Environment and Natural Resources Trust Fund
2010 Request for Proposals (RFP)

LCCMR ID: 169-F

Project Title:

Climate Change in Minnesota: A Television Documentary Series

LCCMR 2010 Funding Priority:

F. Environmental Education

Total Project Budget: $ $506,671

Proposed Project Time Period for the Funding Requested: 2 years, 2010 - 2012

Other Non-State Funds: $ $0

Summary:

Statewide public television series with Website to educate Minnesotans about climate change and strategies to protect and enhance Minnesotas environment and natural resources in the face of this global threat.

Name: Kent Cavender-Bares

Sponsoring Organization: U of MN

Address: Institute on the Environment, 1954 Buford Ave, 325 VoTech Bldg
St. Paul MN 55108

Telephone Number: (612) 624-6182

Email: bares@umn.edu

Fax: (612) 435-4995

Web Address: http://environment.umn.edu

Location:

Region: Statewide

County Name: Statewide

City / Township:

_____ Knowledge Base _____ Broad App. _____ Innovation

_____ Leverage _____ Outcomes

_____ Partnerships _____ Urgency _____ TOTAL

MAIN PROPOSAL

PROJECT TITLE: Climate Change in Minnesota: A Television Documentary Series

I. PROJECT STATEMENT

What is the Project's goal? To increase Minnesotans' understanding of the expected impacts of climate change across the state and to highlight response strategies that have the potential to protect and enhance Minnesota's environment, natural resources, and related economy in a changing climate.

How will this goal be achieved? We will develop high-definition television programming and an associated Web site based on cutting-edge science that will be readily accessible to the general public. Using the popular communication skills of meteorologist Paul Douglas as narrator we will demonstrate and explain local and personal impacts of global climate change throughout Minnesota. We will also describe proposed strategies to slow the advance of climate change or help Minnesotans adapt to changes that prove inevitable. Through four 30-minute video productions that will be produced and broadcast multiple times statewide on Twin Cities Pubic Television (TPT) and other PBS stations, Minnesotans will better understand the context of climate change as it pertains directly to our state, and the impact climate change is having and will have on Minnesota's plants and animals, as well as on businesses, individuals, tourism, quality of life, etc. (see attached Figure). DVDs, advertised on-screen and via Web site, will be distributed at no cost to classroom teachers, civic groups, nonprofits, state agencies, and others for teaching or discussion purposes (experience shows that segments 30-min or less are most valuable for such discussions). The programs will be delivered directly to schools throughout Minnesota via the Science Museum's in-school and out-of-school programs.

This television and Web content will be produced through a partnership between the U of M's Institute on the Environment (Institute) and TPT. Our partnership will take advantage of a special new collaboration between the Institute and Climate Central, a national consortium of scientists and media specialists delivering factual information about climate change to the public and policymakers. The Project Manager and research team at the Institute (post-doc and grad student) will be responsible for shaping the content in all video productions, which will require both understanding the latest expert information as well as translating this complex material into a form understandable by general audiences. This partnership will bring TPT's PBS-level video resources together with the latest insights of regional, national, and international experts to tell stories specifically relevant to Minnesota audiences. Our team will blend scientific rigor with communications excellence, including the highly acclaimed graphics from WeatherNation, throughout the production process, ultimately providing a model for informing debate locally about an issue that has both local and global implications.

Why is the Project needed? Climate change is a force that will have an impact on Minnesota for centuries to come. There is a large disconnect between the low priority Americans place on addressing the issue of climate change and the sense of urgency with which scientists view the threat of climate change. A necessary step in closing this gap is increasing the public's understanding of this complex issue and its impacts on a local level. There is an added degree of urgency for this work because of recent scientific observations that point toward changes greater than "worst case scenarios" imagined just a few years ago.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: *TV series broadcast on PBS stations across MN* Budget: $432,600

We will develop the environmental science and technology content using our research team at the Institute and together with TPT we will co-produce four 30-minute broadcast television programs that will explore climate change using Minnesota's distinctive seasons as a framework. These will have year-round appeal and will have a supporting Web site (see Result

2). Broadcasts will be seen on TPT and via a new network of PBS stations in Minnesota. Each program's broadcast will be repeated statewide five times each year over the following 5 years, and the programs will be available online via TPT's MN Video Vault.

We will create at least two 60-second videos describing a "nugget" of information related to each 30-minute program. These "climate minutes" with Paul Douglas will serve both to promote the 30-min broadcasts and as informational interstitials shown between programs on all of TPT's channels, including the statewide tptMN.

Deliverable	Completion Date*
1. 30-min TV program & two 60-sec "climate minutes" for first program.	*3/1/2011*
2. Same for second program in the series.	*6/30/2011*
3. Same for third program in the series.	*10/31/2011*
4. Same for fourth program in the series.	*2/29/2012*

**Note that premier air dates will be governed by TPT's overall programming schedule.*

Result 2: *Web site and related video production* **Budget: $74,071**

A unique project Web site will be created, hosted by the Institute, and linked directly from both the Institute's and TPT's Web sites. The site will feature three short videos (about 5 min) extracted from each 30-minute program, as well as the 60-second videos described above. Each video will have an annotated transcript with detailed sources supporting key science points made in the videos. Videos and transcripts will also be posted on Climate Central's Web site (see examples on http://www.climatecentral.org), which draws a national audience.

Deliverable	Completion Date
1. Web site, with videos & transcripts from the first program in the series.	*3/1/2011*
2. Videos & transcripts added from second program in the series.	*6/30/2011*
3. Videos & transcripts added from third program in the series.	*10/31/2011*
4. Videos & transcripts added from fourth program in the series.	*2/29/2012*

III. PROJECT STRATEGY

A. Project Team/Partners

Institute on the Environment: Project Manager, post-doc, and graduate student research team; access to Minnesota experts in various fields, and administrative support. ***Climate Central:*** Research scientists and media specialists providing expertise in communicating scientific issues nationally to a general audience, connecting to a broad network of experts. ***Twin Cities Public Television:*** responsible for all television program and video production and statewide broadcast distribution; Tom Trow, Executive in Charge; Dan Bergin, regional Emmy-winning Producer, and a 4-person production team. ***WeatherNation:*** Paul Douglas will provide his extraordinary skills as a communicator for on-screen narration and commentary. He will also make available his highly acclaimed and innovative weather mapping technology that will help general audiences immediately grasp the science behind the stories.

B. Timeline Requirements

The first production will begin in the summer of 2010, followed by the second production in the fall of 2010. Both will be available for viewing by early winter of 2011, although their broadcast times may be sequenced later. The third and fourth productions will be created in 2011; all productions will be completed by early 2012.

C. Long-Term Strategy

The Institute will maintain the project Web site. Climate Central's Web site will also host the videos and will be a long-term and ongoing resource for information related to climate change. The full programs will be maintained for free access on TPT's MN Video Vault, and they will continue to remain in the broadcast rotation for as long as they are viable, which should be for many years.

(LCCMR 2010) Project Budget

IV. TOTAL PROJECT REQUEST BUDGET (2 years)

BUDGET ITEM	AMOUNT
Personnel:	
Post-Doctoral Research Associate (75% FTE over 24 months; 84% salary, 16%	$ 77,410
Graduate Student Research Assistant (25% FTE over 24 months; 45% salary, 54% benefits)	$ 29,576
Contracts:	
Twin Cities Public Television (full production responsibilities for TV programs and	$ 297,385
Salary & Fringe, all over 24 months (Producer @ 50% FTE; Assist. Producer @ 25% FTE; Exec. Producer @ 5% FTE; Production Mgr. @ 10% FTE); Consultant, phone, shipping, & copyright fees [$184,075]	
Field Production costs [$44,025]; Post Production costs, including video and audio editing and program design work [$65,899]; Finishing costs, including close captioning [$3,386]	
Climate Central (salary reimbursement for involvement of K. Cavender-Bares, [35% FTE over 24 months; 74% salary; 26% benefits])	$ 89,300
Project Website Development	$ 5,000
Equipment/Tools/Supplies:	
Make total of 2000 DVDs (500 per show), and mail out upon request by USPS	$ 8,000
Travel:	none
Additional Budget Items:	none
TOTAL PROJECT BUDGET REQUEST TO LCCMR	$ 506,671

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State $ Being Applied to Project During Project Period:	none	
Other State $ Being Applied to Project During Project Period:	none	
In-kind Services During Project Period:		
Twin Cities Public Television (TPT will assume responsibility for costs associated with oversight of the production process, preparing each program for broadcast, distributing each to a network of 5 PBS stations for simulcast presentations, promotion by way of online and print (newspaper, magazine, TV Guide) grids, scheduling and airing the programs at least 5 times each within a year of completion, on-air voice overs promoting the broadcasts, streaming video on the	$ 80,000	*secured*
Remaining $ from Current Trust Fund Appropriation (if applicable):	none	
Funding History:		
U of M (Salary and Fringe for 3 months for Post-Doc and Grad Student effort before start of project in July 2010). Funds will come from the Institute's Discovery Grant funds available to Climate Central for mutually beneficial projects like this one.	$ 26,788	
Climate Central (Salary and Fringe of Project Manager for 3 months of effort before start of project in July 2010). Funds will come from start-up grants that are intended to expire as staff secure salary through project-based funding.	$ 41,215	

(LCCMR 2010) Figure: *Sample topics and questions for the broadcast PBS programs*

What predicted changes in Minnesota should cause us to care about climate change?				
	We will spotlight key impacts for each season in Minnesota that will help draw viewers into the programs. For example, will there be more severe heat waves in summer? Or, will milder winters mean that insect pests are able to survive better and have more impact in summer?			
But how do we know that there will be change?				
	How do we know that climate change is real? *This will be a blend of the latest science with observations made by experts from around the state.*			
How responsible are we in Minnesota?				
	How do contributing causes of climate change, such as emissions of carbon dioxide, vary across the seasons in Minnesota? And how important are Minnesota's contributions nationally and globally?			
What specific impacts should we expect in Minnesota, season-by-season?				
	Spring	***Summer***	***Fall***	***Winter***
	Will the fishing season begin earlier because of an earlier spring?	Will we keep catching the same fish in our lakes? Should we expect better or worse fishing?	Will changes in deer habitat affect hunters' success?	Will the ice be thick enough for a good ice fishing season?
	How will shifting plant hardiness zones impact our gardening?	Are we going to have new pests to deal with in our gardens and on our croplands?	Will we be able to enjoy biking for more weeks into the Fall?	Are we going to have fewer days of good outdoor skating?
	Should we expect more or less flooding?	Will mosquitoes be a bigger problem? What about ticks?	Will there still be striking fall colors to drive tourism?	What's likely to happen to the snowmobile industry?
	Do we know if there will be more tornados?	Will we have more droughts? Will farmers need to irrigate more?	Will there be more wildfires?	Should we expect more severe storms?
	Will we be planting different crops in MN in a few years?	Will crops grow better with more carbon dioxide in the air? What about weeds?	Should we expect larger harvests?	How will milder winters affect crop pests?
Can we really make a difference here in Minnesota?				
	What changes in my lifestyle can make a difference? For the driving I do, does the type of car I drive matter? How should I prioritize improvements around my home? What are we doing here in Minnesota to develop new energy sources?			
	In terms of wind energy—do seasonal variations in wind line up with seasonal variations in energy demand? Are there going to be ways to store wind energy for calm days? Should we consider solar electric panels for our houses? What about solar hot water panels?			
	In terms of biofuels—where are the sources of biomass across the state? How much of Minnesota's future energy needs can biofuels meet? Will they help slow climate change? What is clean coal, is it feasible, and can we expect to rely on it in Minnesota? Where does our heating energy come from, and can the associated carbon emissions be reduced?			

(LCCMR 2010) Project Manager Qualifications and Organization Description

Project Manager: Kent Cavender-Bares, Ph.D.
Visiting Scientist, Institute on the Environment, University of Minnesota
1954 Buford Avenue, 325 VoTech Building, St. Paul, MN 55108
612.624.6182; bares@umn.edu

Responsibilities

Will coordinate all aspects of the proposed project. Primary responsibility will be to guide the development of content for the various video productions. Will supervise post-doc and graduate student researchers, both of whom will conduct short-term research projects to build content. Will be responsible for seeking advice on the subject matter, both internally from Institute and Climate Central experts as well as from regional, national, and international experts. Will ultimately be responsible for maintaining a high quality of scientific excellence throughout video development. Will coordinate all activities with Twin Cities Public Television, building off expertise working with Climate Central, a hybrid science-media organization.

Education

Cornell University	Agricultural & Biological Engineering	B.S. (1989)
Stanford University	Environmental Engineering	M.S. (1990)
Massachusetts Institute of Technology	Civil and Environmental Engineering	Ph.D. (1999)

Professional Experience

(7/08 – Present) Research Scientist, Climate Central, Princeton, NJ.

One of several lead scientists for ongoing production and detailed scientific annotation of 10-minute programs produced for PBS's *The News Hour with Jim Lehrer,* from program conception through final fact-checking and documentation. Served as key science contact for development of short videos for Web distribution. Point person for developing regional corporate office in the Twin Cities.

(9/03 – Present) Research Associate, Department of Ecology, Evolution and Behavior, University of Minnesota, St. Paul, MN.

(1/08 – 6/08) Research Associate, Foundation for Environmental Research, St. Paul, MN.

(3/00 – 12/07) Senior Research Associate, The H. John Heinz III Center for Science, Economics and the Environment, Washington, D.C.

Served as the deputy project manager over the several year period leading up to the completion of the 2008 edition of the State of the Nation's Ecosystems report series (www.heinzctr.org/ecosystems; 352 page report published by Island Press). Key staff member on the 2002 edition (288 page report published by Cambridge Press). Worked with over 100 collaborators, facilitating numerous meetings, and distilling complex science for a general audience. Led a parallel in-depth effort to design a number of indicators describing patterns of how landscapes have been transformed by human activity (107 page report). Author on related articles published in the *Journal of Environmental Quality*, *Water Resources Update*, *Environment*, and *Risk Policy Report*.

Organization Description

The University of Minnesota is the state's main research and graduate teaching institution. The U of M's ***Institute on the Environment's*** mission is to discover new solutions to Earth's most pressing environmental problems through cutting-edge research, world-class leadership development and innovative partnerships. ***Twin Cities Public Television*** mission is to harness the power of television and other media for the public good. ***Climate Central's*** mission is to provide factual information to help the public and policymakers make sound choices about climate change.