



## Environment and Natural Resources Trust Fund (ENRTF) M.L. 2011 Work Plan

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**Date of Status Update:**

**Date of Next Status Update:** 1/1/2012

**Date of Work Plan Approval:** 8/11/2011

**Project Completion Date:** 6/30/2014

**Is this an amendment request?** \_\_\_\_\_

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**Project Title:** Minnesota Junior Master Naturalist Program

**Project Manager:** Robert Blair

**Affiliation:** U of MN

**Address:** 1980 Folwell Ave, #200

**City:** St Paul **State:** MN **Zipcode:** 55108

**Telephone Number:** (651) 644-1591

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

**Web Address:** <http://www.minnesotamasternaturalist.org>

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**Location:**

**Counties Impacted:** Statewide

**Ecological Section Impacted:** Lake Agassiz Aspen Parklands (223N), Minnesota and Northeast Iowa Morainal (222M), North Central Glaciated Plains (251B), Northern Minnesota and Ontario Peatlands (212M), Northern Minnesota Drift and lake Plains (212N), Northern Superior Uplands (212L), Paleozoic Plateau (222L), Red River Valley (251A), Southern Superior Uplands (212J), Western Superior Uplands (212K)

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<b>Total ENRTF Project Budget:</b>	<b>ENRTF Appropriation \$:</b>	365,000
	<b>Amount Spent \$:</b>	<u>0</u>
	<b>Balance \$:</b>	365,000

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**Legal Citation:** M.L. 2011, First Special Session, Chp. 2, Art.3, Sec. 2, Subd. 08b

**Appropriation Language:**

\$365,000 the first year is from the trust fund to the Board of Regents of the University of Minnesota to expand the junior naturalist after-school programs. This appropriation is available until June 30, 2014, by which time the project must be completed and final products delivered.

**I. PROJECT TITLE: Minnesota Junior Master Naturalist: An After-School Program**

**II. PROJECT SUMMARY:** Minnesota Junior Master Naturalist will pair current adult Minnesota Master Naturalist Volunteers with staff in existing after-school programs to offer fun, outdoor, science-based educational opportunities for 4<sup>th</sup> and 5<sup>th</sup> graders to learn about the ecology and natural history of their schoolyard, neighborhood, nearby natural areas, and the entire state.

The goals of the project are 1) to create a series of outdoor, sequential, science-based lessons with targeted learning outcomes that address the new MN K-12 Science Standards, 2) to prepare adult leaders to deliver these lessons in after-school programs for 4<sup>th</sup> and 5<sup>th</sup> graders with the aim of improving their performance on the 5<sup>th</sup> grade Science MCA exams and 3) to establish a permanent program to offer these lessons throughout Minnesota.

The lessons will focus on the physical changes in the seasons and their effects on plant and animal life. These lessons will be divided into three units -- Fall, Winter, Spring -- linked to *The Minnesota Weatherguide*. Each unit will include supplies for the volunteer to use while implementing the lessons. The pilot-testing and field-testing phases will be a collaborative effort between Master Naturalist staff, students, volunteer instructors, and after-school staff to develop lessons that are appropriate for teaching diverse audiences in schoolyard and park settings. Pilot-testing will occur at four sites including schools in St Paul, Minneapolis, and Willmar and the St Paul Parks Department. Field-testing will take place at 12 – 24 sites across the state. Final roll-out will include out least fifty locations in Minnesota.

**III. PROJECT STATUS UPDATES:**

**Initial Work Plan:** No status to update.

**IV. PROJECT ACTIVITIES AND OUTCOMES:**

**ACTIVITY 1: Develop and Pilot-test Fall, Winter & Spring Curricula**

**Description:** We will develop and pilot-test a series of weekly lessons on the physical changes in the seasons and their effects on plant and animal life. These lessons will be divided into three units linked to *The Minnesota Weatherguide*, a natural history calendar. Each seasonal unit (Fall, Winter, Spring) will include supplies for the volunteer to use while implementing the lessons. The pilot-testing phase will be a collaborative effort between Master Naturalist staff, students, volunteer instructors, and after-school staff to develop lessons that are appropriate for teaching diverse audiences in schoolyard settings. We will then evaluate and revise the units.

**Summary Budget Information for Activity 1:**

**ENRTF Budget: \$ 100,000**  
**Amount Spent: \$ 0**  
**Balance: \$ 100,000**

**Activity Completion Date:**

Outcome	Completion Date	Budget
1. Develop, pilot test at 4 sites, and revise curricula.	12-31-12	\$100,000

**Initial Work Plan:** No status updates

**Final Report Summary:**

**ACTIVITY 2: Train Master Naturalist Volunteers & Field-test Curricula**

**Description:** While developing sequenced curricula is vital, it is also important to develop and evaluate training materials for the volunteer instructors i.e. field-testing. Field-testing will be done the second year to insure that the developed materials and adult training materials are appropriate for widespread implementation. In Yr. 2, we will

train 16 – 24 additional Master Naturalist Volunteers who want to work with the Jr. Program. They will then test the materials at eight additional sites for at least one season (for a total of 12 sites over the school year) followed by evaluation and revision of both the lessons and training materials. Some sites may participate all three seasons while some sites may choose to participate for only one or two seasons during the school year. Additional sites will increase the geographic coverage.

**Summary Budget Information for Activity 1:**

**ENRTF Budget: \$ 126,000**  
**Amount Spent: \$ 0**  
**Balance: \$ 126,000**

**Activity Completion Date:**

<b>Outcome</b>	<b>Completion Date</b>	<b>Budget</b>
<i>1. Develop and Implement Training for 16 – 24 Master Naturalist Volunteer Instructors</i>	9-30-12	\$600
<i>2. Field Test Curricula at 4 - 12 Sites then Revise for Final Distribution.</i>	12-31-13	\$125,400

**Initial Work Plan:** No status updates

**Final Report Summary:**

**ACTIVITY 3: Expand Program to 50 Sites Statewide.**

**Description:** In the final year of the grant, we will train at least 50 additional Master Naturalist Volunteers and offer the field-tested Junior Master Naturalist program in at least 50 after-school programs statewide for at least one season at each site. Sites may choose to participate for one, two, or all three seasons.

**Summary Budget Information for Activity 1:**

**ENRTF Budget: \$ 139,000**  
**Amount Spent: \$ 0**  
**Balance: \$ 139,000**

**Activity Completion Date:**

<b>Outcome</b>	<b>Completion Date</b>	<b>Budget</b>
<i>1. Train 50 additional Master Naturalist Volunteers</i>	9-30-13	\$2,500
<i>2. Offer Seasonal Curricula at 12 – 24 Sites each season for a total of 50 unique sites overall.</i>	6-30-14	\$135,500

**Initial Work Plan:** No status updates

**Final Report Summary:**

**V. DISSEMINATION:**

**Description:** This project is a dissemination project. The major outcome will be the development and testing of the curricula with a delivery mechanism provided by Minnesota Master Naturalist volunteers. Depending on resources and abilities, we may develop a separate web section for youth on the Master Naturalist web site, though this is not included as an outcome of this proposal. However, the final curricula will be available in digital format, free of charge, from the Minnesota Master Naturalist program to any interested party.

After the grant ends, the longevity of the program being offered through Minnesota Master Naturalist will depend on hiring a permanent coordinator and finding funds to provide supplies to the Master Naturalist Volunteers and after-school programs. Currently, the Master Naturalist program is growing a long-term donor base, which may be

sufficient to provide for these needs. Alternatively, we may need to seek other grants to guarantee the baseline funding. We understand that this grant is one-time funding for this project from the LLCMR; however, we hope this will not preclude us from applying for new initiatives that develop with Minnesota Master Naturalist.

**Initial Work Plan:** No status updates

**Final Report Summary:**

**VI. PROJECT BUDGET SUMMARY:**

**A. ENRTF Budget:**

<b>Budget Category</b>	<b>\$ Amount</b>	<b>Explanation</b>
Personnel:	\$ 207,982	\$34,638 total for Rob Blair, UMN, 1 month salary per year for three years, 33.3% fringe benefits, to assist in development of curricula, serve as a liaison between the Minnesota Master Naturalist (adult) program and Minnesota Junior Master Naturalist) and manage project throughout year. \$173,345 total for coordinator, 12 months salary for three years, 33.3% fringe benefits to develop, adapt, evaluate, refine curriculum and implement program.
Equipment/Tools/Supplies:	\$ 39,600	\$340,350 for seasonal supplies for each school/program participating in Junior Master Naturalist, up to three seasons per year (Fall, Winter, Spring), \$200 of supplies per school per season; 4 schools Yr 1, 12 schools Yr 2, 50 schools Yr 3.
Printing:	\$ 750	\$750 for printing of pilot-test materials and evaluations, \$250 per year.
Travel Expenses in MN:	\$ 3,588	Travel for staff to visit schools to evaluate implementation and to conduct training: 1173 miles Year 1, 2000 miles Year 2, 4000 miles Year 3
Other:	\$ 113,080	\$24,000 salary supplement for staff teachers involved in pilot- and field-testing. (\$500 per season, per staff teacher involved); \$6,000 Year 1, \$18,000 Year 2. \$3,500 for workshops to train volunteers including room rental, printing of training materials, teaching supplies, recognition pins, name badges, and background checks. Estimate based on \$50 per volunteer.  <i>Contract to DNR</i> \$74,580 salary for DNR staff member, 25% time for three years, 37.2% fringe benefits, to adapt and develop curricula and to guide coordinator; \$11,000 for graphic design and printing of final materials including promotional materials (brochures, banners, pins, badges) in Year 1, seasonal curricula for students Year 2, training materials for instructors Year 3.
<b>TOTAL ENRTF BUDGET:</b>	<b>\$365,000</b>	

**Explanation of Use of Classified Staff:**

**Explanation of Capital Expenditures Greater Than \$3,500:** None.

**Number of Full-time Equivalent (FTE) funded with this ENRTF appropriation:** 1.11

**Number of Full-time Equivalent (FTE) estimated to be funded through contracts with this ENRTF appropriation:** 0.25 at DNR

**B. Other Funds:**

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
<b>Non-state</b>			
National Science Foundation	\$2,700,000	\$	This proposal is under consideration for funding at NSF to broaden the Master Naturalist program: one portion involves evaluating the Jr. Master Naturalist and extending it two more years.
VISTA	\$108,000	\$	VISTA will provide one worker for up to three years on this project. The first year of funding (~\$36,000) has been secured.
<b>State</b>			
	\$44,000	\$0	This is the approximate value of personnel hours and fringe devoted by Extension staff on the project (25% of an FTE annually)
<b>TOTAL OTHER FUNDS:</b>	<b>\$2,852,000</b>	<b>\$0</b>	

**VII. PROJECT STRATEGY:**

**A. Project Partners:** The main partners in this project are Univ. of MN Extension and the MN Dept. of Natural Resources, which jointly run the MN Master Naturalist Program. Rob Blair (Assoc. Professor; Fisheries, Wildlife and Conservation Biology; UMN-St. Paul), Amy Rager (UMN Extension – Morris), Nate Meyer (UMN Extension – Cloquet), Andrea Strauss (UMN Extension – Rochester), John Loegering (Assoc. Professor – UMN Crookston), Karen Oberhauser (Assoc. Professor, UMN St. Paul), and Dawn Flinn (Education Coordinator – MN DNR) all participate in the operation of the Minnesota Master Naturalist program. Each Master Naturalist staff member will devote at least two weeks of their time to this new project in addition to staff hired with the LCCMR funds. The University of Minnesota will receive a total of \$365,000 and will distribute \$85,580 of this to the DNR in a subaward.

Minnesota Master Naturalist is a joint program of University of Minnesota Extension and Minnesota Department of Natural Resources. The program has been operating for five years with a Collaboration Agreement between the two entities and it delineates both responsibilities and expectations. The agreement designates University of Minnesota Extension as the fiscal agent and the Regents of the University of Minnesota as the copyright holder of all materials produced in the program.

Minnesota Junior Master Naturalist will be a new venture of the Minnesota Master Naturalist program. The newly hired coordinator of Jr. Master Naturalist will be an employee of University of Minnesota Extension and will be directly supervised by Robert Blair at the University of Minnesota. A DNR staff member involved with education, will support Dr. Blair in supervising the new Junior Master Naturalist

Coordinator. Both the DNR staff member and the new coordinator will be responsible for adapting, refining, and evaluating the curriculum for the Jr. Master Naturalist program. Consequently, they will work closely to insure that the program meets the objectives of both agencies. The new coordinator will devote 100% of his or her time to the project, while the DNR staff member will devote 25% of her time to the project.

**B. Project Impact and Long-term Strategy:** This program will address the problem that children are spending increasingly less time outside and, consequently, know less about their environment and world. It responds to the needs identified in the 2009 Outdoor Education Legislative Report to increase outdoor learning opportunities for children and to train educators who are often uncomfortable taking youth outside for lessons. It also addresses outcomes outlined in the Minnesota Greenprint to provide increased environmental education opportunities for youth both at school and during play.

The goals of this project are 1) to create a series of outdoor, sequential, science-based lessons with targeted learning outcomes that address the new MN K-12 Science Standards, 2) to prepare adult leaders to deliver these lessons in after-school programs for 4th and 5th graders with the aim of improving their performance on the 5th grade Science MCA exams and 3) to establish a permanent program to offer these lessons throughout Minnesota.

Other state and national programs focus on outdoor exploration, play, and reflection with an emphasis on natural areas. This program emphasizes targeted science learning outcomes and use of the schoolyard as a means of investigating the environment. The curriculum will be developed and tested in schools with large minority enrollments. MN Master Naturalist staff will then train, place, and support volunteers offering the program in at least 50 after-school programs statewide.

**C. Spending History:**

<b>Funding Source</b>	<b>M.L. 2005 or FY 2006-07</b>	<b>M.L. 2007 or FY 2008</b>	<b>M.L. 2008 or FY 2009</b>	<b>M.L. 2009 or FY 2010</b>	<b>M.L. 2010 or FY 2011</b>
National Science Foundation	\$359,157.38	\$361,305.12	\$280,510.22	\$348,515.95	\$363,015.27

**VIII. ACQUISITION/RESTORATION LIST:** NA

**IX. MAP(S):** NA

**X. RESEARCH ADDENDUM:** NA

**XI. REPORTING REQUIREMENTS:**

**Periodic work plan status update reports will be submitted not later than January 31, 2012; July 31, 2012; January 31, 2013; July 31, 2013; and January 31, 2014. A final report and associated products will be submitted between June 30 and August 1, 2014 as requested by the LCCMR.**

Attachment A: Budget Detail for M.L. 2011 (FY 2012-13) Environment and Natural Resources Trust Fund Projects											
Project Title: <i>Minnesota Junior Master Naturalist Program</i>											
Legal Citation: <i>ML 2011 First Special Session , Chapter 2,</i>											
Project Manager: <i>Robert B. Blair</i>											
M.L. 2011 (FY 2012-13) ENRTF Appropriation: \$ 365,000											
Project Length and Completion Date: <i>June 30, 2014</i>											
Date of Update: <i>Preliminary Report July 31, 2011</i>											
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Balance	Activity 2 Budget	Amount Spent	Balance	Activity 3 Budget	Amount Spent	Balance	TOTAL BUDGET	TOTAL BALANCE
<b>BUDGET ITEM</b>	<i>Develop and Pilot-test Fall, Winter &amp; Spring Curricula</i>			<i>Train Master Naturalist Volunteers &amp; Field-test</i>			<i>Expand Program to 50 Sites Statewide.</i>				
<b>Personnel (Wages and Benefits)</b>											
Director (Robert Blair) -- 11% FTE for three years, 33.3% Fringe Benefits	10,987			11,537			12,114			34,638	
Coordinator -- 100% FTE for three years, 33.3% Fringe Benefits	54,985			57,736			60,623			173,344	
<b>Professional/Technical Contracts</b>											
Project Manager at DNR -- 25% FTE for three years, 37.2% Fringe Benefits	23,657			24,840			26,082			74,580	
Graphic Design Services at DNR	1,000			5,000			5,000			11,000	
Salary supplement for teachers assisting with pilot- and field-testing -- \$500 per season per teacher	6,000			18,000						24,000	
<b>Equipment/Tools/Supplies</b>											
Teaching Supplies -- \$200 per season per site	2,400			7,200			30,000			39,600	
Training Workshop Supplies -- \$50 per volunteer	400			600			2,500			3,500	
<b>Printing</b>											
Photocopying pilot- and field-test curricula	250			250			250			750	
<b>Travel expenses in Minnesota</b>											
Mileage for staff to conduct training and evaluation calculated at \$0.50 per mile	588			1,000			2,000			3,588	
<b>COLUMN TOTAL</b>										<b>\$365,000</b>	