Threats Template Matrix - EAB

1. **Threat:** The Emerald Ash Borer (EAB) has caused significant mortality to date and threatens to ultimately cause near100% mortality of the ash trees on the ANF. (Handout 6/8 Meeting and anecdotal experience of committee members). The majority of ash trees are projected to fall or break within 5 year of mortality. (Handout 6/8 Meeting). This mortality will negatively affect all users and interests on the ANF. A Large concentration of trails and camping areas are within the mortality area, 13,000 active oil and gas wells are located on the ANF owned by approximately 120 operators; a conservative estimate of roads serving said wells is 985 miles. 401 miles of PA state Routes are located in the ANF with an additional 274 municipal road miles. 609 miles of utility lines are located in the ANF. Ash mortality creates a major safety and economic threat to all of these parties in terms of cost of cleanup of downed trees, lost production, damage to infrastructure etc. The direct economic impact due to the loss of the timber volume to the municipalities and school districts could number in the millions of dollars in lost revenue if the ash species is not sold into the timber industry. 500,000 acres X 5,000 board feet per acre X 3% ash basal area X $500 per MBF stumpage= estimated present Ash stumpage value of $37,500,000.00. 25% timber sale revenue to school districts and municipalities would equal $9,375,000.

   Clearly all interests and users of the ANF will suffer great economic loss and recreation access loss if the Ash species is not treated to prevent mortality or removed.

2. **Location:** The majority of this projected mortality is located around the Kinzua impoundment, to the south of the New York Border and to the north of PA route 59, roughly speaking. Please see the mortality projection maps. Very noteworthy regarding the location of the threat is the ANF designated **Management Areas** that a significant amount of project mortality will likely occur. Significant mortality is projected in Management Area 8.2 “National Recreation Area,” Management Area 2.2 “Late Structural Linkages” and Management Area 5.2 “Wilderness Study Area.” Please see Management Area Maps. Each of these areas have specifically defined roles and restrictions within the ANF as discusses in the Allegany National Forest Land and Resource Management Plan.

3. **Impact or Severity** This group believes it is hard to overstate the severity of the threat that is presented by Ash Mortality. The anecdotal experience of the members of this group is that on the in-holdings within the ANF and the parcels immediately surrounding the ANF, the attack of the EAB has been swift and relentless. Many ash trees which appeared healthy in the 2016 growing season did not leaf in 2017. In recognition of the extreme severity of the problem owners of private timber holdings in and next to the ANF have harvested in excess of 90% of the white ash, with work diligently underway to harvest the remainder before mortality renders the trees valueless and/or too dangerous to harvest. The rapidly closing time-window within which to harvest is an additional element of severity that cannot be overstated.

4. **Desired Outcome:** To eliminate, or reduce to practical means, the threat of dead and dying ash trees falling on people and property, public and private, as quickly as possible all while providing forest products to area industry and financially supporting municipalities and school districts.

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5. Strategies to Achieve the Desired Outcome

Strategy 1: Expedite pre-mortality timber harvesting in order to treat the largest amount of acres at the lowest cost to the public.

Ash pre mortality based timber sales should be designed in a manner to gather as much interest from the timber industry as possible in order to ensure projects are purchased in a timely manner and treated. Ash timber harvests should have minimum stumpage pricing set low to ensure the market value of the timber exceeds the minimum estimated pricing. Ash timber harvests should not be included in Stewardship contracting project. Ash timber sales should be exempted from small business concern timber sale bidder class restrictions. Categorical exclusion process should be employed at each possible opportunity.

Comments received from the ANF working group were generally filtered into two categories, aesthetic concerns and regeneration.

Our group believes that a temporary change in crown structure in a controlled manor such as a timber harvest will have a shorter term visual change and will be overall more pleasing than retaining thousands of dead trees for an indeterminate amount of time, until they fall over. One or the other will happen, this collaborative group and the ANF staff will make these decisions.

This group is not recommending and stand level silvicultural, regeneration or timber harvest recommendations, rather an overall strategy for mitigating a forest health issue. Concerns such as competing vegetation, sunlight management, deer herd pressures, desirable regeneration etc. all must be addressed on a case by case basis by the on the ground forest management staff of the ANF as is the current case with all ANF timber sale management projects.

Ash Timber sales should be prioritized to treat areas of high public safety and high infrastructure concerns. Pre salvage harvests should focus resources around harvesting along road corridors, utility lines, OGM production locations, trails and campsites. Ash Timber sales should also be large in scope and size. A very recent fine example is the **Hollow Trail** Timber sale with a sale area of 870 acres and harvest confined to 271 acres with a specific design to harvest ash.

Our Group recommends a Categorical Exclusion request to allow pre-mortality timber harvesting in the Management area 8.2 to reduce risk to the public caused by having dead or dying trees so close to high use recreation areas. Also to reduce cost to the ANF of cleaning and maintaining these the dead woody debris that will quickly accumulate recreations areas. The Pennsylvania DCNR has instituted these types of timber sales within the PA State Parks systems for these reasons. Currently the state park system has received very little negative push back from the public for these projects.

Management Area 5.2 allows for “Natural Succession, No Timber Harvest.” An argument could be made that EAB infestation is not a Natural Succession event as it is an exotic invasive species. The management goals of this area have already been manipulated by human interference even if it is or was unintentional.

MA 5.2 is a logical area within the ANF to introduce biological control measures as discussed below.

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When: ASAP

Who:

Cost: This strategy will provide economic benefits to local economies, school districts and municipalities.

Strategy 2: Biological control. This strategy would consist of releasing three species of parasitoids for the control of emerald ash borer:

- *Tetrastichus planipennisi*, larval parasitoid
- *Oobius agrili*, egg parasitoid
- *Spathius galinae*, larval parasitoid

The current goal of APHIS is to release in all EAB-infested counties. The Bureau of Forestry is already releasing in Forest and Elk Counties. The Forest County site is immediately adjacent to ANF land. The Elk County site is approximately 20 miles from the edge of the National Forest. A site has been identified and is awaiting approval for Warren County. A tentative site has been identified in the Management Area 5.2/8.2 area. This site still has to be finalized and sent to APHIS for approval These organisms are believed to move about 7 miles per year.

Tetrastichus planipennisi and *Oobius agrili* have established in other parts of Pennsylvania. In addition, there is scientific evidence that *T. planipennisi* is able to reduce EAB larval levels where there is thin bark (i.e. young trees and high branches) to levels that allow trees to survive. Neither *O. agrili* nor *Spathius galinae* have been released long enough to confirm their efficacy against EAB. The fact that *O. agrili* is established in Pennsylvania necessarily means that it is reducing the number of EAB eggs to some degree. Further, if *S. agrili* can establish, it should be able to attack larvae beneath thicker bark than *T. planipennisi*.

Unfortunately, it is still likely that a large percentage of larger size class ash will be lost. What is hoped at this point is that the next generation of ash trees will be protected by these parasitoids. Ash seedlings are abundant in many parts of the ANF, and getting these organisms established should offer them some protection.

Site requirements:

- Not to be harvested/developed in the next 5 years
- Diversity of size classes
- At least 40 acres
- At least 25% ash

These releases can also be conducted in the vicinity of chemically treated trees. This might be an option where hazard trees are a concern.

Refer to Tim Tomon's expertise on this topic. Management areas 5.2 and 8.2 seem to be logical concentration areas for these controls of experiments.

When: Starting late summer, 2017. Releases will continue through the 2018 season and possibly all or part of 2019.

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Who: Cooperating agency personnel will assist with assessing and setting up release sites. Parasitoids provided by APHIS-EAB Biocontrol Program. **Cost**: The cost of the parasitoids is covered by APHIS. Costs for personnel to conduct site assessments and releases are covered by cooperating agencies.
6. Monitoring Strategies *(Add more as needed)*
Strategy 1:
When/Frequency:
Who:
Cost:
Strategy 2:
When/Frequency:
Who:
Cost:
7. Additional Information Needs:
8. Other: