SOUTHERN GROUP OF STATE FORESTERS
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August 4, 2023

Ms. Jan Matuszko
Director Environmental Fates and Effects Division
Office of Pesticide Programs Environmental Protection Agency
1200 Pennsylvania Ave, NW
Washington, DC 20460-0001

RE: Vulnerable Species Pilot Project for Endangered Species (EPA-HQ-OPP-2023-0327)

Dear Ms. Matuskzo,

The Southern Group of State Foresters (SGSF) is pleased to offer the below and attached comments in response to federal Docket ID No. EPA-HQ-OPP-2023-0327 – Draft Plan for Vulnerable Listed (Endangered and Threatened) Species Pilot Project: Proposed Mitigations, Implementation Plan, and Possible Expansion.

SGSF is a non-profit association representing the interests of the state government forestry agencies from a 13-state area of the southern United States as well as Puerto Rico and the US Virgin Islands. The SGSF mission is to provide leadership in sustaining the economic, environmental, and social benefits of the South's forests, which includes supporting the conservation of our region's diverse flora and fauna, including the many Threatened and Endangered Species (TES). One of the greatest challenges in our state-level and regional work is combating forest health threats, including insects and disease.

In reviewing the proposed pilot program as written, it appears the potential impacts to forestry operations in our region are minor given the geographic and species scope. However, as the Environmental Protection Agency (EPA) and US Fish and Wildlife Service (USFWS) implement the pilot program with a view towards potentially adding additional TES in the future, we see areas of concern which we would like to bring to your attention for consideration as you proceed.

More widespread implementation of this proposal could potentially add additional barriers to the use of neonicotinoids in forest health applications. We have attached our SGSF Issue Paper entitled "Protecting the Use of Neonicotinoids for Forest Pest Control" for your reference, but the ability to use neonicotinoids, especially imidacloprid, in addressing forest health challenges is vital. In particular, for established pests such as Hemlock Wooly Adelgid (HWA) and Emerald Ash Borer (EAB), as well as emergent pests such as Elm Zigzag Sawfly, the use of neonicotinoids is the main line of defense against their spread.

Many of our member states, especially those in the Appalachian region including Kentucky, Tennessee, Virgina and North Carolina, have hemlock treatment programs and established Hemlock Conservation Areas (HCAs) designed to address and avoid outbreaks of HWA. Because eastern and Carolina hemlocks are keystone tree species and offer vital habitat often in riparian areas, these programs are imperative to protect HCAs from being decimated by the invasive HWA. The pilot project process, if

implemented across-the-board on all TES species, could require additional process burden to determine where species pesticide use limitation areas (PULAs) would impact these conservation areas and how USFWS would want to handle those locations.

Most forestry neonicotinoid applications are spot-treatments, and as currently written we read the proposal to not apply to such small-scale applications. However, some states use a soil-drench method of imidacloprid application in which single trees are treated, which we are unsure whether EPA and/or USFWS would interpret as a spot-treatment. This proposal bases risk assessments of imidacloprid in forests on 100% of acres being treated in managed forests annually. However, this is not reflective of forestry practices, where a small percentage of natural forest acres are treated with imidacloprid for conservation purposes to protect forests from invasive forest pests. If soil drench of imidacloprid is not considered a spot-treatment (and thus be covered by this proposal), we would desire additional mitigation options added to Table 4 (runoff/erosion measures). These would give applicators more options to adapt HWA treatments if PULAs are involved, adding more mitigation strategies specific to soil drench treatments in natural forest settings. The current mitigations would greatly reduce the effectiveness of HWA treatment programs by limiting the number of trees that can be protected and limiting protection of hemlocks in vital riparian habitats by increasing the buffer (a buffer of 3.3 m is currently used based on previous water quality assessment studies). If EPA and USFWS do expand this proposal in species and geographic scope, we would welcome further dialogue about what those mitigation measures need to be to support forest health.

Current soil-drench applications of imidacloprid for HWA management adhere to the optimized dosage as determined in a paper from University of Georgia (Benton and Cowles, 2016). Treatments are effective for 5-7 years, reducing the need for frequent re-treatments; re-treatments in HCAs typically occur every 5 years to maintain protection of those hemlocks. These practices should be considered when evaluating risk assessments for forest pesticide use as these methods are more representative of practices used in natural forest settings, as opposed to other non-agricultural systems.

In short, we believe that use according to the label for neonicotinoids such as imidacloprid in forestry applications has been working well, both in terms of addressing forest health challenges and avoiding impacts to non-target species. We would see the creation of additional barriers to forestry use through future amendment and/or expansion of this pilot project as unnecessary and counter-productive to forest health.

Thank you for the opportunity to comment on this proposed draft plan, and we look forward to further engagement if it expands in a way that might impact forest health in our region.

Sincerely,

Mark E. Goeller

Digitally signed by Mark E. Goeller
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Mark Goeller
State Forester, Oklahoma Forestry Services
Chair, Southern Group of State Forester

Enclosure (1): Southern Group of State Foresters Position Paper Related to ‘Protecting the Use of Neonicotinoids for Forest Pest Control’

Southern Group of State Foresters Position Paper Related to 'Protecting the Use of Neonicotinoids for Forest Pest Control'

Prepared and Reviewed by SGSF Forest Health Committee, the Forest Management Committee and the Urban & Community Forestry Committee

Executive Summary

The Southern Group of State Foresters opposes restrictions of neonicotinoid pesticides for forest uses, as these pesticides are crucial to our endeavors to combat destructive invasive insects and preserve the health of North American forests.

The purpose of this paper is to declare the SGSF's position to support the continued use of the neonicotinoid insecticide class for the protection of critically imperiled tree species despite increasing public demand for stricter regulations that reduce the use of neonicotinoid insecticides.

Inappropriate use of neonicotinoid insecticides can negatively affect non-target organisms, such as bees. Strict adherence to the elements on the insecticide label is paramount for their protection. While pollinators are a critical component of all forest ecosystems, the protection of keystone tree species from invasive pests is vital to preserving forest health. Appropriate application of neonicotinoids to protect threatened forest resources poses little risk to pollinators.

The Southern Group of State Foresters supports the continued use of these insecticides on critically imperiled tree species. Removing this management option will have irreversible long-term impacts on North American forests.

Neonicotinoid insecticides are used globally to suppress a variety of tree, crop, and ornamental plant insect pests. Neonicotinoids have been implicated as part of a suite of contributors to widespread pollinator population decline; however, forest health in eastern North America is currently being preserved by the ecologically sound use of neonicotinoid pesticides. Invasive forest pests, such as the hemlock woolly adelgid, *Adelges tsugae* (Annand) (HWA) and the emerald ash borer, *Agrilus planipennis* (Fairmaire) (EAB), threaten to eliminate entire species and reduce the ecosystem services of our eastern forests. Neonicotinoids such as Imidacloprid and dinotefuran are essential tools for the suppression of these invasive pests and the resulting protection of our forest resources. Other neonicotinoids used to suppress tree pests include clothianidin, acetamidprid, and thiacloprid.

Hemlock woolly adelgid has spread throughout much of the natural range of eastern hemlock since its introduction to Virginia in the 1950s. Millions of hemlock trees have been killed, devastating associated terrestrial and aquatic habitats. Eastern hemlock, a keystone species in eastern North American forests, provides a unique set of ecological services. Forest soil properties are affected by hemlocks (Jenkins et al. 1999), resulting in distinctive hemlock-associated floral and faunal communities. Hemlocks stabilize stream banks and shade streams, both of which are necessary for the survival of aquatic organisms. Unique aquatic insect and canopy arthropod communities are associated with hemlock forests (Snyder et al. 2002, Dilling et al. 2007). The loss of this species will have many negative cascading environmental effects on the forest ecosystem, including decreased water quality and the shift of these characteristic hemlock forest habitats into analogous forest types.

Emerald ash borer, first detected in Michigan in 2002, has killed millions of ash trees and continues to spread throughout the entire range of ash in North America. As ash species are common components of forests and urban landscapes, the demise of ash would have disastrous long-lasting ecological and economic impacts. Ash species are often dominant in overstory canopies and are present in over 25 forest cover types ranging from upland hardwoods to riparian areas and swamps (Erdmann et al. 1987, Burns and Honkala 1990). Canopy cover in many urban forests are 10-40 percent ash (Coalition for Urban Ash Tree Conservation 2011). This large ash component contributes to storm water mitigation, improves air quality, increases shade, and adds aesthetic value to urban landscapes. Predicted EAB-induced economic costs for insecticide treatment, ash removal, and tree replacement in urban forests are staggering, ranging from $10-20 billion (Kovacs et al. 2010).

Neonicotinoids are critical to the effective management of these invasive forest pests. Imidacloprid, a common systemic neonicotinoid, can successfully suppress both HWA and EAB populations. Once absorbed by the plant, imidacloprid metabolizes into an insecticidal metabolite. The additive effect of imidacloprid and its insecticidal metabolite increases efficacy and longevity of insecticide treatments. Since hemlocks do not lose their foliage each year, insecticide residues persist resulting in HWA control for up to seven years after one imidacloprid application (Benton et al., 2015). Imidacloprid is important in EAB suppression programs, resulting in financial benefits for municipalities devastated by EAB. Chemically treating landscape ash is often less costly than hazard tree removal, and treatment may even be used as tool to delay expensive removal costs and safety hazards over multiple years through treat-until-removal methods. Imidacloprid provides municipalities and landowners an option for conserving both ash resources and financial resources (McCullough and Mercader, 2012). According to the imidacloprid product label, the insecticide is “highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds” (Bayer 2015). The

exposure of pollinators to imidacloprid via translocation to blooms, drift, and direct spray is concerning, and reasonable measures should be taken to reduce pollinator exposure by these established routes. Hemlock and ash, however, are both wind-pollinated, and thus their pollen is not a food source used by bees and other pollinators. The soil and trunk application methods used in forested settings present a negligible risk to pollinators. While imidacloprid is often dispersed into air or on foliage in agricultural settings, this is not the case in forest settings. There is little risk of direct contact or indirect exposure of pollinators to imidacloprid when being used for HWA or EAB suppression.

In addition to minimal pollinator risks, non-target assessments of imidacloprid use in forests has shown no negative impacts to aquatic insects (Churchel et al. 2012, Benton 2016) and minimal impacts to soil and canopy arthropods (Knoepp et al. 2012, Dilling et al. 2009). The benefits of imidacloprid treatment far outweigh the slight risks, in comparison to the complete loss or degradation of arthropod habitat if hemlocks were left untreated.

Restricting the low-risk use of neonicotinoids for forest pest suppression would be devastating to foresters, land managers, and home owners, leaving them with little to no options to protect natural and urban forests from these invasive insect threats.

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