale University Center for Climate Change Communication, and the George Mason University Center for Climate Change Communication. [35-45 hours]

- d. We will develop the narrative kits, using the information from the inventory described in Task 2. The kits will include narratives and materials that will be reviewed by WAA members. We anticipate that each kit will require *40 hours*.
- e. Pending the availability of funding, we will work with a graphic designer to develop easy-to-follow information graphics, which connect the dots between climatic causes, impacts, and the value of proactive measures to reduce vulnerabilities to impacts. We anticipate that production of infographics will require *24 hours* per kit.

Deliverable 3: Five Regional Impacts Narrative Kits. Five kits, one for each of the 5 impact categories (drought, fire, flood, temperature extreme, wind). Each kit will include communication products about local and regional climate variability and change, which will enable the easy production of talking points.

Task 4: Extreme Heat Promising Practices Toolkit [130-200 hours]

Objective: Identify and catalogue practices, partnering opportunities, and funding resources for improving preparedness to extreme temperature events in communities within the Intermountain West.

Sub-Tasks:

- a. We will conduct a literature review on practices, planning tools, and templates related to preparedness and community engagement on extreme temperature events and heat waves. Literature references, and materials available in electronic format, will be cataloged and made available to WAA members. We will also research partnering opportunities, in this sub-task. [50-70 hours]
- b. We will conduct telephone interviews with key informants, in order to garner first-hand accounts of promising practices and pointers to key references, contacts, and related materials. We will also ask key informants about partnering opportunities, in this sub-task. [10-20 hours]
- c. We will review and synthesize the information garnered in sub-tasks (a) and (b), and write-up a narrative related to promising practices for local governments and their citizens to deal with extreme heat risks. In consultation with WAA project partners, we will format documents and any ancillary materials (e.g., Powerpoint) in a manner that is useful to WAA members. [70-110 hours]

Deliverable 4: Extreme Heat Toolkit. Toolkit of promising practices for extreme temperature, focusing on: adaptive strategies and highlighting best practices, planning approaches, partnering opportunities, and available resources for local governments.

Task 5: Dissemination and Evaluation [50-75 hours]

Objective: Disseminate information to WAA members and associates. Provide a brief written summary of feedback on the process and products.

Sub-Tasks:

- a. We will disseminate the project deliverables through electronic means. Database and information files will be distributed through a Dropbox or a similar shared data portal. Project results will be disseminated through teleconferences and webinars. We plan to convene 2-3 webinars with WAA members and selected associates. [40-50 hours]
- b. We will garner feedback from project participants and associates, through a teleconference-based focus group. We will design and vet focus group questions with WAA members. Following the focus group, we will analyze the focus group responses, and produce a brief report, highlighting key comments and recommendations. [15-25 hours]

Deliverable 5: Dissemination and Evaluation. Brief report documenting WAA member comments on the process, its applicability to other USDN communities, and on the products.

Items Needed from WAA Members

1. List of WAA members, key informants, including contact information, to be interviewed for Deliverable 1.
2. List of WAA members, associates, and outside stakeholders, including contact information, to be interviewed for Deliverable 3.
3. Background information about WAA cities, to provide context for the inventory and analysis.
4. Support for identifying, and in some cases, gathering relevant data and information.
5. Support and review of preferred messaging practices, written and graphical products.
6. Desired timeline for progress updates.

**Western Adaptation Alliance | Urban Sustainability Directors Network
Regional Networks: Collaboration Projects in Adaptation/Resilience**

Project Duration/Timeline

The project will begin July 1, 2014 and end June 30, 2015. Gray boxes (below) indicate half-month commitments; thus, April-June indicates a 2-month period within the span of these three months.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1: Define Data Collection Parameters	■											
Deliverable 1: Interview Guide	■											
Task 2: Extreme event/intervention data collection		■	■	■	■	■	■					
Deliverable 2: City Extreme Event History Summaries (13)						■						
Task 3: Development of the five "big impacts" narrative kits							■	■	■	■		
Deliverable 3: five "big impact" narrative kits											■	
Task 4: Development of the Extreme Heat Tool Kit										■	■	■
Deliverable 4: Extreme Heat Tool Kit												■
Task 5: Dissemination of results, project close-out, evaluation												■
Deliverable 5: Evaluation Report												■

3. Project Cost

	Annual Rate	Hours/FT E	Salary Requested
Gregg Garfin	88750	48	3,067
Sarah LeRoy	38000	0.5	19,000
Andrea Brooks	48000	80	1,839
Undergraduate student	9/hr	240	2,160
Total Salary			26,066
ERE/Benefits*			7,236
Total Salary and Other Direct Costs			33,302
IDC @20%**			6,660
Total Costs			39,962

*The Univ. of Arizona benefits rate for Gregg and Sarah is 28.6%.
The rate for Andrea is 47.8%.
Undergrad student is 2.1%

**Indirect Costs will be charged at the 20% rate stipulated by the USDN.

Appendix: Estimate of Work Hours

Task 1: Data collection protocol and interview guide	Hours	Months (based on Sarah's time)	
Research data sources	72	Sarah & student	
Develop interview guide	8	Sarah	
Conduct preliminary interviews: data sources, climate impacts	40	Sarah	
Supervision	8	Gregg	
SUBTOTAL	128	1	
Task 2: City extreme weather/climate event inventory			
Hours	Hours		
13 cities @ 30 hr/city (20 weeks of work = 5 months)	390	Sarah	
Data collection assistance	200	Student	
Supervision (<i>Partially Leveraged</i>)	28	Gregg	
SUBTOTAL	610	5	
Task 3: Regional Impacts Narrative Kits			
Hours	Hours		
Interview WAA members: communications	20	Sarah	
Interview regional network members and stakeholders: engaging audiences	20	Sarah	
Climate communications literature review and synthesis	40	Sarah	
5 kits @ 40 hr/kit	200	Sarah	
Graphics: 5 kits @ 24 hr/kit (<i>40 hours of this time is leveraged</i>)	120	Andrea	
Supervision	32	Gregg	
SUBTOTAL	432	3.5	
Task 4: Extreme Heat Promising Practices Toolkit			
Hours	Hours		
Research: extreme heat practices	60	Sarah	
Interviews	20	Sarah	
Review of templates, tools and approaches	40	Sarah	
Write-up and formatting	40	Sarah	
Supervision (<i>Leveraged</i>)	16	Gregg	
SUBTOTAL	176	2	
Task 5: Dissemination and evaluation			
Hours	Hours		
Teleconferences and webinars (including prep time)	20	Sarah	
Evaluation: focus group, analysis, write-up	20	Sarah	
Evaluation: focus group design, analysis, write-up (<i>Leveraged</i>)	14	Gregg	
Supervision (<i>Leveraged</i>)	6	Gregg	
SUBTOTAL	60	0.5	
TOTAL	1406	12	