

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

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**LCCMR ID: 176-F**

**Project Title:**

Digital Photography Bridge to Nature, Teacher Training

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**LCCMR 2010 Funding Priority:**

F. Environmental Education

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**Total Project Budget: \$** \$230,000

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

**Other Non-State Funds: \$** \$40,000

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**Summary:**

This new interdisciplinary curriculum will use digital photography to foster an interest in nature by Minnesota youth by providing 80 workshops for 1000 school teachers over two years.

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**Location:**

**Region:** Statewide

**County Name:** Statewide

**City / Township:**

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_____ Knowledge Base	_____ Broad App.	_____ Innovation
_____ Leverage	_____ Outcomes	
_____ Partnerships	_____ Urgency	_____ TOTAL

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## **MAIN PROPOSAL: Digital Photography Bridge to Nature, Teacher Training**

### **I. PROJECT STATEMENT**

The Digital Photography Bridge to Nature will carry out a two-year statewide program consisting of 80 day-long digital nature photography training workshops for 1,000 upper elementary and middle school teachers, state park and nature center naturalists.

- This project responds to educational needs for outdoor-based curricula identified by the Outdoor Education Working Group in their report delivered to the Minnesota Legislature in January 2009.
- The goal of this project is to create a strong, enthusiastic, and lifelong interest in wildlife and Minnesota's outdoors among Minnesota youth through the youthful appeal of digital photography as a technological bridge to the enjoyment of nature.
- The Digital Photography Bridge to Nature project in Minnesota would provide a pioneering prototype for nature education that Watchable Wildlife Inc. would subsequently implement on a state-by-state basis across the nation.
- Two coordinators would train and supervise ten workshop trainers who have a background in nature, digital nature photography, and teaching.
- Each workshop trainer would carry out eight teacher workshops to teach how to use digital photography in the outdoors to enhance traditional classroom curricula.
- Teacher workshops would offer continuing education units (CEUs).
- Teachers would return to their classroom, state park, or nature center and carry out digital nature safari photo sessions for their classes.
- These digital photo safari activities would be designed to meet state academic standards as they relate to science, art, language arts, and math.
- Photo safari sessions would involve the use of volunteer DNR and PCA staff and other project partners who would serve as mentors for students on their outdoor photo safaris. This would involve about one mentor per four or five students.
- Teachers would be provided with Watchable Wildlife curriculum guides, info on the DNR web site, and free loan of learning trunks with cameras and field guides.

The goal of this project is to reach at least 1,000 teachers and naturalists with nature photography outdoor workshops over a two-year period. It is estimated that they will introduce 30,000 of their students in grades 5 through 9 to the opportunities for discovering Minnesota's outdoors through the medium of digital photography and incorporate their discoveries and images into traditional classroom curricula. Thirty learning trunks with cameras and field guides will be available on loan to be checked out from ten teacher facilitators who will be presenting the 80 teacher workshops.

### **II. DESCRIPTION OF PROJECT RESULTS**

**Result 1. Statewide training for upper elementary and middle school teachers will be provided at 80 nature photography workshops in use of digital photography to introduce Minnesota youth to the outdoors and concurrently enhance traditional classroom curricula like science, art, language arts, and math. Budget: \$230,000.**

Teacher/naturalist training workshops will teach basic digital photography skills and how to use digital photography to stimulate upper elementary and middle school age students (grades 5-9) to discover Minnesota's outdoors while helping meet state academic standards in four disciplines. Workshops will be carried out to promote a better lifetime

connection between young people and the outdoors through wildlife and nature photography. These workshops will be conducted throughout Minnesota including inner city schools, state parks, and environmental learning centers. Outdoor digital photography sessions will help to meet state academic standards and provide a unique link between Minnesota's outdoors and science, math, language arts, and art curricula. This project will offer continuing education credits for teachers who participate in the workshops. This activity will include an evaluation component for participants.

**Deliverables:**

1. Thirty nature photography learning trunks with 12 cameras each will be assembled and assigned to ten instructors who will use these trunks in their workshops. They will also be responsible for maintaining, scheduling and loaning those trunks to teachers when teachers carry out workshops for their students. It is anticipated that each trunk will get used in at least 30 classrooms per year. Ownership of the trunks will remain with the Minnesota Department of Natural Resources. Completion date: October 31, 2010.

2. Thirty one-day Digital Photography Bridge to Nature workshops will be held for approximately 250 teachers and teacher/naturalists in the first year of the biennium. The workshops will use the new Digital Bridge to Nature curriculum guide by Watchable Wildlife Inc. and will be held statewide. The workshops will teach teachers how to meet traditional academic standards by creative use of outdoor "photo safaris." These may include nearby visits to nature centers, state parks, school forests, wildlife management areas or other public lands where participants can experience digital nature photography with the instructors and volunteers including natural resource managers, biologists, and wildlife conservationists. Some workshops could be affiliated with birding festivals. The learning trunks will be available free on loan from the ten naturalist/instructors. Completion date: June 30, 2011.

3. Fifty one-day Digital Bridge to Nature photography workshops will be held for approximately 750 teachers and teacher/naturalists in the second year of the biennium. Completion date: June 30, 2012.

**III. PROJECT STRATEGY**

**A. Project Partners:** The DNR Nongame Wildlife Program (Carrol Henderson), DNR State Parks (Bryce Anderson), DNR Division of Enforcement (Jim Konrad), DNR Master Naturalist Program (Dawn Flinn), and Pollution Control Agency (Jeff Lederman) would provide volunteer staff to assist teachers for their workshops. National Camera Exchange (Mike LaMotte) would provide guidance on camera equipment and technology. James Mallman of Watchable Wildlife Inc. would provide guidance on implementation of this project and use of their "Digital Bridge to Nature" curriculum guide. (Pending proposed partners-Mille Lacs Band and MN Nature Photography Club)

**B. Timeline:** Hire two project coordinators and ten teacher/naturalists, and purchase and assemble the photography learning trunks by October 1, 2011. The teacher workshops would begin thereafter through June 30, 2012.

**C. Long-term Strategy:** This effort is intended to carry forward as a six-year project to fully utilize the photo gear purchased and volunteer network created in the first biennium.

## Project Budget

### IV. TOTAL PROJECT REQUEST BUDGET (2 years)

<b>BUDGET ITEM</b>	<b>AMOUNT</b>
<b>Personnel:</b>	XXX
Contracts: Two Digital Bridge to Nature Program coordinators @ \$20,000/year for two years (one for northern MN; one for southern MN).	\$ 80,000
Contracts: Ten teacher/photographer/naturalists @ \$4,000 per year for two years. They will each be responsible for teaching at least eight teacher workshops over two years, managing and scheduling use of three Digital Bridge learning trunks for teachers, and evaluation of teacher followup and use.	80,000
Supplies: Digital imaging software and related supplies for use at teacher workshops.	5,000
Supplies: 390 Digital cameras, at least 8 mp; 3X+ zoom; in-camera rechargeable batteries; battery chargers, and accompanying SD memory cards for each camera. 390 cameras & memory cards @ \$110 =	43,000
Supplies: 360 field guides (60 birds, 60 mammals, 60 reptiles and amphibians, 60 trees, 60 wildflowers, 60 butterflies) to include in learning trunks. 30 trunks x 12 guides per trunk @ \$11 =	4,000
Supplies: 30 learning trunks to transport camera equipment and field guides @ \$30 each	1,000
Supplies: 1200 teacher Digital Bridge to Nature curriculum guides for all teachers who complete the workshop training @ \$10 each	12,000
Travel: Two-year in-state travel and lodging costs for statewide program coordinators to attend some workshops. Report on and evaluate the workshops, coordinators, and create reporting system for followup teacher use in classrooms.	\$ 5,000
<b>TOTAL PROJECT BUDGET REQUEST TO LCCMR</b>	<b>\$ 230,000</b>

### V. OTHER FUNDS

<b>SOURCE OF FUNDS</b>	<b>AMOUNT</b>	<b>Status</b>
<b>Other Non-State \$ Being Applied to Project During Project Period:</b> In-kind match provided by National Camera Exchange for equipment purchase at their cost.	\$ 40,000	Pending
<b>Other State \$ Being Applied to Project During Project Period:</b> Nongame Wildlife Program staff time and expenses for participation in workshops; program planning, and project coordination	\$ 30,000	Pending
<b>In-kind Services During Project Period:</b> Workshop volunteer contribution: 3,000 volunteers x 3 hrs/volunteer x \$19.46/hr =	\$175,000	Pending
<b>In-kind Services During Project Period:</b> Staff time donated by Watchable Wildlife, Inc.	\$8,000	Pending
<b>Remaining \$ from Current Trust Fund Appropriation (if applicable):</b>	N/A	
<b>Funding History:</b> None		

## **Carrol L. Henderson**

### **Bio-- Digital Photography Bridge to Nature**

Carrol L. Henderson has been supervisor of the Minnesota Department of Natural Resources= Nongame Wildlife Program since 1977. He has a B.S. in zoology from Iowa State University (1968), and a Master of Forest Resources degree in ecology from the University of Georgia (1970).

Henderson has a wildlife biologist and writer. He is also is a self-taught nature photographer whose interest in photography began in 1970 when his father gave him an old Argus rangefinder 35-mm camera. Since then, he has incorporated his interest in photography into his wildlife conservation work in the DNR Nongame Wildlife Program. Over one thousand of his photos have been published in books and magazines. Most of the images in his books have featured his own photographs. Henderson is author of the DNR books "Landscaping for Wildlife," "Wild About Birds: the DNR Bird Feeding Guide," and "Woodworking for Wildlife" and is co-author of "Lakescaping for Wildlife and Water Quality" and the "Traveler's Guide to Wildlife in Minnesota." He was the primary photographer for "Galapagos Islands: Wonders of the World" and has written three other books, including the "Field Guide to the Wildlife of Costa Rica," "Oology and Ralph's Talking Eggs," and "Birds in Flight: the Art and Science of How Birds Fly."

Carrol Henderson has accumulated a collection of over 80,000 photos of nature and wildlife of Latin America, Africa, and New Zealand as well as photos of North American wildlife. His photos have won seven national awards from Wild Bird magazine and his images have appeared in Audubon, Birder's World, New York Times, and the World Book Encyclopedia. He has used his photography skills and images in developing tourism, outdoor recreation, and promoting 4-H nature photography projects as a way of increasing the number of youths who develop a lifetime interest in Minnesota's outdoors.

He was a major contributor to the production of the CD-Rom entitled "Restore Your Shore." He was the original project manager for creation of Lakescaping for Wildlife and Water Quality buffer zone demonstration sites through a grant from the LCMR in 2000 and has managed that project and subsequent LCCMR grants that have resulted in the selection, planning, and installation of 55 shoreland buffer zones during the past 8 years. He has planned, organized, and carried out lakescaping workshops as part of those grants for lakeshore homeowners, lake associations, nursery managers, realtors, and officials from local units of government.

