

ESA SME Liaison to EPA OPP Report for May 19, 2022 - July 21, 2022
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Activities Highlights

On May 25-26, 2022, I attended the Pesticide Program Dialog Committee (PPDC) two-day workshop wherein stakeholders are updated on EPA's fiscal year activities and priorities and the various workgroups of the committee report on their progress and motions for improvement of the registration process and policy implementation. One item of discussion was EPA OPP's priorities during the next fiscal year. The EPA-listed priorities were...

- Continued implementation of the Pesticide Registration Improvement Act (PRIA) to provide technical assistance;
- Continued review of registration issues;
- Implementation of the policy to conduct ESA assessments for all pesticide registration decisions (not just the Federal court mandated active ingredients cited in the "PNW salmon" ESA lawsuits circa the early 2000's);
- Implementation of policies consistent with the Biden administration focus on environmental justice and climate change;
- Advancing "state of the art" science;
- Deal with routine legal issues regarding rule making, litigation, petitions;
- Focus on quality of the employee experience and organizational development along with process and IT improvements.

During the PPDC meeting EPA OPP reviewed their FY21 workload in terms of registration decisions. For example, the agency received over 11,000 submissions for registration/labeling decisions with over 5,000 registration actions completed. The agency registered 14 new active ingredients and issued 60 section 18 emergency exemptions that included several for insect pests (e.g., pesticides to control Asian citrus psyllid, brown marmorated stink bug, and hemlock wooly adelgid). Pesticide resistance issues were discussed by one of the workgroups, making the case that IPM must include resistance management strategies. Another workgroup focused on the new application technology with UAVs (unmanned aerial vehicles, aka drones) and whether analysis of pesticide risks would change.

One pertinent item of interest to ESA members was a motion passed by the PPDC to form a work group focused "on using foundational IPM principles to connect multiple pertinent EPA initiatives including pesticide resistance management, pollution prevention, and risk reduction and pesticide safety education."

During June 2022 I attended several webinars dealing with pesticide issues and IPM implementation. On June 8, 2022, I attended an American Chemical Society AGRO Division sponsored webinar titled, "Innovation in the Discovery of Novel Insecticidal Modes of Action" by Dr. Frank Wessels in Corteva's Crop Protection Discovery & Development group. The speaker reviewed updates on the insecticide modes of action classifications and advocated for the need to maintain insect pest susceptibility as a shared responsibility among all stakeholders. For quick access to all insecticide modes of action classifications and the numbering system now appearing on the first page of pesticide product labels, visit the Insecticide Resistance Action Committee website at URL <https://irac-online.org>.

Later during the day on June 8th, I attended an EPA IPM webinar titled, "Read the Label- Pesticide Label Guidance". The webinar was intended to help pesticide users understand and follow labels better and also to help regulators at the State level better interpret some of the mandate statements that might be ambiguous. This webinar and other IPM oriented webinars

can be accessed from the agency's website at URL <https://www.epa.gov/ipm/previous-webinars-about-integrated-pest-management>.

On June 14, 2022 I attended an EPA Region 6 workshop webinar about use of pesticides on tribal lands. The workshop presenters shared basic information about the environmental chemistry of pesticides with regard to soil interactions and translocation to aquatic habitats. At least one presentation focused on IPM and the use of non-chemical control methods.

On June 15, 2022, I attended the webinar, "Monarchs, Milkweeds, and the Anthropocene" sponsored by EPA OPP in coordination with ESA. The speaker was Dr. Joshua Puzey, an Associate Professor of Biology at William & Mary in Williamsburg. In 2019, Puzey's team published an article titled "Monarch butterfly and milkweed declines substantially predate the use of genetically modified crops" (Boyle et al, PNAS 116: 3006-3011). Puzey discussed his lab's research using museum specimens from herbarium collections and archived monarch butterfly specimens and genomic analyses to understand dynamics of monarch populations long before Roundup Ready soybeans and corn were planted on well over 90% of the Corn Belt acreage. Puzey made the case that as eastern forests were cleared historically, monarchs shifted to milkweed populations that grew in more open spaces on disturbed soils, thus shifting to the prairies of the midwestern U.S. Furthermore, the *Asclepias syriaca* (common milkweed) population thrived when agriculture expanded to the midwestern prairies and is now one of the most important food resources for egg laying and larval development. In the forests, common milkweed abundance is low, and Puzey hypothesized that other common milkweed species in semi forested land (i.e., open canopies) in the understory may not be a favored host. Puzey thinks the migratory overwintering habitat may be a bigger factor affecting population dynamics than the milkweed abundance in the midwest.

On June 23, 2022, I attended a day-long workshop sponsored by EPA in their recurring modeling workshop program, Environmental Modeling Public Meeting (EMPM). The workshop in June was themed, "Modeling for Protecting Endangered Species". Many of the talks presented model development and implementation for predicting runoff of pesticides and how agronomic practices affect the process. Some presentations focused on overlaying runoff predictions as well as field measurements with species co-occurrence. One presentation focused on urban use of pesticides and possible impacts on endangered and threatened species. Other talks focused on mitigation measures. Numerous documents from this workshop and past EPMP workshops can be accessed from the [registraton.gov](https://www.regulations.gov) docket at URL <https://www.regulations.gov/docket/EPA-HQ-OPP-2009-0879/document>.

EPA Announcements of Interest to ESA Members

May 30, 2022: EPA Supports New Funding Opportunity from the Pesticide Educational Resources Collaborative for Pesticide Safety in Agricultural Communities. "Through a cooperative agreement funded by the U.S. Environmental Protection Agency (EPA), the Pesticide Educational Resources Collaborative (PERC) is making \$200,000 in funding available for 2022-2023 to non-profit organizations for community-based projects. These grants will help fund efforts supporting the health and safety of farmworkers, agricultural pesticide handlers, their families and communities." "PERC is funded through a cooperative agreement between EPA and the University of California Davis in partnership with Oregon State University to help increase the reach and scope of pesticide safety educational materials to farmworkers and their families in rural agricultural areas." Unfortunately, the applications for funding had closed by July 1, 2022 (see <https://pesticideresources.org/CBP/> for more information). A complete list of PERC projects with online access to available resources can be found at URL <https://pesticideresources.org/status.html>).

June 16, 2022: EPA Finalizes Biological Evaluations Assessing Potential Effects of Three Neonicotinoid Pesticides on Endangered Species. EPA has released its final biological evaluations (BEs) for clothianidin, imidacloprid, and thiamethoxam along with its responses to comments received after release of the draft BEs. EPA evaluated clothianidin, imidacloprid, and thiamethoxam to determine whether they may affect one or more federally listed endangered or threatened (listed) species or their designated critical habitats. The BEs evaluated the effects of clothianidin, imidacloprid, and thiamethoxam on over 1,700 listed species and over 800 designated critical habitats in the United States. In these BEs, EPA designates the outcome of their hazard and risk assessment with three qualitative narratives: “will have no effect”; “may affect but is not likely to adversely affect”; and “likely to adversely affect”. The media jumped on the conclusion that the three neonicotinoid insecticides were assessed as “likely to adversely affect” around 80% of listed species.

Each of the BE conclusions and supporting documents can be found at the URLs listed below. For each insecticide, there are multiple documents and spreadsheets, exhibiting the agency’s commitment to transparency in its decision making and communication with the public. One important point to keep in mind for these analyses, is that EPA uses exposure data derived from various deterministic models. The models have evolved to consider more realistic scenarios over the years, but generally modeled exposure data often exceeds measurements in the environment, especially for aquatic habitats.

- **Clothianidin BE:** <https://www.epa.gov/endangered-species/final-national-level-listed-species-biological-evaluation-clothianidin>
- **Imidacloprid BE:** <https://www.epa.gov/endangered-species/final-national-level-listed-species-biological-evaluation-imidacloprid>
- **Thiamethoxam BE:** <https://www.epa.gov/endangered-species/final-national-level-listed-species-biological-evaluation-thiamethoxam>

June 21, 2022: EPA Marks National Pollinator Week by Launching Pilot Projects and Resources Portal to Help Protect Vulnerable Species from Pesticides. EPA Administrator Michael S. Regan issued a proclamation marking National Pollinator Week (June 20-26; download proclamation at URL <https://www.epa.gov/pollinator-protection/epa-administrator-signs-pollinator-week-proclamation>). EPA’s website titled, “Protecting Bees and Other Pollinators from Pesticides” (<https://www.epa.gov/pollinator-protection>) updates the public about all the activities EPA is engaged in regarding pollinator protection. EPA also has a website that hosts several past webinars on pollinator health and habitats (<https://www.epa.gov/pollinator-protection/epa-offers-webinars-pollinator-health-and-habitat>).

June 30, 2022: EPA Takes Step to Protect Vulnerable Species from Three Organophosphate Insecticides. EPA finalized its consultation with NMFS (National Marine Fisheries Service, a.k.a. NOAA Fisheries; <https://www.fisheries.noaa.gov>) regarding the BiOps (Biological Opinions) for mitigating risk to endangered species associated with re-registration decisions for chlorpyrifos, malathion, and diazinon (OP insecticides). The finalized BiOp can be accessed at <https://www.epa.gov/endangered-species/biological-opinions-available-public-comment-and-links-final-opinions>. Mitigation measures agreed to by NMFS, EPA, and registrant stakeholders involve better management of runoff and spray drift. Although all food tolerances for chlorpyrifos were revoked by EPA in late February 2022, thus effectively ending use of this insecticide, the present BiOp is an independent policy decision regardless of the compounds registration status.

July 13, 2022: EPA announced proposed interim registration decisions for several pesticides undergoing registration review and are seeking public comments. Listed biopesticide decisions included the active ingredients 2-methyl-1-butanol (wasp trap attractant); calcium acetate (trap attractant for yellow jackets); *Candida oleophila* (post-harvest

fungicidal activity); cedarwood oil (clothes moth repellent); citral (mosquito and other biting flies repellent); heptyl butyrate (wasp trap attractant); and l-carvone (repellent for mosquitoes and biting flies). These biopesticides are known food ingredients occurring naturally and thus of low concern. No synthetic insecticides were listed under interim decision review during the third FY quarter. The proposed interim decisions (PIDs) propose mitigation measures based on findings in the draft human health and ecological risk assessments (DRAs) and feedback submitted during the DRAs' public comment period. After considering comments, the next step in the registration review process will be the interim decision, which finalizes any required risk mitigation measures to address human health and ecological risks of concern. Thereafter EPA will consider further public comments and then publish the final re-registration decision.

Note that not all of the biopesticides with insecticidal/repellent properties have been assigned docket numbers as of the date of this report. However, if you're interested in accessing regulatory, science, and docket assessment and decision files, you can copy and paste the pesticide name (common or IUPAC chemical name or CAS number) into EPA's Pesticide Chemical Search engine at <https://ordspub.epa.gov/ords/pesticides/f?p=chemicalsearch:1>.

July 19, 2022: EPA Releases Draft Assessment of Effects of Sulfoxaflor on Endangered Species for Public Comment. EPA released a draft BE for sulfoxaflor that evaluated potential effects on over 1,700 listed species and over 800 designated critical habitats in the United States. Without any further mitigation applied to current use characteristics, EPA concluded that the active ingredient is likely to adversely affect 7% of the listed species and adversely modify 4% of critical habitats. After considering public comments on the draft BE and any additional mitigations that are agreed upon with the sulfoxaflor registrant, EPA will make any appropriate changes and issue a final BE. The draft BE will be available for public comment for 60 days in docket EPA-HQ-OPP-2010-0889 (<https://www.regulations.gov/document/EPA-HQ-OPP-2010-0889-0604>).