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

LCCMR ID: 195-F

Project Title:

Tick-borne Disease Prevention Programs at Minnesota Parks

LCCMR 2010 Funding Priority:

F. Environmental Education

Total Project Budget: $ $173,271

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

Other Non-State Funds: $ $0

Summary:

The Minnesota Department of Health, in cooperation with the Department of Natural Resources, will develop tick-borne disease interpretive programs for people using state parks and other outdoor recreation venues.

Name: David Neitzel

Sponsoring Organization: MN Department of Health

Address: OLF Bldg, 625 Robert St N, Box 64975

St. Paul MN 55164

Telephone Number: (651) 201-5414

Email: david.neitzel@state.mn.us

Fax: (651) 201-5743

Web Address: www.health.state.mn.us

Location:

Region: Statewide

County Name: Statewide

City / Township:

_____ Knowledge Base _____ Broad App. _____ Innovation

_____ Leverage _____ Outcomes

_____ Partnerships _____ Urgency _____ TOTAL

MAIN PROPOSAL

PROJECT TITLE: Tick-borne Disease Prevention Programs at Minnesota Parks

I. PROJECT STATEMENT

In Minnesota, blacklegged ticks (also known as deer ticks, *Ixodes scapularis)* transmit the agents of Lyme disease, human anaplasmosis, and babesiosis to humans. The number of tick-borne disease cases reported to the Minnesota Department of Health (MDH) has risen markedly in Minnesota during recent years. During 2007, a record number of 1,239 Lyme disease cases, 322 anaplasmosis cases, and 24 babesiosis cases (combined incidence of 30 cases per 100,000 population) were reported to MDH. County-level incidence in north central Minnesota has consistently been markedly higher than statewide incidence (up to 295 cases per 100,000 population in 2007).

Geographic risk of blacklegged tick-transmitted disease corresponds to areas with hardwood and mixed hardwood forest, which provide ideal habitat for blacklegged ticks. In Minnesota, highest risk historically has been in forested portions of east central, north central, and southeastern Minnesota. However, since 2000, elevated numbers of human Lyme disease cases have reported exposure in forested portions of counties north and west of the historically endemic region. In 2004, MDH amended its high risk map (Figure 1) to include these new areas. Infected blacklegged ticks may also be encountered at lower levels in forested areas outside of this zone. Most human cases occurred from May through mid-July, the primary feeding season for the nymph stage of the blacklegged tick.

Forested regions of Minnesota are highly valued for outdoor recreation. The “lake country” of central and northern Minnesota is known for its many resorts and cabins in forested areas. In a 2004 survey conducted by the Minnesota Department of Natural Resources (DNR), more than 80% of Minnesotans indicated that outdoor recreation was “very important” or “moderately important” to their lives, and a substantial proportion of the Minnesota population engaged in activities involving potential tick exposure (e.g., walking/hiking [54%], camping [26%], and nature observation [24%]).

Personal protection measures are the primary defense against tick-borne diseases. People can effectively prevent tick bites through the use of tick repellent and protective clothing. Prompt detection and removal of any attached ticks can prevent disease transmission, and early recognition and treatment of the diseases can prevent serious illness. Adopting these preventive behaviors depends in part on attitudes and perceptions of self-efficacy.

The primary goal of the project is to reduce the incidence of tick-borne disease in visitors to Minnesota’s public parks by actively incorporating disease prevention information into the park visit. MDH will develop a tick-borne disease prevention program targeted to people at risk for tick-borne disease at state parks and other places of outdoor recreation (e.g., state forests, county and municipal parks), focusing on counties with historically high tick-borne disease risk or emerging disease risk. The program will feature an interpretive outdoor education program on ticks for state park visitors (children and adults) that will weave the natural history of ticks, disease transmission cycles, and simple personal protection measures into the overall park experience. The project will also include a tick-borne disease prevention video, and a variety of other educational materials that will be available on the MDH website for download to individuals or groups at risk for tick-borne diseases.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Interpretive Program Development **Budget:** $ 95,929
MDH will develop a presentation on the natural history of ticks and tick-borne disease prevention that will be used by Minnesota Department of Natural Resources (MDNR) Interpretive Naturalists. MDH will provide the naturalists with training to give the presentations and respond to questions from park visitors. The presentation will be designed as an outdoor program for park visitors of all ages with straightforward information on ticks, tick habitat, seasonal risk periods, and easy ways to prevent tick bites and illness. While this program will be designed for use in state parks, it will be applicable to other settings across forested regions of the state. The program will also be made available to agencies or groups with outdoor workers at risk for tick-borne disease.

Deliverable	Completion Date
1. Tick-borne disease interpretive program	4/1/2011

Result 2: Tick-borne Disease Prevention Video and Printed Materials **Budget:** $ 77,342
MDH will develop a short video (10-20 minutes) outlining the important aspects of tick biology, tick-borne disease, and tick-borne disease prevention. This video will be available to state parks with video capabilities and to all members of the public via the MDH and MDNR websites. MDH will also produce and provide a variety of other tick-borne disease prevention materials including brochures, wallet cards, posters, placards, and tick reference specimens that will also be available to the public at parks (state, county, and municipal) and other outdoor venues. The video and other materials will also be available to agencies with outdoor workers at risk for tick-borne disease.

Deliverable	Completion Date
1. Tick-borne disease video and other disease prevention materials	11/1/2011

III. PROJECT STRATEGY

A. Project Team/Partners

MDH will primarily work with Bryce Anderson (MDNR). As the manager of statewide interpretive programs at state parks, Bryce will assist MDH in developing programs and materials that will be useful for interpretive naturalists at each state park and ensure that tick-borne disease programs are added to their program schedules. MDH will also work with county and municipal park managers to distribute tick-borne disease prevention materials at their parks and with other agency representatives to provide outdoor workers with tick-borne disease information.

B. Timeline Requirements

Tick-borne disease prevention programs and materials will be developed during the first nine months of the program (i.e., July 2010- April 2011). The programs will then be initiated at state parks during the spring of 2011, at the beginning of the high risk season for tick-borne disease transmission. Much of the outdoor footage for the tick-borne disease video will be filmed during the spring of 2011, and the final video will be available by the fall of 2011.

C. Long-Term Strategy

This project is part of a larger ongoing MDH effort to provide timely and effective tick-borne disease prevention information to Minnesota residents. The programs and materials developed in this project will be useful to MDNR interpretive naturalists and others into the foreseeable future. The project content will be reviewed annually to identify necessary updates and forward that information to the naturalists. The review will include an evaluation tool for interpretive naturalists and members of the public to critique the program and suggest improvements.

Tick-borne Disease Prevention at Minnesota State Parks - Project Budget

IV. TOTAL PROJECT REQUEST BUDGET (*Two* years)

BUDGET ITEM	AMOUNT
Personnel:	
Public Health Educator 2 (Step 8) 1.00 FTE, Two Years, Salary ($92,624 + Fringe $28,343 (based on 30.6%)	$ 120,967
This person is needed to coordinate the development of the tick-borne disease interpretive program, tick-borne disease video, and other materials. This person will also train naturalists to give the interpretive program.	
Contracts:	
Contract with DNR for Video Production ($10,000 per year): This contract is needed to use existing MDNR video production equipment and production support staff.	$ 20,000
Equipment/Tools/Supplies: *N/A*	
Acquisition (Fee Title or Permanent Easements): *N/A*	
Travel: In-State only	$ 10,200
The Public Health Educator will make frequent trips to train MDNR Interpretive Naturalists at state parks across the state (30 trips x 200 miles/trip/per year). Long travel distances will necessitate some overnight trips (15 trips per year at $120 per night).	
Additional Budget Items:	
ADP/Computer Services: Effective July 1, 2008, the Department of Health began charging programs an annual Desktop User Support Fee to cover the cost of providing user support to each computer in the agency. Prior to this fiscal year, these costs were paid by programs through the allocation of salary costs for IT positions and charged directly to a funding source such as a federal grant. The fee for State Fiscal 2009 is $1,052 per FTE.	$ 2,104
Funds to print the Lyme Disease Brochure ($5,000 per year): Funds are needed to produce and print 30,000 tick-borne disease brochures per year.	$ 10,000
Funds to produce and to print other materials ($5,000 per year): Funds are also needed to develop and print 300 posters, 500 placards, and 30,000 wallet cards per year. The funds will also allow MDH to prepare 500 sets of tick reference specimens per year. Brochures and related educational materials are needed to disseminate tick borne disease prevention messages to the public.	$ 10,000
TOTAL PROJECT BUDGET REQUEST TO LCCMR	$ 173,271

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State $ Being Applied to Project During Project Period:	$ -	
Other State $ Being Applied to Project During Project Period:	$ -	
In-kind Services During Project Period: David Neitzel, MPH and Melissa Kemperman, MPH, funded through the CDC Epidemiology and Laboratory Capacity Cooperative Agreement, will act as project coordinators @ .10 FTE each.	$ 15,683	Secured
Remaining $ from Current Trust Fund Appropriation (if applicable):		
Funding History:	$ -	

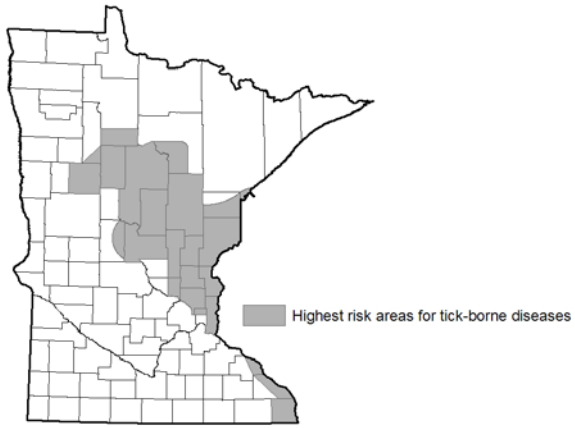

Figure 1. Highest risk areas in Minnesota for *Ixodes scapularis*-transmitted diseases.

Project Manager Qualifications

David Neitzel, MS is a Senior Epidemiologist in the Foodborne, Vectorborne, and Zoonotic Diseases Unit within the Infectious Disease Epidemiology, Prevention, and Control Division at the Minnesota Department of Health (MDH). Mr. Neitzel has a MS degree in Environmental Health and a BS in Wildlife Management from the University of Minnesota. He has over 24 years of experience working on tick and mosquito-borne disease prevention in Minnesota. From 1987 through 1996, he managed mosquito and tick-borne disease prevention efforts at the Metropolitan Mosquito Control District. From 1997 through the present, Mr. Neitzel has worked as a vector-borne disease epidemiologist at MDH. A large component of his work has been to monitor tick-transmitted diseases within the state and to communicate disease prevention information to the public and medical providers.

MDH is the state agency charged with protecting, maintaining, and improving the health of all Minnesotans. The agency has monitored Lyme disease in Minnesota since the early 1980s. Since that time, MDH has developed a comprehensive tick-borne disease program that includes monitoring of human disease trends and monitoring of tick populations. Through years of case follow up with doctors and patients, MDH has developed a thorough understanding of seasonal and geographical tick-borne disease risk in Minnesota. Disease prevention information is disseminated to the public and medical providers via press releases, the MDH website, presentations to groups, and printed materials.