Environment and Natural Resources Trust Fund (ENRTF)
M.L. 2018 ENRTF Work Plan (Main Document)

Today's Date: March 7, 2018

Date of Next Status Update Report: February 15, 2019

Date of Work Plan Approval:

Project Completion Date: June 30, 2021

Does this submission include an amendment request? __

PROJECT TITLE: Connecting Students with Water Stewardship through Hands-on Learning

Project Manager: John Lenczewski

Organization: Minnesota Trout Unlimited

College/Department/Division:

Mailing Address: P.O. Box 845

City/State/Zip Code: Chanhassen, MN 55317

Telephone Number: 612-670-1629

Email Address: jlenczewski@comcast.net

Web Address: www.mntu.org

Location: Primarily in the Twin Cities area, but also in outstate communities Statewide

---

Total Project Budget: $400,000

Amount Spent: $0

Balance: $400,000

Legal Citation: M.L. 2018, Chp. xx, Sec. xx, Subd. xx

Appropriation Language:

I. PROJECT STATEMENT:

This program will get students engaged outdoors through hands-on learning and connecting them with water, aquatic life, groundwater and watersheds. We will expand the current program to more schools, including in outstate communities. Students will learn their role in healthy, sustainable, freshwater habitats and develop a sense of stewardship they carry forward into adulthood. We will reach students in classrooms, during field days and via outdoor recreation which encourages lifelong, tangible connections to aquatic ecosystems.

Youth are increasingly becoming disconnected from the natural environment. This lack of connection follows students into adulthood and impacts their ability to make well informed decisions about their environment. Many schools have some environmental education programming, but fail to adequately reinforce ongoing lessons through real life applications outside. We use tangible education tools and take students outdoors for hands-on learning activities to connect them to aquatic ecosystems. We utilize a national curriculum which places aquariums in classrooms and nature centers so students can follow the development of trout from egg to juvenile. This serves as a spring board for field trips to streams and as a focal point for reinforcing learning about water, watersheds and ecology. Lessons on groundwater will be included. We also use the Project WET watershed curriculum, endorsed by the National Science Teachers Association. Minnesota specific adaptations will be made to include state specific grade level standards and STEM initiatives.

We will enhance students' science skills and knowledge concerning water quality, groundwater, watersheds, native aquatic life and healthy, sustainable, freshwater habitats. Students will engage in interactive science-based natural resource education through the use of technology and applied sciences as they gather first-hand knowledge of healthy ecosystems. Classroom aquariums and outdoor lessons encourage students to use critical thinking skills and foster deeper knowledge in multiple areas, including science, math, language arts and art.

Our year-long program is unique - combining habitat site explorations, field studies and classroom visits with opportunities to explore outdoor recreation, conservation work and careers relating to fresh water habitats.

II. OVERALL PROJECT STATUS UPDATES:

First Update February 15, 2019

Second Update August 15, 2019

Third Update February 15, 2020

Fourth Update August 15, 2020

Fifth Update February 15, 2021

Final Update August 15, 2021

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Classrooms, Field Days and Student Summits
Description: Place aquariums with trout eggs in classrooms (grades 4 to 12) and nature centers, train teachers and provide classroom lessons between field days; connect students with the natural world through hands-on outdoor field studies and activities at streams, habitat areas, groundwater sites, etc.; hold a summit each year (up to 500 students and 15 schools attending) in central location(s) where students showcase their projects, participate in outdoor skills learning, and learn about water resources careers from professionals.
ENRTF BUDGET: $345,000

Outcome	Completion Date
1. Partner with participating schools - year one – 22 schools; year two – 24 schools; year three – 26 schools.	July to Sept., each year
2. Organize equipment and resources, meet with partners, train participating educators, assemble educator manuals focusing on ways to enhance state learning standards and STEM initiatives, and assist with aquarium set up in schools and nature centers. Coordinate with DNR. Utilize contracted educators to work with students in schools located in outstate Minnesota.	July to June, each year
3. Fall trip: macroinvertebrate and stream surveys using technology; groundwater site visits where feasible	Sept to Nov, each year
4. Coordinate with DNR to bring trout eggs into classrooms for rearing by students.	each December
5. Assist with programming on groundwater, watersheds, invasive species, water contaminants, habitat activities, etc.	November to June, each year
6. Students share inquiry based research projects and learn about careers in natural resources.	Mar to April, each year
7. Spring trip: Students release trout in natural environment, other hands-on learning, including chance to try fishing and catch a lifelong interest in outdoor recreation.	each May

First Update February 15, 2019

Second Update August 15, 2019

Third Update February 15, 2020

Fourth Update August 15, 2020

Fifth Update February 15, 2021

Final Update August 15, 2021

ACTIVITY 2: Outdoor Recreation – create lifelong interest in outdoor activities by youth and their families.
Description: Create lifelong interest in outdoor activities by getting youth and their families engaged in the outdoors through a series of fishing clinics and outings, camps, and opportunities to participate in conservation projects offered after school and throughout the year.
ENRTF BUDGET: $55,000

Outcome	Completion Date
1. Offer calendar of events/opportunities with partners; engage additional students, classes and schools using print news, websites, social media and YouTube	April to June, each year
2. Conduct multiple youth and family fishing events and clinics, advancing MN's Recruitment, Retention, Recruitment and Reactivation (R3) initiative	April to Sept., each year
3. Winter field days: budget permitting, introduce kids to interactive winter outdoor activities and skills, including ice fishing and winter lake ecology	Dec. to March, each year

First Update February 15, 2019

Second Update August 15, 2019

Third Update February 15, 2020

Fourth Update August 15, 2020

Fifth Update February 15, 2021

Final Update August 15, 2021

IV. DISSEMINATION:

Description: We will conduct evening, weekend and summer education/outreach events for students, their families and the community to participate, including students whose classrooms did not have an opportunity to participate in all aspects each year. We will expand the impact of the program by engaging other classes and schools through the use of social media, YouTube, and website capacities. The goal is to reach as many students and teachers as possible and to share the experiences and knowledge gained from the program. By using the Trout Unlimited websites (www.mntu.org and www.twincitiestu.org) as our starting point, we will work with schools to help them create links to or pages for their school websites or blog/Facebook pages. A youth column in Minnesota Trout Unlimited's quarterly newspaper will be added to share the experiences with both members and nonmembers around the state. The student summits will be great opportunities for students to share and network with other classes engaged in the similar experiences.

First Update February 15, 2019

Second Update August 15, 2019

Third Update February 15, 2020

Fourth Update August 15, 2020

Fifth Update February 15, 2021

Final Update August 15, 2021

V. PROJECT BUDGET SUMMARY:

A. Preliminary ENRTF Budget Overview:

See budget spreadsheet

Explanation of Capital Expenditures Greater Than $5,000:

Explanation of Use of Classified Staff:

Total Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation:

Enter Total Estimated Personnel Hours: 3500	Divide by 2,080 = TOTAL FTE: 1.7

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

Enter Total Estimated Personnel Hours: 2100	Divide by 2,080 = TOTAL FTE: 1.0

B. Other Funds:

SOURCE OF AND USE OF OTHER FUNDS	Amount Proposed	Amount Spent	Status and Timeframe
Other Non-State $ To Be Applied To Project During Project Period:			
MNTU/TU cash and in-kind support	$ 10,000	$	Estimate only; over 3 year period
Other State $ To Be Applied To Project During Project Period:			
MNDNR in-kind support	$	$	Estimate only; over 3 year period
Past and Current ENRTF Appropriation:			
M.L. 2015, Chp. 76, Sec. 2, Subd. 05b [current]	$ 400,000	$ 203,043	Amount spent is reimbursed amounts only; actual expenditures higher.
Other Funding History:			
	$	$	

VI. PROJECT PARTNERS:

A. Partners receiving ENRTF funding: None

B. Partners NOT receiving ENRTF funding

Name	Title	Affiliation	Role
MNDNR			Professional staffing and presentations
Schools and school districts			In-kind assistance and transportation cost sharing

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

Project Team/Partners

Minnesota Trout Unlimited and chapters – will receive funding and contribute cash and in-kind assistance;
Schools and school districts – contribute extensive in-kind assistance and required cost sharing to stretch budget;
MNDNR – will contribute in-kind support through professional staffing.

Project Impact and Long-Term Strategy

By reaching kids in classrooms, in the field and after school, we will get them excited about watersheds, the outdoors and outdoor recreation. We will combine outdoor "classrooms" with technology through STEM related activities so students may master state standards across a spectrum of subjects, develop skills necessary for making informed decisions about the water resources, create connections to the natural world, and think critically about their roles in the environment. Students will learn to appreciate the watersheds in which they live, become active in the outdoors and stewards of land and water. Recreational activities are included to encourage enduring connections to the outdoors beyond the classroom. Afterschool, weekend and summer

programs for youth, families and diverse audiences will cement lifelong involvement in outdoor recreation and conservation. YouTube and other media will extend the reach and impact of the programs. This program should reach approximately 4,000 to 6,000 students and their communities annually.

This three year effort will build an educational and organizational support base among Minnesota youths for understanding and supporting natural resource stewardship and management of our cold-water streams and their fisheries resources. Activities and the media coverage they should generate should garner additional support and result in long term programmatic and financial support beyond that received from the Environment and Natural Resources Trust Fund.

VIII. REPORTING REQUIREMENTS:

- **The project is for 3 years, will begin on 7/1/18 and end on 6/30/2021.**
- **Periodic project status update reports will be submitted month/day and month/day of each year.**
- **A final report and associated products will be submitted between June 30 and August 31, 2021.**

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

A. Budget Spreadsheet
B. Visual Component or Map
C. Parcel List Spreadsheet
D. Acquisition, Easements, and Restoration Requirements
E. Research Addendum

Attachment A:
Environment and Natural Resources Trust Fund
M.L. 2018 Budget Spreadsheet

Project Title: Connecting Students with Water Stewardship through Hands-on L
Legal Citation:
Project Manager: John Lenczewski
Organization: Minnesota Trout Unlimited
College/Department/Division:
M.L. 2018 ENRTF Appropriation:
Project Length and Completion Date - 3 yrs.; ending 6-30-2021
Date of Report: March 7, 2018

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	TOTAL BUDGET	Amount spent	TOTAL BALANCE
BUDGET ITEM			
Personnel (Wages and Benefits)	$225,000		$225,000
Environmental education specialist(s) -100% fte; 68 % salary/32% fringe; 36 months; (average of approximately $70,000 annually); Subtotal = approximately $210,000*; [*may utilize one or two full time or part time employees, or contracted individuals in lieu of]			
Director of youth education– 5% fte; 68 % salary/32% fringe; 36 months; (average of approximately $3,300 annually); Subtotal = approximately $9,900;			
Accounting staff - 5% fte; 68 % salary/32% fringe; 36 months; (based upon actual personnel and contracted staffing; average of approximately $1,700 annually); Subtotal = approximately $5,100;			
Professional/Technical/Service Contracts	$52,140		$52,140
Program manager – average of approximately $4,500 annually; [project manager will likely be an independent contractor, not an employee, and paid an hourly fee]; Subtotal = approximately $13,500;			
Education coordinator - average of approximately $10,000 annually; [will be an independent contractor, not an employee, and paid an hourly fee]; Subtotal = approximately $30,000;			
Seasonal interns and field day assistants [will likely be independent contractors, not employees, and paid hourly fees] - Subtotal = approximately $8,640;			
Equipment/Tools/Supplies	$30,800		$30,800
Comprehensive aquarium equipment (3+ years) 6 classrooms x $1,300 per classroom set = $7,800;			
Maintenance/replacement of portions of existing aquarium equipment set - $150/year per set, plus filter and chiller replacements on older equipment: Year 1 – 22 existing x $150 = $3,300; plus $2,000 to replace filters on 10 oldest ($200 x 10) = $5,300 Year 1subtotal; Year 2 –24 existing x $150 = $3,600; plus $1,000 to replace filters on 5 aquariums ($200 x 5) = $4,600 Year 2 subtotal; Year 3 –26 existing x $150 = $3,900; plus $1,000 to replace filters on 5 aquariums ($200 x 5); plus replace chillers on 10 oldest ($600 per chiller x 10 = $6,000); = $10,900 Year 3 subtotal; 3 year total = $19,100;			
Supplies – fish food - $25/aquarium/yr; Year 1 – 22 classrooms; Year 2 – 24 classrooms; Year 3 – 26 classrooms = 72 classrooms x $150 = $1,800;			
Field Aquariums for Macro studies 15 x $40 each = $600;			

Printing/copying for teacher manuals and class worksheets, handouts, summit banners, etc. Estimated to be approximately $500 per year x 3 years = $1,500;			
Travel expenses in Minnesota	$20,000		$20,000
Travel: Travel expenses of environmental education specialists, interns, and project coordinator to and from schools, field sites, DNR facilities, etc. Limited travel of project manager to key meetings with coordinator, schools, events, & DNR. Mileage expense estimated at IRS rate of 0.535/mile			
Other	$72,060		$72,060
Fish eggs and disease testing with shipping - $300/classroom aquarium per year (x 22,24,26 = 72) = $21,600;			
Summit facility to accommodate 15+ schools and 350-500 kids in centralized location - $5,000 x 3 summits over 3 years = $15,000;			
Essential food for instructors at: Centralized teacher orientation on use of equipment, fish raising issues, etc. - $100 x 3 yrs. = $300; Lunches for non-teacher volunteers/agency help at field days - $50/field day x 72 field days over 3 years = $3,600; Summits – lunches for volunteers, agency help needed for student summits - $200/summit x 3 summits = $600; Food subtotal - $4,500;			
Storage of seasonal equipment that cannot fit in trailer $60/mo. x 36 mo. = $2,160;			
Bus transportation: $350/trip x 2 trips per year(2 and 3rd trips contributed by schools) = $350/class/year; Yr 1 - $350 x 22 schools = $7,700; Yr 2 - $350 x 24 schools = $8,400; Yr 3 - $350 x 26 schools = $9,100; Bus transportation total = $25,200;			
Porta potties as needed for 60+ students for those field days which take place on streams not near bathrooms (school buses do not have bathrooms); estimate 24 of 72 field days likely not near bathrooms; - $150 x 24 = $3,600;			
COLUMN TOTAL	**$400,000**		**$400,000**