

**Environment and Natural Resources Trust Fund
2012-2013 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 120-F

Stop Aquatic Invasives: Trained Minnesotans on the Frontline

Topic Area: F. Outreach/Education/Training

Total Project Budget: \$ 360,000

Proposed Project Time Period for the Funding Requested: 3 yrs, July 2013 - June 2016

Other Non-State Funds: \$ 0

Summary:

Stop Aquatic Invasives will equip Minnesota's citizens with the most current research and management practices to prevent the transport and limit population growth of Eurasian watermilfoil, zebra mussels, and carp.

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Sponsoring Organization: U of MN

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Location

Region: Statewide

County Name: Statewide

City / Township:

<input type="checkbox"/> Funding Priorities	<input type="checkbox"/> Multiple Benefits	<input type="checkbox"/> Outcomes	<input type="checkbox"/> Knowledge Base
<input type="checkbox"/> Extent of Impact	<input type="checkbox"/> Innovation	<input type="checkbox"/> Scientific/Tech Basis	<input type="checkbox"/> Urgency
<input type="checkbox"/> Capacity Readiness	<input type="checkbox"/> Leverage	<input type="checkbox"/> Employment	<input type="checkbox"/> TOTAL <input type="checkbox"/> %



Environment and Natural Resources Trust Fund (ENRTF) 2012-2013 Main Proposal

PROJECT TITLE: Stop Aquatic Invasives: Trained Minnesotans on the Frontline

I. PROJECT STATEMENT

Stop Aquatic Invasives will focus on the best management practices (BMPs) to limit the dispersal, recruitment, and ecological impact of three focal aquatic invasive species (AIS): Eurasian watermilfoil, zebra mussels, and carp. Building on the strong connections between Minnesota's aquatic resources and waterfront residents, resort owners, anglers, and recreational lake and river-users, this program will put Minnesotans on the frontline to stop the spread of aquatic invasives.

The **goal** of *Stop Aquatic Invasives* is to equip Minnesota's citizens with the most current research and BMPs to prevent the transport (dispersal) and limit population growth (recruitment) of Eurasian watermilfoil, zebra mussels, and carp and then to help those citizens implement those practices in communities near lakes and rivers where they live and recreate. The project will pair research expertise at the University of MN and MN Sea Grant with the outreach power of the MN Master Naturalist program to develop BMPs and training materials to be offered at workshops and public events throughout the state, which will be followed with hands-on stewardship projects.

Outcomes of the project will include:

- 1) a series of research-based publications on BMPs for preventing the dispersal and recruitment of each focal AIS, which can be implemented by shoreline residents, resort owners, and members of lake associations;
- 2) a series of materials for private access sites, such as resorts, to educate anglers and recreational lake users about these AIS and their personal role in preventing spread; and
- 3) a series of three in-depth training workshops for Minnesota Master Naturalist Volunteers.

Additional **outcomes** will involve the trained Minnesota Master Naturalist Volunteers from these workshops who will distribute and implement these materials throughout the state by:

- 1) conducting workshops for lake associations, resort owners, & other interested groups on these BMPs;
- 2) distributing them to anglers and recreational lake-users at private points-of-access; and
- 3) participating in environmental fairs, water festivals, county fairs, and other special events.

This project will complement efforts by the Minnesota DNR's Invasive Species program and Minnesota Sea Grant. Currently, these agencies' programs range from developing a statewide system of boat inspections, to offering training to marina operators and dock installers, to enforcing AIS laws, to speaking to lake association members, to training citizens to monitor for aquatic invasive species, to offering small grants for AIS management.

Despite these efforts, there are major gaps in outreach in Minnesota. Currently no materials specifically address BMP's that individual landowners can implement or help them connect to the appropriate local and state agencies. We will develop materials to address these gaps, and ensure that the information reaches the public. Information dissemination will be the role of the network of over 1,400 trained Minnesota Master Naturalist volunteers with expertise in educating the public, experience in implementing stewardship projects, and the time to interact with Minnesotans across the entire state. For example, Master Naturalist Volunteers are adept at staffing information booths. In the summer of 2012, there will be more than 20 such opportunities at county fairs and other festivals, along the north shore alone. Master Naturalists would be able to sponsor and staff booths at all of these and reach tens of thousands of citizens with information on AIS.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Develop free guides on best management practices for the three AIS. Budget: \$137,857

We will develop a lake managers' tool kit of three separate publications on the BMPs that can be implemented by shoreland property owners, lake associations, and resort owners to prevent the dispersal and recruitment of watermilfoil, zebra mussels, and carp. These kits will have information from existing campaigns but also include more in-depth information and instructions on specific management options that can be implemented at the lake and watershed level. They will also guide users to the appropriate local and state agencies that conduct AIS work. These will be devised with the help of UMN faculty and Minnesota Sea Grant personnel who currently conduct research on these issues.

Outcome	Completion Date
1. Develop, review, revise and distribute free BMP guide for zebra mussels.	June 2014
2. Develop, review, revise and distribute free BMP guide for water milfoil.	June 2014
3. Develop, review, revise, and distribute free BMP guide for carp.	June 2014

Activity 2: Develop materials for anglers and recreational lake users. Budget: \$19,510

We will adapt, develop and distribute materials that highlight the role that boaters, anglers, and recreational lake users can take to prevent the spread of these three AIS for use at private-access points.

Outcome	Completion Date
1. Develop, review, and revise access point educational materials.	December 2014
2. Distribute materials to lake associations, resort owners, and other groups.	June 2015
3. Post free materials, with permission, at more than 100 privately owned access points using the network of Master Naturalist Volunteers.	December 2015

Activity 3: Disseminate information via workshops using Master Naturalists. Budget: \$202,633

We will develop and conduct three in-depth workshops for 60 Minnesota Master Naturalist Volunteers on the topic of AIS and BMP's for the three target species. These volunteers will conduct more than 80 outreach events (workshops, meeting presentations) and local management projects.

Outcome	Completion Date
1. Develop and conduct 3 training workshops for 60 Master Naturalist Volunteers.	December 2015
2. Volunteers conduct > 80 workshops, meetings, and outreach events for members of lake associations, recreational lake users, tourists, and resort owners.	June 2016

III. PROJECT STRATEGY

A. Project Team/Partners

The main partners in this project are MN Master Naturalist Program (run jointly by UMN Extension and MN DNR) and UMN Sea Grant. The scientific experts on the project will include Peter Sorensen (Carp; Professor; Fisheries, Wildlife and Conservation Biology; UMN), Ray Newman (Eurasian watermilfoil; Professor; Fisheries, Wildlife and Conservation Biology; UMN), Doug Jensen (Zebra Mussels; Aquatic Invasive Species Program Coordinator; Minnesota Sea Grant; UMD) and Ingrid Schneider (Works with Resort Owners; Professor; Forest Resources; Director of Minnesota Tourism Center; UMN).

B. Timeline Requirements

Each activity above corresponds approximately to a year of the program beginning each July. This project requires three years because we will develop new educational materials the first year, train volunteers in outreach the second year, and conduct this outreach during the second and third years.

C. Long-Term Strategy and Future Funding Needs

The major initial investment in this program will be for the development and testing of the BMPs and the workshop models that will be the most effective in reaching the different audiences. After the grant ends, Master Naturalist program staff will continue to offer in-depth training for Master Naturalist Volunteers, who will continue to conduct local outreach workshops. Both of these features, the in-depth training and the local outreach by volunteers, are key (and permanent) features of the Master Naturalist program, and will be of interest and use for many years.

2012-2013 Detailed Project Budget

IV. TOTAL ENRTF REQUEST BUDGET 3 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: <ul style="list-style-type: none"> • Rob Blair, UMN, 1 month salary per year for 3 years, 7% fringe benefits, to assist in development of BMPs, to liaison with SeaGrant staff, to supervise MMAI coordinator and manage project throughout year. \$29,154 • Ray Newman, UMN, 2 weeks per year for 3 years, 7% fringe benefits to guide development of water milfoil BMPs and review publications. \$17,874 • Ingrid Schneider, UMN, 2 weeks per year for 3 years, 7% fringe benefits to guide development of materials for resource owners and review publications. \$16,151 • Doug Jensen, Sea Grant, 2 weeks per year for 3 years, 41.3% fringe benefits to guide development of zebra mussel BMPs and review publications. \$8,722 • Marte Kitson, Sea Grant, 8 weeks per year for 3 years, 36% fringe benefits to guide development of workshops, assist in development of BMPs, and coordinate workshops and other outreach events sponsored by Sea Grant. \$24,695 • MMAI Coordinator, UMN, 100% time for 3 years, 41.3% fringe benefits to write bmps; develop curricula and other outreach materials; conduct trainings of volunteers; coordinate volunteer opportunities; and conduct evaluation. \$198,224 	\$ 294,821
Contracts: <ul style="list-style-type: none"> • \$10,500 for a graphic artist to illustrate, design, and layout three BMP manuals. 	\$ 10,500
Equipment/Tools/Supplies: <ul style="list-style-type: none"> • Signs and brochures for 100 water access points at \$50 per point. \$5,000 • Materials to distribute at public events such as water festivals and county fairs. \$100 per event for 80 events. \$8,000 • Training materials for in-depth workshops. \$50 for each of 60 volunteers. \$3,000 • Computer for MMAI Coordinator. \$1,000 • Office supplies and postage including software, paper, toner cartridges. \$1,509 	\$ 18,509
Travel: <ul style="list-style-type: none"> • Staff travel for planning and development of BMPs and workshops including 3,000 miles at 0.555 per mile. \$1,665 • Staff travel (4,000 miles at \$0.555) and 40 days lodging and (10 evenings for each of 4 staff at state per diem of \$123) to offer 3 in-depth workshops. \$7,575 • Travel for Master Naturalist volunteers to attend in-depth workshops. Estimate of 100 miles per each of 60 volunteers at \$0.555. \$3,330 	\$ 12,570
Additional Budget Items: <ul style="list-style-type: none"> • Room Rental for in-depth volunteer workshops. \$200 for each of 3 workshops. \$600 • Rental/Participation fees (e.g. booth rental at county fair) for 80 outreach events estimated at \$100 per event. \$8,000 • Printing of 3 BMP manuals. 1000 copies of each at \$5 per copy. \$15,000 	\$ 23,600
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 360,000

V. OTHER FUNDS

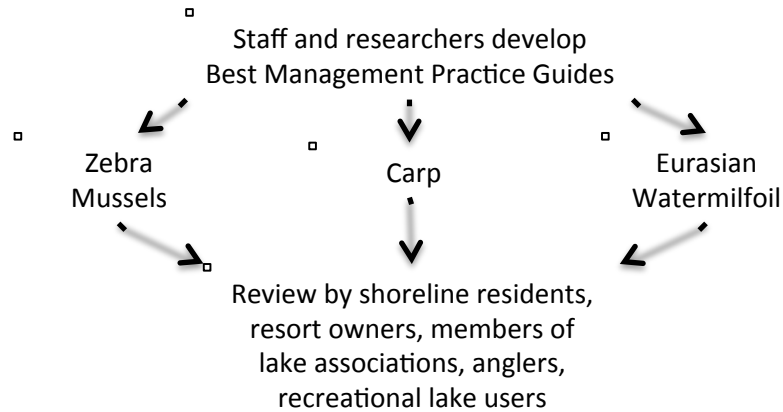
<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
In-kind Services During Project Period: <ul style="list-style-type: none"> • We estimate that this will produce at least 80 volunteers who donate a total of 6400 hours of volunteer service in Years 2 and 3 of the grant. This is valued at \$21.36 per hour by IndependentSector.org as match for Federal grants for a total of \$136,704. • Rob Blair will devote 10% of his effort during the academic year to this project which is valued at \$31,598. 	\$ 168,302	Result of this grant.
Funding History: <ul style="list-style-type: none"> • The Minnesota Master Naturalist program was developed with funding from the National Science Foundation from 2005 - 2012. 	\$ 1,712,504	Ends 2012



Stop Aquatic Invasives Implementation Timeline

Year 1

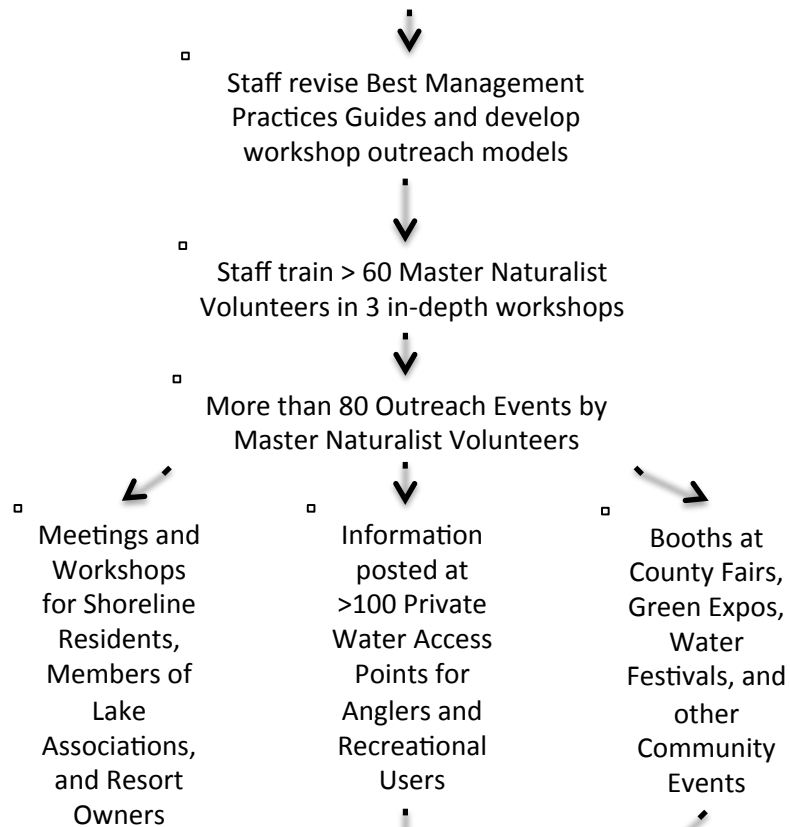
Development of Best Management Practices Guides



Year 2

Workshops for Master Naturalists

Outreach to Citizens

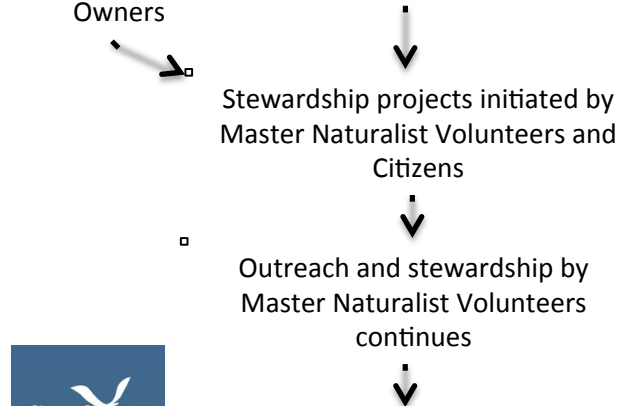


Year 3

Outreach to Citizens

Stewardship Projects

Evaluation



Project Manager Qualifications:

Dr. Rob Blair is a Professor of Fisheries, Wildlife, and Conservation Biology in the College of Food, Agriculture and Natural Resource Science at the University of Minnesota. He initiated the Minnesota Master Naturalist program in 2005 with a grant from the National Science Foundation Informal Science Education Program. Currently, he coordinates efforts of three faculty members, four Extension educators and two administrative assistants working on the project.

Blair has overseen the development of all curriculum material, including writing the majority of the main text. He manages the budgets for the program. He also coordinates efforts with the program's main partner – MN DNR – and Dawn Flinn, Education Coordinator for the DNR. Blair's role in *Stop Aquatic Invasives* will be similar. He will oversee all materials development, budgets, training, and evaluation. He will also be responsible for the coordination of all partners. *Stop Aquatic Invasives* will be an expansion of the Minnesota Master Naturalist program to include a greater emphasis on aquatic systems and their management. Its audience will be the members of lake associations, lakefront residents, resort owners, and recreational lake users.

The researchers involved are all experts on various facets of this project:

- Peter Sorensen (Professor; Fisheries, Wildlife and Conservation Biology; UMN), is internationally known for his work on invasive carp and lamprey.
- Ray Newman (Eurasian watermilfoil; Professor; Fisheries, Wildlife and Conservation Biology; UMN), has conducted more than 20 years of research on watermilfoil in Minnesota.
- Doug Jensen (Zebra Mussels; Aquatic Invasive Species Program Coordinator; Minnesota Sea Grant; UMD) coordinates the AIS efforts of Minnesota Sea Grant.
- Ingrid Schneider (Resort Owners; Professor; Forest Resources; Director of Minnesota Tourism Center; UMN) is the Director of the Minnesota Tourism Center and has been working intensely with resort owners on the issue of AIS.

Organization Description:

The Minnesota Master Naturalist Program is a model collaboration between University of Minnesota Extension and the Minnesota Department of Natural Resources. It operates with a Memorandum of Understanding between the two agencies with each responsible for different portions of the program. University of Minnesota Extension is the fiscal agent for the project.

Minnesota Master Naturalist is a volunteer program that teaches adults about Minnesota's natural resources, empowers them to educate others, and provides them opportunities to do conservation projects. The mission of the Minnesota Master Naturalist Program is to promote awareness, understanding, and stewardship of Minnesota's natural environment by developing a corps of well-informed citizens dedicated to conservation education and service within their communities.

The Minnesota Master Naturalist program has been resoundingly successful. Since the Fall of 2005, more than 159 professional naturalists have become trained Master Naturalist Instructors and they have taught classes that have graduated more than 1400 volunteers. In 2011 alone, these volunteers provided 6,955 hours of work on stewardship projects, 9,666 hours on interpretive activities that reached more than a million people, 7,215 hours on citizen-science monitoring, and 14,824 hours of program support at nature centers located on public lands for a total of 38,660 hours of volunteer effort. According to IndependentSector.org, this volunteer time is valued at \$21.36 per hour for a total contribution of \$825,777 to the state's economy. From 2005 through 2011, the volunteers have donated over 159,807 hours worth more than \$3,306,970.