Department of Energy
Oak Ridge Office
P.O. Box 2001
Oak Ridge, Tennessee 37831

May 7, 2015

FINDING OF NO SIGNIFICANT IMPACT AND NOTICE OF INTENT TO ADOPT THE UNITED STATES DEPARTMENT OF AGRICULTURE'S ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED RELEASE OF THREE PARASITOIDS FOR THE BIOLOGICAL CONTROL OF THE EMERALD ASH BORER (*AGRILUS PLANIPENNIS*) IN THE CONTINENTAL UNITED STATES

AGENCY: United States (U.S.) Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI) and Notice of Intent (NOI) to Adopt the U.S. Department of Agriculture (USDA) Animal and Plant Inspection Service's (APHIS') Environmental Assessment (EA) for the Proposed Release of Three Parasitoids for the Biological Control of the Emerald Ash Borer (EAB) (*Agrilus planipennis*) in the Continental U.S.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S. Code 4321 et seq), the U.S. Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and USDA APHIS' NEPA implementing procedures (7 CFR Part 372), the USDA APHIS completed an EA in July 2007 that analyzed the potential environmental consequences of the release of three parasitoids into the continental U.S. for the biological control of a non-native, invasive beetle, the EAB.

The EAB is a non-native phloem-feeding pest of North American ash trees. This devastating pest was first found in 2002 in North America where it was discovered in southeastern Michigan and adjacent areas in Windsor, Ontario, Canada. It is thought to have been introduced in the 1990s on solid wood packing material originating from Asia. This extremely destructive beetle poses an enormous threat to all of North America's ash resources. Unlike many other wood boring beetles, EAB aggressively kills healthy and stressed trees; many dying within two to three years after becoming infested. Currently, EAB has no known effective natural enemies in North America. If it is not contained or its effects mitigated, this pest will continue to infest and kill all species of trees in the genus *Fraxinus*. The impact on ash in North America has been compared to the effects of chestnut blight and Dutch elm disease, which devastated rural and urban forests in the 20th century. [1]

[1] USDA, *Emerald Ash Borer Program Manual, Agrilus planipennis (Fairmaire),* ver. 1.3, revised July 2013.

State and local cooperators have conducted survey, control, and eradication activities. Efforts have included imposing quarantines, conducting surveys, delimiting areas around confirmed infested sites, removing ash trees, and developing information that will support management efforts. Lack of effective survey and control technology made containment efforts challenging.

As EAB spreads throughout North America, regulatory agencies, land managers, and the public are seeking sustainable management tools such as biological control to reduce EAB population densities and slow its spread. EAB is spreading rapidly and poses a serious threat to ash trees in the U.S. if not controlled. While the ability to detect and find EAB has substantially improved since it was first detected, EAB has spread and can now be found in Michigan, Arkansas, Colorado, Connecticut, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, Wisconsin, Ontario, and Quebec. In North America, native ash trees have little or no resistance to EAB and natural enemies have so far had little effect when EAB populations are high. For current information concerning the EAB, a website has been established as part of a multinational effort to share the latest information. (http://www.emeraldashborer.info/#sthash.BCPbTbVk.dpbs).

The DOE Oak Ridge Office (ORO) conducted a review of the USDA's EA, as well as other USDA publications; and based on this review, the DOE ORO proposes to adopt the USDA's EA to fulfill its NEPA obligations to release parasitoids into the environment on the Oak Ridge Reservation (ORR) for the purpose of reducing EAB populations. The USDA analysis was nationwide in scope, and the three parasitoids were deemed acceptably host-specific and not expected to attack insect species other than the EAB. The three parasitoids released as part of the USDA's EA are the same parasitoids that are being proposed for release on the ORR.

PUBLIC AVAILABILITY: The USDA made the EA available for public comment on May 23, 2007, by notification in the Federal Register (Volume 72, Number 99, page 28947). Forty-one comments were received on the EA. Thirty commenters were in favor of the release of the biological control agents, and eleven were opposed. Responses to comments in opposition of the release were included in the final EA. No significant issues were raised during the comment period. The USDA posted the EA and FONSI online, and they are available at the following website address: http://www.aphis.usda.gov/plant_health/ea/downloads/eab-ea07-07.pdf.

The FONSI and the EA prepared by the USDA on the Proposed Release of Three Parasitoids for the Biological Control of the EAB may be reviewed at and copies of the documents obtained from:

U. S. Department of Energy
Information Center
Building 1916-T1
1 Science.gov Way
Oak Ridge, Tennessee 37831

Phone: (865) 241-4780
DOEIC@Science.doe.gov

FURTHER INFORMATION ON THE NEPA PROCESS: For further information on the NEPA process, contact:

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DESCRIPTION OF PROPOSED ACTION: It has been proposed to release on the ORR three insect parasitoid species (stingless wasps) for the biological control of the nonindigenous EAB. The biocontrol stingless wasps include *Spathius agrili* (parasitizes up to 90% of EAB larvae), *Tetrastichus Planipennisi* (kills up to 50% of EAB larvae), and *Oobius agrilli* (kills up to 60% of EAB eggs). These three parasitoid species are the same species that were identified in the USDA's 2007 EA. These wasps are stingless, very small insects that attach to either the EAB beetle egg or larvae. The wasps cannot sting humans or pets and pose no risk to human health.

Ash trees are relatively common within the ORR campus areas, along roadsides, at the Clark Center Park, and (because of shallow limestone derived soils) are prominent in Bethel Valley and on Copper Ridge. Based upon the most recent forest sampling in Three Bends, there are an estimated 250,000 ash trees over 2-inches diameter at breast height (dbh), and 50,000 ash trees over 10-inches dbh located on the ORR. Due to the ash density on the ORR, DOE, in consultation with The University of Tennessee (UT) Plant Pathology Department, has determined the ORR would be a suitable location for EAB parasitoid releases.

Since 2009, the EAB Biological Control Production Facility (established in Brighton, Michigan) has been rearing non-native stingless wasps for programmatic and ongoing research releases in EAB-impacted states, and USDA has continued to research and support biocontrol of EAB as a long-term strategy in the U.S. In 2010, EAB biocontrol releases took place in Indiana, Illinois, Kentucky, Maryland, Michigan, Minnesota, Ohio, and West Virginia. Parasitoid release sites were established across a range of EAB densities, ash species, and environs to determine the conditions under which each species is most effective. Results at the different sites have helped determine the locations for mass-release in subsequent years and potentially for establishing locations for field insectaries. Today, the Brighton facility supplies 275,000 parasitoids for release in 14 states. State program partners monitor releases in Illinois, Indiana, Kentucky, Maryland, Michigan, Minnesota, Missouri, New York, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

USDA and the Tennessee Department of Agriculture (TDA) Division of Regulatory Services, along with the Plant Protection and Quarantine (PPQ) EAB National Program Management, collectively determine release sites for biocontrol. State cooperators secure permits and agree to follow standardized release and monitoring protocols, and a permit has been issued by the APHIS to the TDA Division of Regulatory Services. Cooperators also agree to monitor release sites for parasitoid establishment for a minimum of three years following each release. Post-release monitoring, including impacts on EAB and non-target wood-boring beetles and spread and establishment of each parasitoid species, would be conducted in accordance with the USDA's *Emerald Ash Borer Biological Control Release and Recovery Guidelines* by UT and the Oak Ridge National Laboratory.

Sufficient densities of appropriately sized, living ash trees have been located on the ORR. Meetings have been held with the UT EAB collaborator to determine the coordinates for the releases and standardized release and monitoring protocols would be followed. The UT EAB collaborator suggests the thinner bark of smaller host trees leads to more releases that are successful and having nearby populations of mature ash for the following generation of the parasitoids to occupy would fulfill a longer-term establishment strategy. Some of the smaller trees may require cutting during the proposed activity. The UT EAB collaborator also proposes to take sections from a sample of the trees as feedback to judge the effectiveness of the release and predation. If parasitoid populations are established, it may then be possible to encourage their spreading by "transplanting" cut sections containing their larvae to other suitable locales. DOE proposes to release these parasitoids during the April/May 2015 time period, just at the emergence of mature EAB.

ALTERNATIVES: The USDA 2007 EA analyzed two alternatives in response to the need to control EAB and contain infestations: (1) no action and (2) biological control by the release of three parasitoids, *Oobius agrili, Tetrastichus planipennisi,* and *Spathius agrili*, for the management of EAB. The analysis included in the EA indicated taking no action to suppress EAB could potentially put the nation's ash tree resources and their associated habitats at risk. USDA/APHIS determined the proposed release would have no effect on federally listed threatened and endangered species or their habitats in the continental U.S. USDA/APHIS prepared a biological assessment that was reviewed by the U.S. Fish and Wildlife Services (USFWS) in Arlington, Virginia, that considered the effects of the proposed release of the parasitoids on federally listed species, and USFWS supported the USDA/APHIS "no effect" determination.

The USDA determined there would be no significant impact to the human environment from the implementation of any of the action alternatives, and it was not necessary to prepare an environmental impact statement.

ENVIRONMENTAL IMPACTS: A complete review of the anticipated impacts to the quality of the human environment from the release of these three parasitoids into the environment of the continental U.S. was presented in the USDA's 2007 EA. For analysis purposes, the EA considered potential environmental and economic impacts of the proposed release of each of the three

parasitoids, which was the preferred alternative. The EA concluded the release of the three parasitoids would have a positive impact on the environment by moderating EAB population increase, thus limiting ash tree damage. Based on host-specificity testing conducted in the field in China and in laboratory studies in the U.S., the EA also concluded the three parasitoids are acceptably host-specific and are not expected to attack other insect species besides EAB, although there may be incidental attack of other Agrilus species.

APHIS determined the proposed release would have no effect on federally listed threatened and endangered species or their habitats in the continental U.S. USDA/APHIS prepared a biological assessment that was reviewed by the USFWS in Arlington, Virginia, that considered the effects of the proposed release of the parasitoids on federally listed species. The USFWS supported the USDA/APHIS in a "no effect" determination.

There were no disproportionate adverse effects to minorities, low-income populations, or children in accordance with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, and Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks.*

The USDA determined implementation would result in no significant impact to the human environment from the implementation of the proposed action, executed a FONSI, and proceeded with implementation of the proposed action.

DETERMINATION: Based on the results of the analysis reported in the USDA EA, as allowed by CEQ regulations (40 CFR 1506.3) and DOE regulations (10 CFR 1021, Subpart B, §1021.200(d)), DOE has determined the proposed action is not a major federal action that would significantly affect the quality of the human environment within the meaning of NEPA. Therefore, the preparation of an Environmental Impact Statement is not necessary, and DOE is adopting the USDA's EA and issuing this FONSI.

Issued at Oak Ridge, Tennessee, this 7th day of May 2015.

R. Kevin Hall, Manager