Lessard-Sams Outdoor Heritage Council
Fiscal Year 2019 / ML 2018 Request for Funding

H RE 10

Date: May 31, 2017

Program or Project Title: Slow the Spread of the Emerald Ash Borer

Funds Requested: $14,689,500

Manager's Name: Mark Abrahamson
Title: Assistant Director, Plant Protection Division
Organization: Minnesota Department of Agriculture
Address: 625 Robert Street North
City: St Paul, MN 55155
Office Number: 651-201-6505
Mobile Number: 612-385-0863
Fax Number: 651-201-6108
Email: mark.abrahamson@state.mn.us

County Locations: Not Listed

Regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition
- Southeast Forest
- Metro / Urban

Activity types:

- Enhance
- Protect statewide ash resource

Priority resources addressed by activity:

- Forest
- Habitat

Abstract:

The emerald ash borer (EAB) is spreading at a faster rate within Minnesota each year. This project seeks to reduce the rate of spread of EAB throughout Minnesota with outreach and strategic management grants to communities. Keeping EAB out of other areas of the state as long as possible will benefit the economy, environment and human health of areas not yet infested and potentially preserve millions of trees and save billions of dollars over decades.

Design and scope of work:

During the first five years of known EAB infestation in Minnesota (2009-2013), the spread rate was about 33% of the national average. However, the spread rate over the last four years (2014-present) is > 50% of the national average and growing. The goal of this project is to reduce the rate of spread back to 33% or less of the national average which would translate into additional decades before EAB is widespread in Minnesota. This is a substantial amount of time to preserve existing ash forest, transition to other hardwood cover types and allow new management tools to come online.

Previous work in Minnesota and Michigan has demonstrated that aggressive management actions can slow the growth of EAB populations and their rate of spread, particularly if new satellite populations can be prevented from forming. Populated areas with EAB infestations are at greatest risk for movement to new areas simply because a higher density of people provides more opportunities for wood movement. This project will reduce the risk of citizens moving infested wood via an outreach campaign to educate and remind citizens about how invasive species can be moved to new locations in wood.

Populated areas (cities and towns) are also prime candidates for EAB management work due to the relatively low number and high value of ash trees compared to natural forest settings. This project will result in earlier detection of EAB populations and decreased

spread as a result of technical outreach to land managers and industry professionals regarding recognizing EAB, best management practices's to reduce spread and management options.

Additionally, municipalities and other entities managing public lands at a local level will be encouraged to implement monitoring and management for EAB through a targeted grant program. Three different areas will be identified with different objectives expected from grant recipients:
1. Areas where EAB populations are high and the most efficient activities are those that keep it from being moved out of those areas.
2. Areas where EAB is present but not at high levels. Effective activities in these areas are intensive monitoring and management to decrease population growth and spread.
3. Areas where EAB is not known to be present but is at high risk to arrive. Intensive monitoring and outreach is the best option for these areas.

The outcomes from this project are meant to be quantitative. We are able to assess rates of spread from different areas of the country and compare to the rate of spread in Minnesota to assess effectiveness. Moreover, changing the rate of spread can be quantified into environmental and economic benefits based on the number of years EAB takes to reach new areas.

Which sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this project:

- H1 Protect priority land habitats
- LU8 Protect large blocks of forest land

Which other plans are addressed in this proposal:

- Minnesota State Management Plan for Invasive Species

Describe how your program will advance the indicators identified in the plans selected:

This plan lays out the structure of prevention and response activities for invasive species in Minnesota. Key elements of this plan are preventing the arrival of invasive species to new areas, quickly detecting satellite populations of invasive species and taking appropriate management activities to eradicate or control populations of invasive species. This project would support all three of those elements regarding the emerald ash borer.

Which LSOHC section priorities are addressed in this proposal:

Forest / Prairie Transition:

- Protect from long-term or permanent endangerment from invasive species

Northern Forest:

- Protect from long-term or permanent endangerment from invasive species

Metro / Urban:

- Protect from long-term or permanent endangerment from invasive species

Southeast Forest:

- Protect from long-term or permanent endangerment from invasive species

Describe how your program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife as indicated in the LSOHC priorities:

The impacts from this project for fish, game and wildlife would be indirect but could be meaningful. Ash is a common tree species in Minnesota and we have as many or more ash trees on forest land than any other state in the country. This is particularly true in northern Minnesota where black ash is a key species in wet forests.

Describe how the proposal uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

This project will rely on monitoring for EAB in order to inform management efforts at local, regional and statewide levels. Monitoring for EAB is difficult for the untrained, but past work in Minnesota has clearly shown the ability of monitoring to inform EAB management. Through this project the MDA would continue to train citizens and professionals on recognizing the signs of EAB and carrying out formal

monitoring programs. Providing this information at multiple scales will allow for targeting of grant funds toward areas that will provide the greatest return in terms of reducing population growth and spread of EAB. Through these activities we anticipate delaying the arrival of EAB to new areas of the state and thereby helping to achieve goals of reducing fragmentation and protecting forested areas.

How does the proposal address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species:

41 wildlife species that are endangered, threatened, or state special concern can be found in ash stands.

A variety of wildlife species utilize ash stands and ash trees including mammals, birds, reptiles and amphibians. Young trees or stands are an important food source for moose and Cerulean warblers utilize stands as nesting sites. Both are species of special concern in Minnesota.

Rare communities that include ash at risk include Northern Wet Ash Swamp WFn55, Northern Very Wet Ash Swamp WFn64, and Southern Wet Ash Swamp WFs57.

Brown-headed cowbirds populations are known to increase with forest fragmentation which may negatively impact songbird populations.

Identify indicator species and associated quantities this habitat will typically support:

Not Listed

Outcomes:

Programs in the northern forest region:

- protect state ash resource

Programs in forest-prairie transition region:

- protect state ash resource

Programs in metropolitan urbanizing region:

- protect state ash resource

Programs in southeast forest region:

- protect state ash resource

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended:

The funds appropriated in 2010 allowed a number of municipalities to begin emerald ash borer programs, some of which continued to be funded at similar levels by local governments after the funds were exhausted. A similar situation is envisioned in this case where entities receiving grant funds will need to match the same with local dollars. Funding priority could be provided to entities that demonstrated an interest in continuing activities after grant funds were exhausted.

Explain the things you will do in the future to maintain project outcomes:

Not Listed

What is the degree of timing/opportunistic urgency and why it is necessary to spend public money for this work as soon as possible:

Emerald ash borer is the most significant forest pest of this generation and it is spreading at a faster rate within Minnesota each year. The number of counties with known infestations has increased from 6 to 15 in just the last four years and the number of affected cities has increased from 16 to 29. EAB populations tend to grow faster as they grow larger and we can expect impacts to Minnesota to intensify rapidly unless action is taken to slow the growth and spread of populations.

How does this proposal include leverage in funds or other effort to supplement any OHF appropriation:

There are limited federal funds available for work with emerald ash borer. However, when funds are available they typically require a

1:1 state match. State funds such as those provided by OHF or ENRTF have provided those required matching funds in the past and have enabled Minnesota to receive some federal funding for work related to EAB.

Relationship to other funds:

- Environmental and Natural Resource Trust Fund

Describe the relationship of the funds:

We have submitted a similar proposal for consideration to the Legislative Citizen Commission on Minnesota Resources.

Describe the source and amount of non-OHF money spent for this work in the past:

Appropriation Year	Source	Amount
2010	OHF	$2,000,000

Activity Details

Requirements:

If funded, this proposal will meet all applicable criteria set forth in MS 97A.056 - **Yes**

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program - **Not Listed**

Is the activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Not Listed**

Do you anticipate federal funds as a match for this program - **No**

Land Use:

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **No**

Accomplishment Timeline

Activity	Approximate Date Completed
Prevent the movement of EAB through outreach to citizens. The best way to stop EAB from reaching new areas is to keep people from moving it. As the area infested by EAB grows, regulatory efforts become diluted. Moreover, outreach efforts have always been paramount with EAB since it is easily spread in firewood which can be moved by anyone. Minnesota has worked hard to educate the public about the firewood pathway for many years, likely contributing to the slower than average spread of EAB in the state. However, to keep the issue on the mind of citizens requires ongoing reminders. We will work to educate and remind citizens within the Minnesota media market about how EAB spreads. The materials to conduct this campaign have already been developed, so every dollar allocated to this function can be used to maximum affect in purchasing outreach. MDA will contract with a firm to provide this service. Prevent the movem	July 2021
Provide technical assistance to communities and promote monitoring-based management. Technical assistance regarding EAB is an ongoing need for communities in Minnesota, particularly those with newly discovered infestations. In addition, work funded by the ENRTF has demonstrated that monitoring for EAB can inform management efforts and reduce unneeded insecticide use and tree removal. This activity will work with communities to promote monitoring-based management which is critical to slowing population growth and spread of EAB. This activity will also quantitatively evaluate the impact of management work on the growth and spread of EAB populations in Minnesota. The MDA will work with the U of M who will provide biological and statistical expertise for this activity.	July 2021
Provide assistance to communities to manage and slow the spread of EAB. There are clear tactics that communities can use to mitigate the impacts of EAB and slow its spread. However, without funds to guide those efforts communities do not have sufficient incentive to undertake activities that will provide benefits beyond and sometimes even within their borders. Under this activity MDA will grant funds to communities who demonstrate the capability to implement EAB management programs that are likely to minimize the impact within and slow the spread of EAB out of that community. Grants will be administered by the MDA and the Minnesota Shade Tree Advisory Committee will act in an advisory role to award funds.	July 2021

Budget Spreadsheet

Total Amount of Request: $14,689,500

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	$675,000	$0		$675,000
Contracts	$13,995,000	$0		$13,995,000
Fee Acquisition w/ PILT	$0	$0		$0
Fee Acquisition w/o PILT	$0	$0		$0
Easement Acquisition	$0	$0		$0
Easement Stewardship	$0	$0		$0
Travel	$11,100	$0		$11,100
Professional Services	$0	$0		$0
Direct Support Services	$5,400	$0		$5,400
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$0	$0		$0
Other Equipment/Tools	$0	$0		$0
Supplies/Materials	$3,000	$0		$3,000
DNR IDP	$0	$0		$0
Total	$14,689,500	$0	-	$14,689,500

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Project Administrator	1.00	3.00	$300,000	$0		$300,000
Scientist	1.00	3.00	$225,000	$0		$225,000
Assistants	1.00	3.00	$150,000	$0		$150,000
Total	3.00	9.00	$675,000	$0	-	$675,000

Capital Equipment

Item Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Contracts -	$0	$0		$0
Total	$0	$0	-	$0

Amount of Request:	$14,689,500
Amount of Leverage:	$0
Leverage as a percent of the Request:	0.00%
DSS + Personnel:	$680,400
As a % of the total request:	4.63%
Easement Stewardship:	$0
As a % of the Easement Acquisition:	-%

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program:

There are standard costs that come with FTE's for communications (phone, email), computing (software licenses) and network administration fees.

Does the amount in the contract line include R/E work?

I'm not sure what R/E work is and can't find that in the instructions. There are three components to the contract work:
1. $300,000 ($100,000/year) for advertising to reduce citizen movement of EAB
2. $195,000 for U of M who will employ a data analyst who will assist the MDA with quantitative analyses to evaluate the impact of the project and identify opportunities to increase impact. Salary and Fringe approximately $65,000 per year
3. $13.5 million - Grants to municipalities or other entities for management of EAB infestations - $4.5 million per year

Does the amount in the travel line include equipment/vehicle rental? - Yes

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging:

We will utilize department lease vehicles which is the most cost effective means of travel with a per month lease cost of ~$400 (fuel included).

Describe and explain leverage source and confirmation of funds:

Not Listed

Does this proposal have the ability to be scalable? - Yes

Tell us how this project would be scaled and how administrative costs are affected, describe the "economy of scale" and how outputs would change with reduced funding, if applicable:

A project administrator is needed regardless of the amount of money being granted, so having more dollars to grant vs fewer results in lower administrative costs per dollar granted.

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	0	0	0	0
Total	0	0	0	0	0

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0
Enhance	$0	$0	$7,389,500	$7,300,000	$14,689,500
Total	$0	$0	$7,389,500	$7,300,000	$14,689,500

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	0	0	0	0	0	0
Total	0	0	0	0	0	0

Table 4. Total Requested Funding within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	$0	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0	$0
Enhance	$3,689,500	$4,000,000	$3,000,000	$0	$4,000,000	$14,689,500
Total	$3,689,500	$4,000,000	$3,000,000	$0	$4,000,000	$14,689,500

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0
Enhance	$0	$0	$0	$0

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0
Enhance	$0	$0	$0	$0	$0

Target Lake/Stream/River Feet or Miles

0

I have read and understand Section 15 of the Constitution of the State of Minnesota, Minnesota Statute 97A.056, and the Call for Funding Request. I certify I am authorized to submit this proposal and to the best of my knowledge the information provided is true and accurate.

Parcel List

Explain the process used to select, rank and prioritize the parcels:

No parcels will be acquired through this project

Section 1 - Restore / Enhance Parcel List

No parcels with an activity type restore or enhance.

Section 2 - Protect Parcel List

No parcels with an activity type protect.

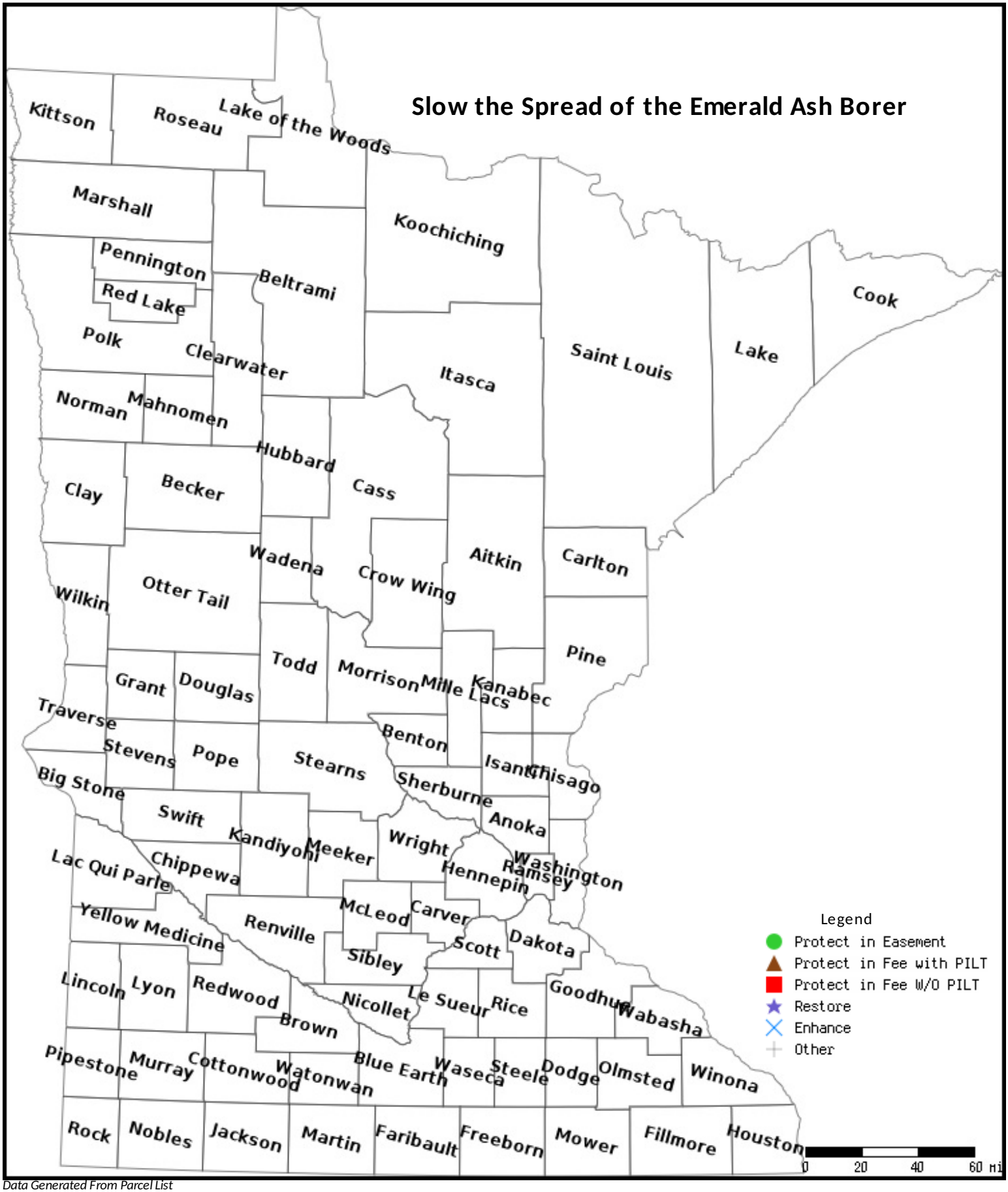
Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

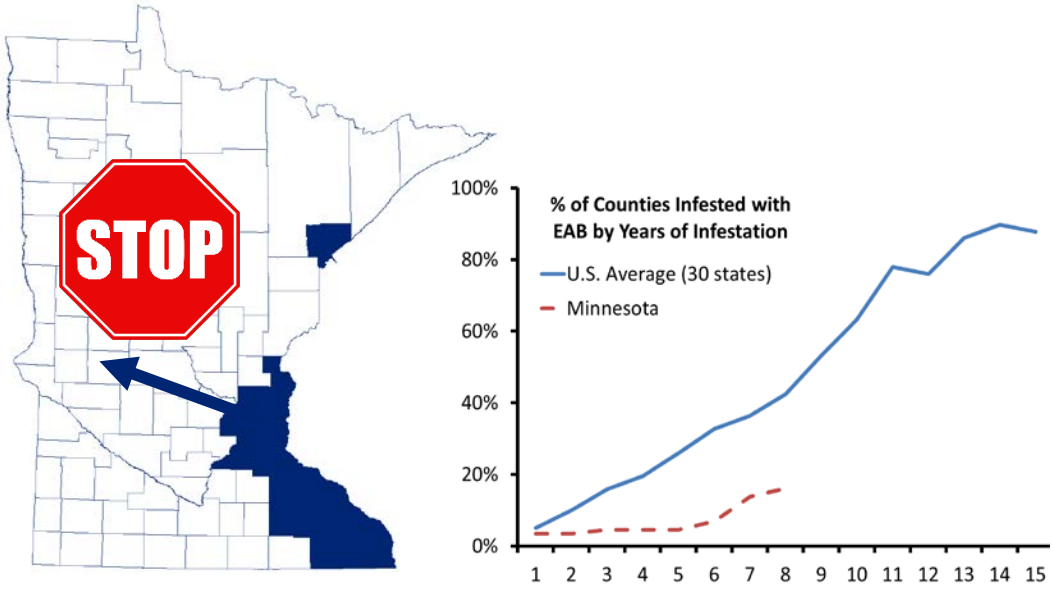


Data Generated From Parcel List

SLOW THE SPREAD OF THE EMERALD ASH BORER

DEPARTMENT OF AGRICULTURE

Prevent the movement of emerald ash borer (EAB) through outreach to citizens



Provide technical assistance to communities and promote monitoring-based management

Provide assistance to communities to manage and slow the spread of EAB

MnSTAC
Minnesota Shade Tree Advisory Committee

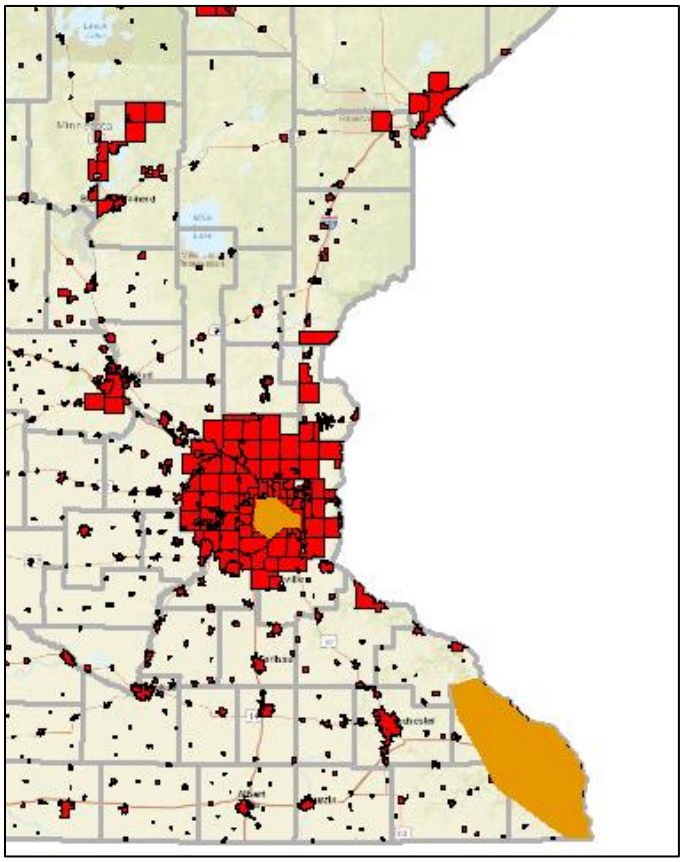
University of Minnesota

Criteria for selecting parcels where work will occur for proposed project, “Slow the Spread of the Emerald Ash Borer”

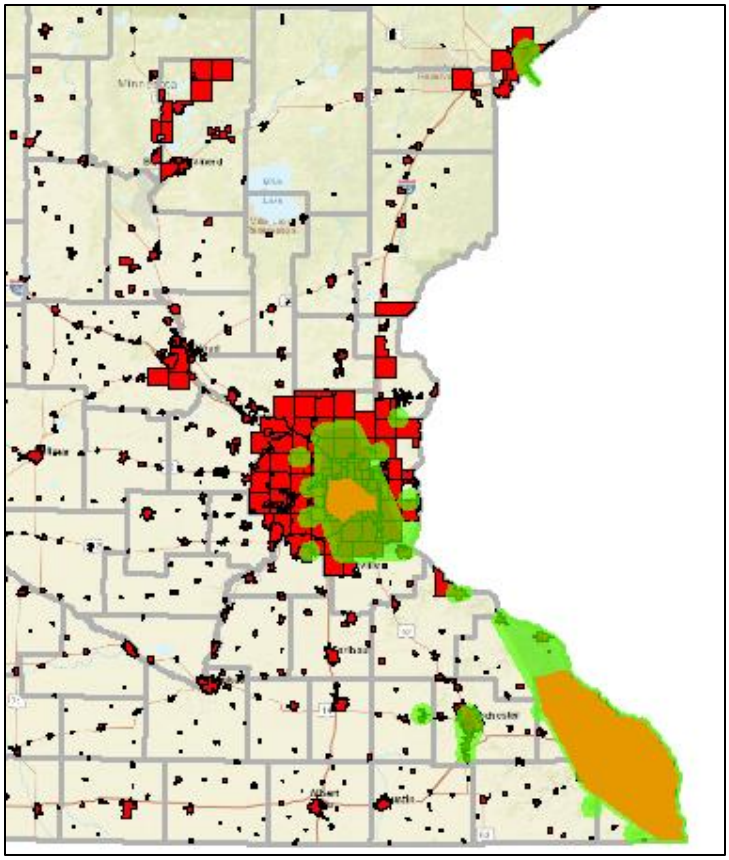
This project would grant funds to municipalities and other local units of government for activities related to slowing the spread of the emerald ash borer (EAB).

Applicants for grant funds would fall into one of five categories depending on the level of EAB population in their area. Activities eligible for grant funds will differ by category so that actions taken in each area have the greatest impact on limiting spread of EAB.

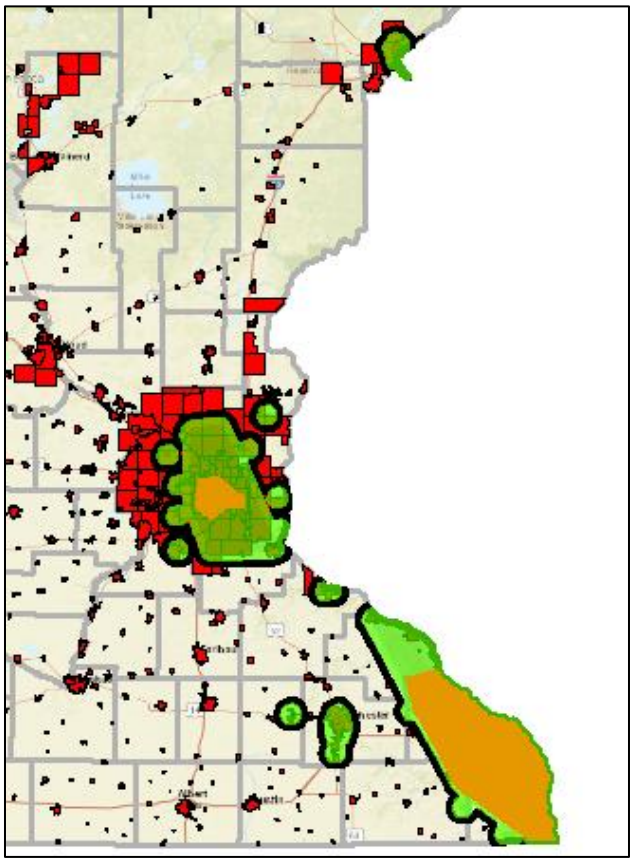
Area 1: Standing dead trees present. In these areas, EAB populations are high enough to be causing tree mortality. In these areas, activities should focus on outreach to prevent movement of infested wood out of these areas as well as providing opportunities for disposal and utilization of infested wood. This currently includes a portion of St Paul and Minneapolis and well as an area of southeastern Minnesota (area highlighted in orange on map, approximately 127,000 acres falling within municipalities).



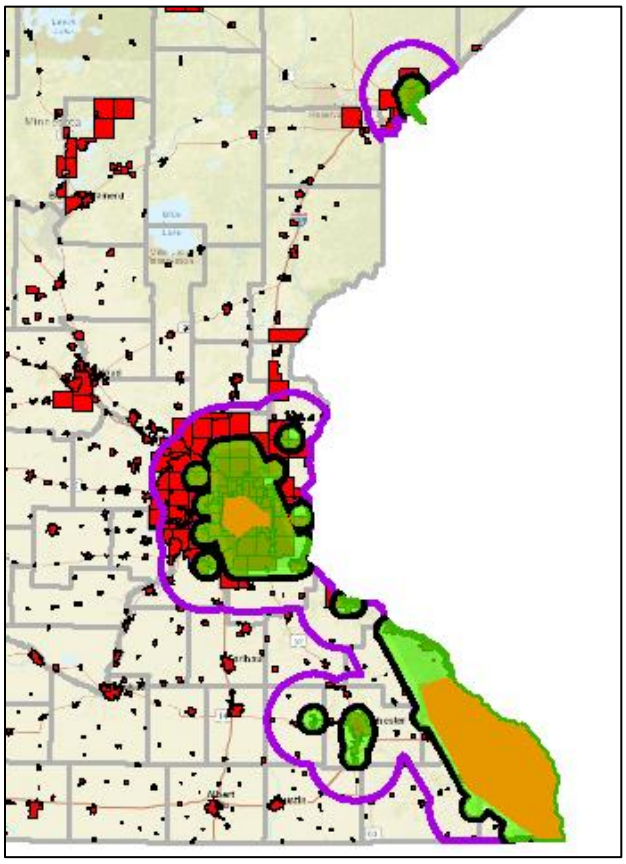
Area 2: EAB present, but no standing dead trees. Outreach about not moving EAB is also important in this area, but rather than focusing on dealing with dead and dying trees the priority should be intensive management to treat high value trees with insecticide and remove and process lower value, EAB-infested trees. Currently this is about 1.2 million acres falling within municipalities (area highlighted in green on map).



Area 3: Within 2 miles of EAB infested area. The focus in this area is outreach for detection and also treating high value trees with insecticides to inhibit EAB spread out of infested areas. This is currently about 895,000 acres falling within cities (black outline around infested area).



Area 4: This area is within 10 miles of treatment areas (Area 3) and the focus is on detection. Currently this is about 2.5 million acres falling within municipal boundaries (outlined in purple on map).



Area 5: This area is the rest of Minnesota where the emphasis should be on outreach related to detection.

Three geographic areas will be considered for grant funds through this project:

1. Areas where EAB populations are large (dead trees present)
2. Areas where EAB is present but populations are not large (no dead trees present)
3. Areas where EAB is not yet known to be present

Grant-funded projects in these areas should utilize different methods in accordance with the level of EAB in the area to either prevent movement out of the area (1), manage populations within the area to prevent spread (2) or monitor for new satellite populations (3).