



# Environment and Natural Resources Trust Fund (ENRTF) M.L. 2015 Work Plan

**Date of Report:** 15 October 2014

**Date of Next Status Update Report:** 31 December 2015

**Date of Work Plan Approval:**

**Project Completion Date:** 30 June 2017

**Does this submission include an amendment request?** \_\_

**PROJECT TITLE:** Hunter's Choice: Alternative Ammunition

**Project Manager:** Julia Ponder, DVM

**Organization:** University of Minnesota dba The Raptor Center

**Mailing Address:** 1920 Fitch Avenue

**City/State/Zip Code:** St. Paul, MN 55108

**Telephone Number:** (612)-624-3431

**Email Address:** ponde003@umn.edu

**Web Address:** www.TheRaptorCenter.org

**Location:** Statewide

**Total ENRTF Project Budget:**

**ENRTF Appropriation:** \$132,000

**Amount Spent:** \$0

**Balance:** \$132,000

**Legal Citation:** M.L. 2015, Chp. xx, Sec. xx, Subd. xx

**Appropriation Language:**

## **I. PROJECT TITLE: Hunter's Choice: Alternative Ammunition**

### **II. PROJECT STATEMENT:**

This program will provide hunters with information and hands-on experience involving non-toxic rifle ammunition and promote voluntary change in hunter ammunition choices that will reduce unintended deaths in wildlife. We will counter misinformation around ammunition options by providing objective information for the available rifle ammunition options and promote choice based on the effectiveness of non-toxic (copper) ammunition. To achieve these goals, we will:

- Provide hunters the opportunity to experience the performance of different types of rifle ammunition while demonstrating the fragmentation and dispersal of fragments that occurs upon impact of a lead bullet.
- Develop print and multimedia training materials, including videos to be available on the web, about making ammunition choices for youth and adult hunters.
- Leverage our relationships with retailers, ammunition manufacturers and conservation groups to make our materials available to a larger audience through enhanced marketing, strategic labeling of ammunition boxes and retail displays, as well as providing educational materials for conservation group members.
- Promote the use of non-toxic ammunition with young hunters participating in Youth Mentored Deer Hunts held on Three Rivers Park District properties and in State Parks.

Choice of ammunition by deer hunters has impacts on our environment and wildlife. Deer hunting is popular in Minnesota with upwards of 200,000 deer taken annually, most with lead hunting ammunition. Typically, deer are field dressed with hunters leaving a "gut-pile" in the field. A study done in 2008 by the Minnesota Department of Natural Resources used sheep carcasses to demonstrate the fragmentation of lead bullets and dispersal of lead fragments. Lead bullets produced up to 498 fragments (average: 141) with fragments dispersing up to 14 inches from the bullet track with a significant percentage dispersing into the gut.

Investigations on lead toxicity in non-target wildlife have demonstrated that lead fragments in the carcass and gut pile of hunter-killed deer cause toxicity and death in wildlife that scavenge on remains left in the field. While the strongest research available is around the risk to bald eagles, scavenging wildlife (mammals and birds) would be exposed to lead through gut piles. Although unintentional, the death of these non-game species is avoidable collateral damage that tarnishes the hunting tradition. Additionally, while not a primary concern for this proposal, there are increasing concerns around the risk to human health of consuming meat harvested with and contaminated by lead ammunition. The health risks (wildlife and human) associated with consumption of spent lead ammunition fragments is an issue receiving increasing attention around the country and around the world resulting in increasing interest in and support for the use of non-toxic ammunition for hunting. In 2013, California passed a statewide ban on the use of lead ammunition for hunting, which will be phased in over the next five years. This proposal will provide the hunting public with information about non-toxic alternatives to lead ammunition with the focus on voluntarily preventing deposition of a highly toxic substance into the environment.

Hunters have long been recognized as strong conservationists and those that have changed to copper ammunition have found an alternative that is both effective for hunting and aligns with their conservation views. Copper rifle ammunition is non-toxic and has been demonstrated to be effective with excellent accuracy, weight retention and capable of quick-kills, and it is increasingly available at a cost comparable to premium grade lead ammunition. In the past two years, The Raptor Center has convened several workshops to understand stakeholder perspective and define a way forward on this issue. An outcome of these meetings has been a better understanding of the deer hunting public's receptiveness to an education-based voluntary approach around hunting ammunition alternatives. Through these efforts, a broad coalition has come together to promote this grassroots effort, including the Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Minnesota Deer Hunters Association, Three Rivers Park District, Minnesota

Conservation Federation, Minnesota Division Izaak Walton League of America, Minnesota Chapter of The Wildlife Society and The Raptor Center at the University of Minnesota. This group will collaborate on this project to achieve the following outcomes:

- Hunters will be informed about ammunition choices and the impacts of these choices. They will choose to be leaders in ethical decisions that support wildlife conservation.
- Youth hunters will understand the importance of their ammunition choices for environmental stewardship
- Minnesota will be a national leader in advocacy for the use of non-toxic ammunition for big game hunting and in protecting-wildlife from lead toxicity, while continuing to support hunting traditions of the state.

**III. OVERALL PROJECT STATUS UPDATES:**

**Project Status as of 30 January 2016:**

**Project Status as of 30 July 2016:**

**Project Status as of 30 January 2017:**

**Overall Project Outcomes and Results:**

**IV. PROJECT ACTIVITIES AND OUTCOMES:**

**ACTIVITY 1:**

**Description:** Deliver a minimum of 10 experiential learning opportunities reaching 200 hunters

Hands-on demonstrations where hunters will be able to experience the different characteristics of ammunitions using a model that shows how bullets fragment will be held throughout the state at shooting ranges and Conservation Officer trainings. Hunters will bring their own guns and lead ammunition. Non-toxic ammunition will be provided for hunters to try. Implementation of the workshops will be done through contracting with experienced organizations.

The locations for these workshops will be distributed geographically to align with where hunters reside based on license data. While hunters from any part of the state can travel to the rifle zone to hunt deer, there will be an extra effort to deliver workshops in this area as lead bullets from rifles show much greater fragmentation than shotgun slugs, which are used for deer hunting in the southern part of the state. Workshops will be promoted locally and educational displays developed. Recognizing the strong oral tradition of deer hunters, it is expected that each 1:1 experience will be leveraged to additional hunters through personal and media contacts.

There will also be an effort to reach ethnic communities with strong hunting traditions. Finally, demonstrations will be performed at youth mentored deer hunts. At all workshops, participants will be encouraged to draw their own conclusions about ammunition choices.

Workshop planning, development, marketing, and implementation will be subcontracted with selection through a competitive process.

**Summary Budget Information for Activity 1:**

**ENRTF Budget: \$ 51,200**  
**Amount Spent: \$ 0**  
**Balance: \$ 51,200**

Outcome	Completion Date
1. <i>Development of demonstration model and materials, including educational display</i>	30 June 2016

2. Delivery of 10 workshops throughout state, goal of reaching 200 hunters	30 June 2017
--	--------------

**Activity Status as of 30 January 2016:**

**Activity Status as of 30 July 2016:**

**Activity Status as of 30 January 2017:**

**Final Report Summary as of 30 August 2017:**

**ACTIVITY 2:**

**Description:** Develop training materials on ammunition choices for 7,500 hunters

Training materials, both print and multi-media, will be developed and incorporated into DNR Youth Firearm Safety classes and hunter education courses. Print materials designed for this project will be translated for Minnesota’s Hmong community, which is an ethnic group highly represented among hunters. A team of instructors will be trained for integrating the education materials into hunter safety and youth firearm courses which will be piloted in the fall of 2016. Each year, the Minnesota DNR provides hunter education to an average of 24,000 youth, offering a large pool for expansion of messaging. Instructors will provide objective information at training sessions, encouraging hunters to make informed choices around the voluntary use of non-toxic ammunition.

**Summary Budget Information for Activity 2:**

**ENRTF Budget: \$ 48,900**  
**Amount Spent: \$ 0**  
**Balance: \$ 48,900**

<b>Outcome</b>	<b>Completion Date</b>
1. Content developed for training materials	31 Dec 2015
2. Translation of materials into Hmong	30 June 2016
3. Printed materials received – 10,000 workshop handouts	30 June 2016

**Activity Status as of 30 January 2016:**

**Activity Status as of 30 July 2016:**

**Activity Status as of 30 January 2017:**

**Final Report Summary as of 30 August 2017:**

**ACTIVITY 3:**

**Description:** Expand reach of program through partnerships and supplemental activities

Working with partners in agencies, retail, manufacturing, and non-profits, programs will be created to expand programmatic reach and provide opportunities for hunters to “try” copper ammunition. Youth mentored deer hunts where young hunters have the opportunity to use copper ammunition will be piloted in conjunction with state and county park systems. An incentive program for hunters to use non-toxic ammunition, for DNR State Parks deer hunts, will be developed.

A key challenge for hunters wanting to use non-toxic ammunition is the difficulty in identifying those options at retail sites; currently manufacturing companies do not clearly label copper ammunition as such. For this reason, language, signage and labels will be developed to be used as marketing tools to promote the visibility,

availability, and use of non-toxic ammunition. Web-based information including photos and definitions of types of ammunition will also be created to increase hunter knowledge around choices.

In order to track the impact of this program, new surveys will be developed and delivered to key audiences. Minnesota deer hunters already receive a survey designed to track data on deer hunting in the state. New survey questions around types of ammunition used for hunting will be incorporated into the Minnesota Deer Hunter survey and designed so that the incidence of deer killed with non-toxic ammunition will be documented over time. In addition, participants in workshops, mentored hunts, and hunter education programs will be surveyed at the end of the deer season to determine degree of selection of and satisfaction with alternative ammunition.

**Summary Budget Information for Activity 3:**

**ENRTF Budget: \$ 31,900**  
**Amount Spent: \$ 0**  
**Balance: \$ 31,900**

<b>Outcome</b>	<b>Completion Date</b>
<b>1. Volunteer-mentored youth hunts reaching 100 youth/year</b>	<i>30 June 2017</i>
<b>2. Surveys of program participants relating to non-toxic ammunition use</b>	<i>30 June 2017</i>
<b>3. DNR stratified random surveys of deer hunters relating to use of non-toxic ammunition use</b>	<i>30 August 2017</i>

**Activity Status as of 30 January 2016:**

**Activity Status as of 30 July 2016:**

**Activity Status as of 30 January 2017:**

**Final Report Summary as of 30 August 2017:**

**V. DISSEMINATION:**

**Description:**

Throughout all activities, including shooting clinics/workshops and Youth Mentored Deer Hunts, we will invite media representatives to attend and participate. Specific efforts to leverage information will be held at Game Fair, the annual DNR Roundtable, the Northwest Sportshow, the Minnesota Deer Classic and the Birds, Bucks, Bait and Boat Show. Announcements, calendar listings and press releases will be sent out statewide and regionally before workshops and provided to project partners for dissemination to their audiences. All events will be listed on the DNR public events calendar. Each project partner will utilize its social media tools to reach its audience and raise awareness. These efforts will include blogs, Facebook pages, Twitter, and web sites already in use by the MN DNR, The Raptor Center, University of Minnesota, and MPCA, among others. The diverse organizations represented by this partnership will leverage the information and educational materials available to other conservation organizations. The state of Minnesota’s Gov Delivery system will be used to develop a listserv where individuals can elect to get more information on this program and Conservation Officers of the DNR will carry informational brochures for distribution.

**Status as of 30 January 2016:**

**Status as of 30 July 2016:**

**Status as of 30 January 2017:**

**Final Report Summary as of 30 August 2017:**

**VI. PROJECT BUDGET SUMMARY:**

**A. ENRTF Budget Overview:**

<b>Budget Category</b>	<b>\$ Amount</b>	<b>Overview Explanation</b>
Personnel:	\$ 95,700	Principle investigator (UMN faculty on 100% soft money) responsible for oversight of project, graduate student supervision, educational curriculum, sponsor reporting; Project manager responsible for planning and execution; Graduate student to develop assessment surveys, implement, and collect and analyze data
Professional/Technical/Service Contracts:	\$ 36,300	Contract for workshop development and delivery (activity 1) Contract for writing/editing of technical and educational materials as well as graphic design of print and web-based materials. Contract for translation of educational materials into Hmong
<b>TOTAL ENRTF BUDGET:</b>	<b>\$ 132,000</b>	

**Explanation of Use of Classified Staff:** N/A

**Explanation of Capital Expenditures Greater Than \$5,000:** N/A

**Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation:** 1.05 FTE per year for two years (50% FTE for project manager, 50% FTE for graduate student, 5% FTE for PI).

**Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:** 0.25 FTE

**B. Other Funds:**

<b>Source of Funds</b>	<b>\$ Amount Proposed</b>	<b>\$ Amount Spent</b>	<b>Use of Other Funds</b>
<b>Non-state</b>			
Project partners – copper ammunition for shooting clinics	\$ 5,000	\$	
P Redig (UMN), in kind salary	\$ 17,488		
<b>State</b>			
C Henderson (MN DNR), in kind salary	\$ 12,000	\$	
L Naumann (MN DNR), in kind salary	5,000		
C Niska (MN DNR), in kind salary	2,500		
J Gilkeson (MPCA), in kind salary	\$ 5,079		
	\$		
<b>TOTAL OTHER FUNDS:</b>	<b>\$ 47,067</b>	<b>\$</b>	

**VII. PROJECT STRATEGY:**

**A. Project Partners:**

Julia Ponder – Univ. of MN, The Raptor Center (5% effort funded - \$15,461): Principle investigator responsible for oversight of project, graduate student supervision, educational curriculum, sponsor reporting. Ponder is on a 12 month appointment on 100% soft money – The Raptor Center is primarily funded through philanthropy (~60%) and earned income (~28%) with 12% funding coming from the University and state.

Carrol Henderson – MN DNR, Nongame (in-kind): Co-principle investigator responsible for management and facilitation of partnerships (agency, NGO, manufacturing, and retail) and oversight of ammunition workshops

Pat Redig – Univ. of MN (in-kind): Co-investigator responsible for scientific oversight of materials and curriculum.

John Gilkeson – MPCA (in-kind): Collaborate in development of educational materials and events and evaluate feasibility of ammunition exchange and disposal programs, facilitation of partnerships

Lori Naumann – MN DNR, Nongame (in-kind): Facilitate development of educational materials

Ed Quinn – MN DNR, Parks and Trails (in-kind): State Park collaboration

Gary Botzek – Minnesota Conservation Federation (in-kind): Review of all workshop and educational materials and facilitation of partnerships

Steve Windels – Minnesota Chapter of The Wildlife Society (in-kind): Development and implementation of shooting clinics and experiential workshops.

Chuck Niska – MN DNR, Law Enforcement (in-kind): Development of training materials to be used with Regional Training Officers and Conservation officers of the Department of Natural Resources

Jay Johnson – MN DNR, Hunter Recruitment and Retention (in-kind): Consulting on development and delivery of hunter education materials.

John Moriarty – Three Rivers Park District: Coordination with county parks

Minnesota Division Izaak Walton League of America, Dave Zentner, National Director: Membership network

**B. Project Impact and Long-term Strategy:**

This program is based upon providing hunters with information needed to make a voluntary choice to use non-toxic ammunition that does not cause collateral damage to wildlife species in the course of deer hunting and in making such choices, gives hunters an opportunity for an expanded definition of their role as conservationists. This is the first part of a multi-year strategy. Promoting the use of copper ammunition will benefit Minnesota’s wildlife and its hunters. This project builds on partnerships developed through stakeholder conversations funded by two internal grants from the University of Minnesota. Future phases are proposed to include expansion of the educational modules to larger audiences and increased opportunities for hunter-to-hunter education and awareness. Ultimately, the risks associated with lead ammunition are a widespread issue and we look to leverage the work done here in Minnesota across the nation. Many hunters are concerned about legal mandates to use non-lead ammunition and this voluntary approach provides a viable mechanism to avoid such mandates.

**C. Funding History:**

Funding Source and Use of Funds	Funding Timeframe	\$ Amount
Univ of Minnesota, Institute of the Environment (Initial planning grant)	2011/2012	\$ 1056
Univ of MN Consortium of Law and Values in Health, Environment and Life Sciences (Stakeholder Workshops and white paper development)	Jan 2012 – Mar 2013	\$ 7602
		\$ 8,658

**VIII. FEE TITLE ACQUISITION/CONSERVATION EASEMENT/RESTORATION REQUIREMENTS: N/A**

**IX. VISUAL COMPONENT or MAP(S):** See attached map of potential locations of experiential workshops throughout state of Minnesota.

**X. RESEARCH ADDENDUM:**

**XI. REPORTING REQUIREMENTS:**

Periodic work plan status update reports will be submitted no later than January 30, 2016; July 30, 2016; and January 30, 2017. A final report and associated products will be submitted by August 30, 2017.



**Environment and Natural Resources Trust Fund  
M.L. 2015 Project Budget**



**Project Title:** Hunter's Choice: Alternative Ammunition

**Legal Citation:** Fill in your project's legal citation from the appropriation language - this will occur after the 2015 legislative session.

**Project Manager:** Julia B Ponder

**Organization:** University of Minnesota dba The Raptor Center

**M.L. 2015 ENRTF Appropriation:** \$ Fill in your appropriation amount (this is the amount recommended for funding by LCCMR)

**Project Length and Completion Date:** 2 Years, June 30, 2017

**Date of Report:** October 15, 2014

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Activity 1 Balance	Activity 2 Budget	Amount Spent	Activity 2 Balance	Activity 3 Budget	Amount Spent	Activity 3 Balance	TOTAL BUDGET	TOTAL BALANCE
<b>BUDGET ITEM</b>	<b>Experiential Learning Workshops</b>			<b>Development of Training Materials</b>			<b>Supplemental Activities</b>				
<b>Personnel (Wages and Benefits)</b>	\$31,900	\$0	\$31,900	\$31,900	\$0	\$31,900	\$31,900	\$0	\$31,900	\$95,700	\$95,700
Principle investigator (UMN faculty on 100% soft money) responsible for graduate student oversight, educational curriculum modules and sponsor reporting - 5% effort for two years (salary \$11,573, benefits \$3,888=\$14,904 total)											
Graduate student responsible for developing assessment surveys, implementation of surveys, data collection, analysis and reporting -20% effort for two years (salary \$14,976, benefits \$ 2,512= \$17,448 total).											
Project manager to manage overall project, conduct post-hunting survey, write final report on the project- 50% FTE for two years (salary \$46,307, benefits \$17,041).											
<b>Professional/Technical/Service Contracts</b>											
Contract for development and implementation of shooting clinics and experiential workshops.	\$19,300	\$0	\$19,300							\$19,300	\$19,300
Contract for development and production of educational materials, including printed, audio-visual and displays. Selection will be by competitive process				\$15,000	\$0	\$15,000				\$15,000	\$15,000
Translators will be contracted to translate educational materials				\$2,000	\$0	\$2,000				\$2,000	\$2,000
<b>COLUMN TOTAL</b>	<b>\$51,200</b>	<b>\$0</b>	<b>\$51,200</b>	<b>\$48,900</b>	<b>\$0</b>	<b>\$48,900</b>	<b>\$31,900</b>	<b>\$0</b>	<b>\$31,900</b>	<b>\$132,000</b>	<b>\$132,000</b>

**Hunter's Choice: Alternative Ammunition**  
Map of potential workshop locations throughout the state of Minnesota

