



Environment and Natural Resources Trust Fund (ENRTF) M.L. 2017 Work Plan

Date of Report: 10 October 2016

Date of Next Status Update Report: 30 January 2018

Date of Work Plan Approval:

Project Completion Date: 30 June 2019

Does this submission include an amendment request? No

PROJECT TITLE: Workshops and Outreach for Nontoxic Ammunition Alternatives

Project Manager: Julia Ponder, DVM, MPH

Organization: University of Minnesota

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Location: Statewide

Total ENRTF Project Budget:

ENRTF Appropriation: \$133,000

Amount Spent: \$0

Balance: \$133,000

Legal Citation: M.L. 2017, Chp. xx, Sec. xx, Subd. xx

Appropriation Language:

[To be inserted following the MN Legislative Session in Spring 2017. This will be blank for the initial submission and will be provided to you at a later date.]

I. PROJECT TITLE: Workshops and Outreach for Nontoxic Ammunition Alternatives

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 and promote hunters as conservationists. 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, other 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 image of hunters and their hunting traditions. 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 and deer hunting traditions.
- 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 and strengthening hunting traditions of the state.

III. OVERALL PROJECT STATUS UPDATES:

Project Status as of 30 January 2018:

Project Status as of 30 July 2018:

Project Status as of 30 January 2019:

Overall Project Outcomes and Results:

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1:

Description: Deliver a minimum of 25 learning opportunities reaching 1200 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.

In addition, information on the advantages of alternative ammunition choices will be presented during State Park Youth Mentored Deer Hunt orientations, Governor's Deer Opener, Becoming an Outdoors Woman workshops and at Forkhorn Camps sponsored by the Minnesota Deer Hunter's Association. In 2015, there were 300 participants in the Youth Mentored Deer Hunt orientations at Minnesota's State Parks.

There will also be an effort to reach ethnic communities with strong hunting traditions. Finally, demonstrations will be carried out 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: \$ 45,470

Amount Spent: \$ 0
Balance: \$ 45,470

Outcome	Completion Date
1. <i>Development of demonstration model and materials, including educational display</i>	30 June 2018
2. <i>Delivery of 30 workshops throughout state, goal of reaching 500 hunters</i>	30 June 2019

Activity 1 Status as of 30 January 2018:

Activity 1 Status as of 30 July 2018:

Activity 1 Status as of 30 January 2019:

Final Report Summary:

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. 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: \$ 31,170
Amount Spent: \$ 0
Balance: \$ 31,170

Outcome	Completion Date
1. <i>Content developed for training materials</i>	31 Dec 2018
2. <i>Printed materials received – 10,000 workshop handouts</i>	30 June 2019

Activity 2 Status as of 30 January 2018:

Activity 2 Status as of 30 July 2018:

Activity 2 Status as of 30 January 2019:

Final Report Summary:

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. An incentive program for hunters to use non-toxic ammunition, in DNR State Park deer hunts will be developed.

A 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 at point-of-sale. 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, including youth hunters participating in mentored hunts, hunters participating in experiential workshops and women participating in Becoming an Outdoors Woman workshops. 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: \$ 56,360
Amount Spent: \$ 0
Balance: \$ 56,360

Outcome	Completion Date
<i>1. Development of marketing tools</i>	<i>30 June 2019</i>
<i>2. Surveys of program participants relating to non-toxic ammunition use</i>	<i>30 June 2019</i>
<i>3. Evaluation of survey results</i>	<i>30 June 2019</i>

Activity 3 Status as of 30 January 2018:

Activity 3 Status as of 30 July 2018:

Activity 3 Status as of 30 January 2019:

Final Report Summary:

V. DISSEMINATION:

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, Governor’s Deer Opener, Outdoor News Deer and Turkey Show, 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 2018:

Status as of 30 July 2018:

Status as of 30 January 2019:

Final Report Summary:

VI. PROJECT BUDGET SUMMARY:

A. Preliminary ENRTF Budget Overview:

***This section represents an overview of the preliminary budget at the start of the project. It will be reconciled with actual expenditures at the time of the final report.**

Budget Category	\$ Amount	Overview Explanation
Personnel:	\$ 96,700	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:	\$ 19,300	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.
Printing:	\$ 15,000	Development of technical and educational materials as well as graphic design of print and web-based materials.
Travel Expenses in MN:	\$ 2,000	Travel expenses for instructors and graduate student to attend workshops
TOTAL ENRTF BUDGET:	\$ 133,000	

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: Cumulative FTE 1.5 [0.75 FTE per year for two years (50% FTE for project manager, 20% 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:

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state			
Project partners – copper ammunition for shooting clinics	\$ 5,000	\$	
P Redig (UMN), in kind salary	\$ 17,488		
State			
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		
	\$		

TOTAL OTHER FUNDS:	\$ 47,067	\$	
TOTAL OTHER FUNDS:	\$	\$	

VII. PROJECT STRATEGY:

A. Project Partners:

Julia Ponder – Univ. of MN, The Raptor Center (5% effort funded - \$15,461): Principal 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-principal 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, facilitation of partnerships promoting the production, availability, and use of non-toxic ammunition products

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

Craig Engwall – Minnesota Deer Hunters Association: 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. It should be emphasized that in no way should this effort be misinterpreted as an anti-hunting effort. This is a project to demonstrate the leadership and reputation of hunters as conservationists who care about all wildlife and who wish to eliminate negative secondary lead poisoning impacts caused by deer hunting activities involving lead ammunition. 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
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VIII. REPORTING REQUIREMENTS:

- The project is for 2 years, will begin on 07/01/2017, and end on 06/30/2019.
- Periodic project status update reports will be submitted Jan 30 and July 30 of each year.
- A final report and associated products will be submitted between June 30 and August 15, 2019.

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

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



**Environment and Natural Resources Trust Fund
M.L. 2017 Project Budget**

Project Title: Workshops and Outreach for Nontoxic Ammunition Alternatives

Legal Citation: Fill in your project's legal citation from the appropriation language - this will occur after the 2016 legislative session.

Project Manager: Julia B Ponder

Organization: University of Minnesota dba The Raptor Center

M.L. 2015 ENRTF Appropriation: \$ 133,000

Project Length and Completion Date: 2 Years, June 30, 2019

Date of Report: 14 September 2016

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
BUDGET ITEM	Experiential Learning Workshops			Development of Training Materials			Supplemental Activities				
Personnel (Wages and Benefits)	\$26,170			\$26,170			\$44,360			\$96,700	
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 and benefits 14,904)											
Graduate student responsible for developing assessment surveys, implementation of surveys, data collection, analysis and reporting -20% effort for two years (salary and benefits \$17,448).											
Project manager to manage overall project, conduct trainings, write final report on the project- 50% FTE for two years											
Professional/Technical/Service Contracts											
Contract for development and implementation of shooting clinics and experiential workshops.	\$19,300									\$19,300	
Printing											
<i>Design and development of educational materials and displays</i>				\$5,000			\$10,000			\$15,000	
Travel expenses in Minnesota							\$2,000			\$2,000	
<i>Travel expenses for instructors and graduate student (survey and assessment) to attend workshops and orientations</i>										\$0	
COLUMN TOTAL	\$45,470	\$0	\$0	\$31,170	\$0	\$0	\$56,360	\$0	\$0	\$133,000	

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

