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Comments:

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Wayne National Forest

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Comment of the OEC RE: EA for the 2025 Non-Native Invasive Plant Control Project

To Whom It May Concern:

Thank you for the opportunity to comment on the Environmental Assessment for the 2025 Non-Native Invasive Plant Control Project (the Project). As a general matter, the Ohio Environmental Council (OEC) supports the control and removal of NNIS from Wayne National Forest lands. The OEC recognizes the ecological threats posed by non-native, invasive plants, and we understand that sometimes the only viable control method involves herbicides. However, we have several concerns about the Project's herbicide authorizations.

First, the Project EA proposes to eliminate NEPA review for herbicides that are added to the Project's authorization list in the future. The OEC requests that this proposed methodology be eliminated from the EA and Project in favor of formal NEPA review. Doing so will serve NEPA's aims of public involvement and informed agency action. Furthermore, the proposed non-NEPA review process for approval of future herbicides is unreasonably vague. For example, the provision that authorization would occur "[i]f the risks posed by the active ingredient fall within the range of those considered in the environmental assessment prepared for this project" lacks any meaningful definition.

Please note that the following concerns are limited to foliar application and ground-based broadcast spraying.

Second, while the EA includes a 100 foot riparian buffer (or the width of the riparian corridor, whichever is greater), it does not explain why it considers 100 feet sufficient to adequately reduce risk to aquatic species. The EA should take a closer look at the effectiveness of riparian buffer distances. This is particularly true given that most of the Wayne National Forest is highly susceptible to herbicide runoff. And, given that some of the herbicides authorized by the Project are highly mobile. For example, Fluroxypyr is toxic to fish and aquatic organisms. Field studies demonstrate that herbicides such as fluroxypyr can be transported off-site via surface runoff under real-world conditions. See M. Larsbo et al., Surface Runoff of Pesticides from a Clay Loam Field in Sweden, 45 J. Env'tl. Quality 1367, 1369 (2016) (finding that applied pesticides, including fluroxypyr, were detected in surface runoff and can be transported off fields under runoff conditions). Clopyralid has long residence times in water and high transportation potential. And Aminopyralid is classified as having high potential for reaching both surface water and aquatic sediment via runoff for several months after application.

Furthermore, research indicates that the effectiveness of vegetated buffer strips in reducing herbicide transport varies widely depending on site-specific factors such as soil properties, runoff conditions, vegetation, and season. See R.N. Lerch et al., Vegetation Buffer Strips for Reducing Herbicide Transport in Runoff: Effects of Buffer Width, Vegetation, and Season, 53 J. Am. Water Res. Ass'n 667, 668 (2017) (finding that buffer strip performance is highly variable and dependent on environmental conditions). The EA should try to take these variables (and slope, in particular) into consideration as much as possible.

Third, and finally, Glyphosate and Triclopyr pose greater species and health risks than are accounted for in the EA. The EA should more closely examine these risks and consider additional mitigation and/or eliminating or more tightly limiting their authorization under the project. Particularly given concerns relating to cancer risk and impacts to amphibians and freshwater mussels.

GLYPHOSATE

A 2015 EPA analysis found multiple environmental harms from glyphosate use. Use of glyphosate in accordance with the label was found to:

- 1) Result in concentrations that can potentially impact the survival and biomass of aquatic plants, upland plants, and riparian/wetland plants.
- 2) Result in residues on foliage that can potentially impact the growth of herbivorous birds, reptiles and terrestrial amphibians.
- 3) Potentially impact the growth and reproduction of terrestrial mammals following ground applications of glyphosate.

This analysis also indicated that considerable no-spray buffers would be needed to keep off-target plants from being harmed by glyphosate use, more than 1000 feet for certain aerial applications and nearly 400 feet for certain ground applications. The states of California and Arkansas both adopted mandatory no-spray buffers of 500 feet for aerial applications.

Ecological incident data also reinforce the finding that the current labelled uses of glyphosate are having devastating effects to plant and animal life outside of the sprayed field. Approximately 600 incidents have been reported and logged on the Ecological Incident Information System (EIIS) and Avian Monitoring Information System (AIMS) databases. A separate Incident Data System (IDS) database has identified 269 separate aggregate incident reports. Ecological incidents are also significantly underreported for pesticides so this should be viewed as the absolute bare minimum of ecological incidents that involve glyphosate.

A final biological evaluation was released by the EPA on how use of glyphosate may affect all endangered and threatened species in the United States. The agency concluded that glyphosate would "Likely Adversely Affect" 1676 out of 1795 listed species (93%) and adversely modify 759 out of 792 designated critical habitat in the U.S. This includes nearly every single listed species and critical habitat in the United States and all that reside in or near the action area being considered.

The EPA has found that glyphosate poses a risk to a federally listed amphibian, the California Red-legged frog, making a Likely to Adversely Affect determination for the species. Some glyphosate formulations and co-formulants have been found to be "highly toxic" to certain species of fish.

Researchers have found negative associations between glyphosate use and monarch population size. Use of glyphosate has been tied to widespread declines of milkweed, which is essential to monarch butterfly survival.

The World Health Organization's International Agency for Research on Cancer ("IARC") conducted an exhaustive review of the publicly available scientific literature in 2015 and concluded that glyphosate is "probably carcinogenic to humans" (Group 2A). IARC carefully weighed evidence in three areas, and found that: 1) There was sufficient evidence to conclude that glyphosate causes cancer in animal studies; 2) There was limited evidence that exposure to glyphosate causes cancer (non-Hodgkin lymphoma) in humans; and 3) There was strong evidence that glyphosate can damage DNA and induce oxidative stress, two well characterized pathways that can lead to cancer.

IARC's finding that glyphosate causes cancer in animals prompted California's Office of Environmental Health Hazard Assessment to list glyphosate as a known carcinogen under California's Proposition 65 law. The agency

has also finalized a No Significant Risk Level for glyphosate, which estimated the daily exposure level that will result in a 1/100,000 chance of developing cancer, of 1.1 mg/day.

Molly A. Richard et al., Reduced Freshwater Mussel Juvenile Production as a Result of Agricultural and Urban Contaminant Mixture Exposures, *Envtl. Toxicol. & Chem.* 1, 6-10 (2024) (finding that exposure to environmentally relevant contaminant mixtures reduced successful juvenile production and impaired transformation from larval to juvenile stages).

TRICLOPYR

EPA has found that the range, pastureland, and rights-of-way uses of triclopyr can expose birds, reptiles and terrestrial amphibians to levels of the herbicide that cause reduced survival of offspring. The same uses can expose mammals to 37 times the amount of triclopyr known to reduce litter size. All labelled uses of triclopyr were found to expose adult and larval bees to levels estimated to reduce survival and larval emergence. Harm to bee larva was estimated more than 1000 feet from the application site. Terrestrial plants were also estimated to be exposed to levels of triclopyr that were known to cause harm more than 1000 feet away from the site of application, even for ground applications.

Triclopyr butoxyethyl ester (BEE) is classified as "highly toxic" to aquatic organisms. Range, pastureland and meadow uses of BEE can expose fish and aquatic invertebrates to levels of the pesticide known to cause acute harm. The EPA has found that triclopyr poses a risk to a federally listed amphibian, the California Red-legged frog, making a Likely to Adversely Affect determination for the species.

Chen, C. Y., Hathaway, K. M., Thompson, D. G., & Folt, C. L. (2008). Multiple stressor effects of herbicide, pH, and food on wetland zooplankton and a larval amphibian. *Ecotoxicology and environmental safety*, 71(1), 209-218 (finding concentrations much lower (5-10×) than the predicted environmental concentration for Release® or Garlon 4® applications in forestry are significantly toxic to a ubiquitous wetland zooplankton species and a common amphibian species).

Sincerely,

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