

Record of Decision

Asian Longhorned Beetle Eradication Program

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Purpose

This document records the rationale for selection of one of the five alternatives analyzed in the final programmatic environmental impact statement, “Asian Longhorned Beetle Eradication Program”. The Asian longhorned beetle (ALB), *Anoplophora glabripennis* (Motchulsky), is a foreign wood-boring beetle that threatens a wide variety of hardwood trees in North America. The beetle bores through the tissues that carry water and nutrients throughout the tree, causing the tree to weaken and eventually die. Symptoms appear 3 to 4 years after infestation, and tree death can occur in 10 to 15 years, depending on site conditions. The insect threatens urban and suburban shade trees, and recreational and forest resources valued at hundreds of billions of dollars. ALB is likely to have negative impacts on forest-dependent species, including threatened and endangered (T&E) species. Significant impacts to soil and water quality may occur in forested areas where ALB-host trees are dominant.

The ALB eradication program is a joint effort between Federal and State agencies to identify and eradicate ALB in the United States. So far, there have been outbreaks in five States including Illinois, Massachusetts, New Jersey, New York, and Ohio.

Statutory Authorities

The U.S. Department of Agriculture’s (USDA), Animal and Plant Health Inspection Service (APHIS) mission includes protecting and promoting U.S. agricultural health and natural resources. Specifically, the Plant Protection Act of 2000 (7 United States Code (U.S.C.) 7701 *et seq.*) gives APHIS the authority to take actions to exclude, eradicate, and control plant pests, including ALB. A description of APHIS statutory authorities is in the purpose of and need for action section of the final environmental impact statement.

The Decision

We have selected alternative 5, which encompasses all ALB eradication strategies, including the removal of infested trees, and the removal or treatment of high-risk host trees. The Program may add other treatment(s) that become available to the currently approved treatments for managing ALB, referred to as adaptive management. APHIS would only add a new chemical treatment if the Environmental Protection Agency (EPA) approves its use on ALB and it poses no greater risks to human health and nontarget organisms than are disclosed in the final programmatic environmental impact statement for the currently approved chemical treatments. APHIS will conduct site-specific environmental assessments to address local issues before implementing this alternative. APHIS will tier site-specific environmental analyses to the final programmatic environmental impact statement. Alternative 5 will guide the ALB eradication program.

Alternatives

Combinations of three eradication strategies, or their absence, comprise the five alternatives analyzed in the final environmental impact statement.

Two alternatives considered but not analyzed in the environmental impact statement are the use of other insecticides and the use of other integrated pest management and suppression strategies. These alternatives involve methods still in development and are not ready for use against ALB. A detailed discussion of the alternatives considered but not analyzed is in section II: Alternatives of the final environmental impact statement.

The five alternatives apply to areas where ALB outbreaks occur. Alternative 1 slows the spread of ALB into new areas but is not an eradication strategy. The objective of eradication is to prevent the insect from causing more tree loss by stopping its spread and establishment in new areas and removing it from where it occurs. Eradication strategies are the removal of infested trees, and the removal of, or the application of imidacloprid (an insecticide) to, high-risk host trees within a ½-mile radius of infested trees. The Program uses three herbicides (triclopyr, or triclopyr mixed with imazapyr and/or metsulfuron-methyl) to treat tree stumps to prevent sprouting if stumps are not removed.

Alternative 1. No Action. APHIS would conduct survey and impose quarantine.

Alternative 2. Removal of Infested Trees. APHIS would remove trees infested with ALB.

Alternative 3. Full Host Removal. APHIS would remove infested trees as well as high-risk host trees within a ½-mile radius of infested trees.

Alternative 4. Insecticide Treatment. APHIS would remove infested trees and apply the insecticide imidacloprid to high-risk host trees within a ½-mile radius of infested trees.

Alternative 5. An Integrated Approach. APHIS would remove infested trees and remove or treat with imidacloprid high-risk host trees within a ½-mile radius of infested trees.

Environmentally Preferable Alternative

Alternative 1 poses the greatest potential for unfavorable effects due to ALB. Alternative 5 poses the least potential for unfavorable effects due to ALB because APHIS could apply treatments in infested areas throughout the United States; however, there would be unfavorable effects due to treatments. Discussion of unfavorable effects due to the ALB and ALB treatments is in section IV: Environmental Consequences of the final environmental impact statement with chemical specific human health and ecological risk assessments in Appendix E and F.

Alternative 5 is the environmentally preferable approach. The actions other agencies, organizations, or individuals take against ALB without cooperation of APHIS are not within the scope of the final environmental impact statement or this Record of Decision.

Rationale for the Decision

We compared the alternatives based on (1) how they respond to the goal of eradicating ALB, (2) how they respond to issues that arose during scoping, and (3) the flexibility they provide in eradicating ALB.

We selected alternative 5 because it is an eradication program that provides several eradication options which afford flexibility and site-specific adaptations in managing ALB in affected areas. In addition, APHIS use of the eradication options under alternative 5 has been successful in eradicating the pest from outbreaks in the United States.

Eradication Goal

Alternative 5 best meets the APHIS goal to eradicate ALB by allowing the agency to apply eradication measures in areas where it occurs. Alternative 1 is not an eradication program but a slow-the-spread program and does not meet APHIS' goal to eradicate the insect. Alternatives 2 through 4 only partially meet the eradication goal because those alternatives strategies do not lead to eradication.

Eradication success would best occur under alternative 5 because the Program could either remove or treat high-risk host trees located within a ½-mile radius of infested trees. Host trees near infested trees are likely to have beetle infestations given ALB's dispersal pattern. Trees in the early stages of infestation may not display symptoms (wilt, dieback) or noticeable signs (entry and exit holes, etc.). Allowing the Program to remove or apply chemical treatments to high-risk host trees would contain the outbreak and facilitate eradication.

Issues

The major issues that arose during scoping and in previous environmental assessments APHIS prepared for the ALB eradication program include how the eradication strategies affect forest, environmental, and ecological resources, as well as economic, social and cultural resources.

Forest Resources

Trees infested with ALB eventually die. The loss of trees can change tree species diversity, age class distribution, and overall health and vigor of urban and rural forests. Alternative 1 does not prevent ALB from changing the forest condition. Alternative 2 may have a short-term effect on forest health through the removal of infested trees and will have a long-term effect on the forest health because this approach is unlikely to lead to successful eradication. Alternatives 3 and 4 may have a short-term effect on forest health through the removal of infested trees and the removal or treatment of high-risk host trees but forest health will improve over time in response to ALB eradication. Alternative 5 provides the greatest protection to forests because it allows action anywhere that ALB may occur and the use of eradication strategies appropriate to the site. The discussions of the affect the alternatives may have on forest resources are in section IV: Environmental Consequences of the final environmental impact statement.

Environmental Resources

Water

Tree loss will occur for all five alternatives. Many of the preferred hosts for ALB are tree species that occupy riparian and wetland areas. Loss of tree cover and density from ALB infestations and eradication strategies can have negative impacts on streambank stabilization, water temperature, sediment loading, hydrology, nutrient cycling, and contaminate removal in aquatic habitats. Alternative 1 would cause the least immediate impact to water quality but would have a long-term impact because ALB would continue to spread and kill trees. The removal of infested trees could have short-term impacts to water quality. The removal of infested trees (Alternatives 2 and 4) and high-risk host trees (Alternatives 3 and 5) would have greater short-term impacts because of the potential removal of a higher number of trees. Planting trees or natural regeneration of tree-removal areas will reduce long-term impacts from eradication activities.

Air

Trees intercept pollutants from the air, and sequester the gases, including carbon dioxide, that contribute to greenhouse gas levels. Tree loss will occur for all five alternatives. Similar to the impacts on water quality, the more trees removed, the greater the short-term affect to air quality. Planting trees or natural regeneration of tree-removal areas will reduce long-term impacts from eradication activities.

Soil

Trees are integral to soil nutrient cycling, soil structure and stability, and soil temperature. The loss of host trees in area where ALB-host trees are dominant would alter these soil features. Tree loss will occur for all five alternatives. Similar to the impacts on water and air quality, the greater number of trees removed, the greater the short-term effect on soil features. Planting trees or grass and the natural regeneration of tree-removal areas will reduce the long-term impacts from eradication activities. The discussions of the affect the alternatives may have on the environmental resources are in the environmental consequences section of the final environmental impact statement.

Ecological Resources

The ALB is the target of eradication strategies. All other plant or animal species are nontarget organisms. The eradication strategies may directly or indirectly affect nontarget organisms. The loss of trees from ALB infestation may also affect nontarget organisms.

Alternative 1 results in no effects from eradication activities but would result in significant negative effects to ecological resources from ALB establishment. Alternatives 2 through 4 cause effects from eradication strategies and reduce the effects caused by ALB. Alternative 5 is expected to result in long-term impacts that are less than those described under the other alternatives. Under alternative 5, eradication effects to ecological resources will be of shorter duration and localized compared to alternatives 2 through 4. Site-specific environmental assessments must weigh the benefits of a treatment against the potential unfavorable effects to determine the most appropriate

treatment(s) for the area. The discussions of the affect the alternatives may have on ecological resources are in the environmental consequences section and appendices E and F of the final environmental impact statement.

Economic, Social, and Cultural Resources

The loss of trees to ALB or eradication activities will cause both market and non-market impacts. The severity of these impacts will vary depending on the density of host trees in an area, the rate of spread of the insect, the rate of decline of the trees, and the type of eradication strategy. Alternatives 1 and 2 would have the greatest potential impacts because neither approach eradicates ALB. Alternative 5 may have economic, social, and cultural impacts similar to those for alternatives 3 and 4. However, the flexibility in eradication strategies under alternative 5 may reduce the impacts. The environmental consequences section in the final environmental impact statement describes the market and non-market impacts of the five alternatives.

Human health concerns fall within two categories: (1) the exposure to and effects from the three herbicides and the insecticide imidacloprid, and (2) the loss of trees on human health and well-being. A detailed examination of the human health risks is in the environmental consequences section and appendices E and F of the final environmental impact statement.

Cumulative Impacts

Cumulative effects that may occur in a treatment area include the loss of trees and the use of an insecticide and herbicides. The severity and intensity of tree loss varies under the different alternatives, as well as the dominance of ALB-host trees in an area. We have considered the cumulative effects discussed in the environmental consequences section of the final environmental impact statement in our decision.

Management Flexibility

The alternatives provide a range of options that APHIS could use to eradicate ALB from infested areas. Alternative 1 is not an eradication program but a slow-the-spread option. Alternatives 2 through 4 only partially meet the eradication goal because some of the strategies may not lead to eradication and do not afford the Program flexibility in strategy options. Alternative 5 provides flexibility in addressing high-risk host trees and allows the Program to implement eradication strategies based on site-specific conditions.

Mitigating Measures

APHIS recognizes the various alternatives may pose some risk to human health and the environment. APHIS mitigates risks associated with the eradication strategies by imposing Program requirements, and in the case of pesticide use, Federal regulations. This includes pesticide label language to reduce risk to human health and the environment. The coordination with State and other stakeholders on site-specific eradication efforts ensure the implementation of State and local requirements. A discussion of mitigation measures is in the special

programmatic considerations section of the final environmental impact statement. This section discusses measures to minimize adverse effects from Program activities to human health and the environment. For example, use of no-spray buffer zones to minimize or remove insecticide or herbicide drift into sensitive areas. Site-specific analyses will decide the need for further mitigation measures.

Threatened and Endangered Species

In the environmental consequences section of the final environmental impact statement APHIS considered the potential effects of ALB establishment, and the ALB eradication program, on listed species. To date APHIS has consulted with the U.S. Fish and Wildlife Service (FWS) on site-specific ALB outbreaks. In compliance with the Endangered Species Act of 1973 (16 U.S.C. sections 1531-1536, 1538-1540) APHIS will continue to consult with the FWS or—where appropriate—the National Marine Fisheries Service, on the application of ALB eradication strategies in site-specific outbreaks. APHIS will contact the appropriate field offices of the FWS as part of the environmental analysis process for site-specific projects.

Monitoring

APHIS conducts surveys to determine the extent of ALB infestations and if eradication strategies are effective. One goal of the ALB environmental monitoring program is to minimize exposure of the public and the environment to Program-applied imidacloprid. A discussion of APHIS program monitoring is in the special programmatic consideration section of the final environmental impact statement.

Public Involvement

A public involvement effort informed the public about the environmental impact statement and asked for suggestions and concerns related to the proposed ALB eradication program. Public outreach included formal public comment periods announced through social and print media and the APHIS Stakeholder Registry that contains almost 12,000 contacts. APHIS sent letters to all federally recognized tribal nations in the contiguous United States and held a follow-up conference call with tribal nations. APHIS also notified Federal and State partners, and non-governmental organizations.

During the first public comment period, APHIS received 27 comment letters in response to the notice of intent the agency published in the Federal Register (78 FR 50022–23, August 16, 2013) describing its intent to prepare a programmatic environmental impact statement for the ALB eradication program. APHIS considered all comments in the plan of the environmental impact statement. Many comments did not raise specific issues for analysis but did provide opinions for or against certain eradication methods. APHIS and its cooperators recognize the public's concern about the impacts of ALB and program activities on human health, biological resources, and the physical environment and address these concerns in the environmental impact statement.

During the second public comment period, APHIS received 14 comment letters in response to the draft environmental impact statement. The Environmental Protection Agency published the notice of availability in the Federal Register on March 13, 2015. No comments triggered significant changes to the alternatives, environmental consequences, or cumulative impacts in the final environmental impact statement.

During the third public comment period, APHIS received 2 comment letters in response to the final environmental impact statement. The notice of availability was published in the Federal Register on September 11, 2015. Comments received on the final environmental impact statement did not change the analysis in the document.

A description of public affairs and public involvement activities appears in section I: Purpose and Need for Action of the final environmental impact statement.

Implementation

A minimum of thirty days has passed since the Environmental Protection Agency published in the Federal Register the notice of availability of the final environmental impact statement. APHIS may immediately implement alternative 5 but must conduct site-specific environmental analyses in accordance with the National Environmental Policy Act.

You can direct your questions about this decision or other topics related to the environmental impact statement to:

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