April 2, 2023

Office of Pesticide Programs
Docket number EPA-HQ-OPP-2011-0668-0063
Environmental Protection Agency Docket Center (EPA/DC) (28221T)
1200 Pennsylvania Ave. NW
Washington, DC 20460-0001

Re: Comments on EPA's Draft Biological Evaluation and Proposed Mitigations for Cyantraniliprole (Docket #: EPA-HQ-OPP-2011-0668-0063)

Please accept the following comments from the Center for Biological Diversity and the Center for Food Safety (collectively, "Centers") in response to the Environmental Protection Agency's ("EPA") Draft Biological Evaluation and proposed mitigations for cyantraniliprole.

The Center for Biological Diversity is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists dedicated to the protection and restoration of endangered species and wild places. The Center has worked for thirty-three years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life. The Center's Environmental Health Program aims to secure programmatic changes in the pesticide registration process including securing the completion and implementation of ESA consultations for all pesticides in order to ensure that the nation's most imperiled species have a fighting chance in their battle against extinction.

The Center for Food Safety is a nonprofit membership organization of over one million farmer and consumer members with a mission to empower people, support farmers, and protect the environment from the harmful impacts of industrial agriculture. Through legal, scientific, and grassroots action, CFS serves to protect and promote the right to safe food and the environment. For twenty-five years one of CFS's flagship programs has focused on pesticides, combining multiple tools in support of its mission including public and policymaker education, outreach, and campaigning. CFS has multiple staff that focus on its pesticide program, including policy, science, communication, and legal staff. CFS disseminates a wide array of informational materials to government agencies, lawmakers, nonprofits, and the public regarding the effects of pesticides on human health and the environment. When necessary, and as with this pesticide, CFS also engages in public interest litigation to address the impacts of industrial food production and pesticides on its members, the environment, and the public interest.

We appreciate the opportunity to provide comment.

The draft Biological Evaluation ("BE") for cyantraniliprole ("CTP") presents effects determinations for ESA-listed species and some mitigations to potentially avoid Jeopardy/Adverse Modification of Critical Habitat ("J/AM") as well as mitigations to address incidental take. The broad label changes and early mitigations for all listed species are a step in

the right direction, but we remain concerned that label language and the proposed mitigations remain insufficiently protective and fail to address take.

We encourage EPA to institute mitigations early in the consultation process that are strong, efficient, and targeted. Establishing adequate mitigations for ESA-listed species now will save EPA time and resources for this pesticide registration and for future registrations as part of EPA's ongoing consultation with the Services. Below we outline ways that this process can achieve adequate protections for the vulnerable plants and animals protected under the ESA.

In short, our comments include the following:

1) Cyantraniliprole use should be prohibited in designated critical habitat of all listed species throughout the entire year, excepting for pesticide use that directly benefits a listed species or a legitimate conservation or human health objective, such as removing invasive species or treating serious disease.
2) To address runoff in an enforceable and implementable manner, EPA should implement a standard, minimum 100 ft buffer from waterways to protect listed species. A 25-foot buffer is simply too small, too easy for non-compliant entities to ignore, and too difficult to enforce. Included together with the standard 100-foot buffer, EPA should also require a standard, minimum 30-foot vegetative filter strip.
3) To address drift and/or volatilization, EPA should implement a standard, minimum 100-foot *omnidirectional* buffer for ground applications and aerial application should not be allowed for any use. If aerial application is allowed, it should have at least a 250-foot *omnidirectional* buffer for aerial applications to protect listed species. Wind-direction contingent buffers are not effective, not enforceable, and provide a massive loophole (e.g., any person can claim wind was not blowing when spraying occurred) that makes such mitigation essentially useless.
4) While such standard, minimum buffers for runoff, drift and/or volatilization should be required on all labels, EPA should clarify and make clear to registrants that such measures are the *minimum* additional label changes for *Bulletins Live II*. A menu of additional mitigation options may still be required to both avoid jeopardy, and crucially, to minimize unavoidable take as the Endangered Species Act requires.
5) Any effort to minimize take should include tank mix restrictions in the form of requiring rate reductions for pesticide mixtures that affect the same organ system.
6) The many legal and scientific flaws of the U.S. Fish and Wildlife Service ("FWS") malathion BiOp must preclude its use as a blueprint for making predictive jeopardy determinations. The NMFS malathion BiOp provides a far superior blueprint both legally and scientifically.

I. EPA Predictive Jeopardy Approach to Endangered Species Act Compliance

The EPA's approach to assessing the harms to listed species has several critical limitations. First and foremost, the EPA does not possess the statutory authority or scientific expertise to correctly assess or make "predictive" determinations regarding jeopardy to any listed species, as such

determinations can only be made by the U.S. Fish and Wildlife Service and National Marine Fisheries Service during formal consultations under the Endangered Species Act. Jeopardy can only be assessed in context of the full suite of threats to any given species, after considerations of the environmental baseline, cumulative effects, and the real-world conservation status of any given species, none of which are considered by the EPA. However, we recognize that the EPA is making efforts to make strides in protecting species from pesticides and commend its efforts.

We want to reiterate that while FWS range data often remains the best scientific information available on listed species' range, in some instances, EPA may be able to use publicly available datasets from other federal, state or even local government agencies instead of FWS range data to deploy targeted information. EPA can also draw from other FWS data such as Species Status Assessments, 5-year Reviews, Recovery Plans and even other Section 7 consultations or Habitat Conservation Plans. We want to make it very clear that data submitted by the registrants or their consultants (i.e. GESTF) are not the best scientific information available and any reliance on those data will be strongly opposed, as will information that is proprietary and not available to the public.

We do agree that the EPA can, somewhat accurately, assess the relative likelihood of severe harm to listed species from pesticides, but its methodologies continue to overlook key information including, for example, the relative extinction risk within taxonomic groups of similar species.

It is vital for the EPA to recognize that the consultation process contains two, mandatory statutory goals: (1) avoiding jeopardy or adverse modification of critical habitat, and (2) *minimization* of unavoidable take in situations where jeopardy will not occur.[1] To the extent that EPA's Proposed Interim Decision might mean that the registration of CTP will avoid jeopardy for a subset of listed species, that is certainly positive. However, reducing take to a level that possibly avoids jeopardy does not mean that EPA has satisfied the requirements of the ESA; *all* unavoidable take must be minimized in order to receive an Incidental Take Statement. The Centers supports the EPA's efforts to reduce take to listed species at the front-end of consultation and at every opportunity during EPA's registration review processes, but it should not, and may not legally, create the expectation that these initial mitigation measures are sufficient for full compliance with the Endangered Species Act.

We would also like to emphasize that the EPA's over-reliance on the conclusions within the FWS's malathion BiOp is extraordinarily problematic. The BiOp remains fatally flawed and would not withstand judicial review, in part because it failed to fully assess the full range of harms from insecticides for many listed species, and both its draft and final conclusions regarding jeopardy are highly problematic. Excessive reliance by the EPA on the FWS BiOp will cause the EPA problems down the road. We urge the EPA to look to the NMFS chlorpyrifos,

[1] 16 U.S.C. 1536(b)(4) (The Secretaries shall provide: "a written statement that (i) specifies the impact of such incidental taking on the species, (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact."

diazinon and malathion BiOp (as well as many of the regional BiOps completed by NMFS) as better blueprints for its predictive jeopardy findings.

II. Cyantraniliprole Biological Evaluation Findings

EPA's cyantraniliprole effects findings for listed species and their critical habitat broadly give likely adversely affect ("LAA") findings where appropriate. However, given the shifting nature of the BE analysis some issues remain with the consistency of calls. Here we highlight some broad issues with EPA's effects findings for cyantraniliprole.

A) Critical Habitat LAA, Species NLAA

As we have stated in previous comments, we remained concerned about species with not likely to adversely affect ("NLAA") calls at the species level that have LAA calls for critical habitat. Critical habitat is vitally important to listed species and—for those species that have it—is some of the only remaining intact habitat where each species can carry our essential parts of their life history (e.g., breeding, mating, feeding).

This BE has a reduced number of these mismatched calls compared to previous BEs and we recognize that EPA is working to address this issue. Two species have received NLAA calls for the species overall, but have received LAA calls for their critical habitat and they are the Morro Bay kangaroo rat and the slenderclaw crayfish. While the Morro Bay kangaroo is possibly extinct, the best and likely only place where it could still be found is within the designated critical habitat.[2] Therefore, it's most likely current range only includes the critical habitat area and not the broader, historic range. If the overlap of the critical habitat area is above the LAA threshold then the species as a whole should also be LAA. Additionally, the slenderclaw crayfish is not found outside Short Creek and Town Creek which are entirely within the designated critical habitat.[3] So if the critical habitat is LAA due to impact to potential aquatic invertebrate food, then the species as a whole should also be LAA.

B) Listed Insects

The BE correctly makes species LAA determinations for nearly half of all listed insects and arachnids, however, the BE gave only four critical habitats for listed insects LAA determinations. Insects are at high risk from CTP given its toxicity. EPA must be conservative when assessing risk to this vulnerable group.

Our primary concern is with the lack of MA/LAA determinations for critical habitat for listed insects/arachnids. In this BE, a May Affect ("MA") finding for critical habitat is based on whether the pesticide would affect the prey/diet, pollination, or dispersal only. Therefore, the BE

[2] FWS, "Draft Revised Recovery Plan for the Morro Bay Kangaroo Rat (Dipodomys Heermanni Morroensis)," 1999, https://ecos.fws.gov/docs/recovery_plan/000125.pdf.
[3] FWS, "Species Status Assessment Report for the Slenderclaw Crayfish (*Cambarus Cracens*)" (U.S. Fish and Wildlife Service, 2019), 10–12, https://ecos.fws.gov/ServCat/DownloadFile/204186.

determined that the critical habitat for only four listed insects would be likely adversely affected: Hines emerald dragonfly, Salt Creek tiger beetle, Delta green ground beetle, and Casey's June beetle. These four species consume other invertebrates as part of their diet. We disagree that the critical habitat for only four insects would be affected because this leads to illogical conclusions. For example, how can species like Dakota skipper or Fender's blue butterfly be LAA at the species level, but its critical habitat be NE when there is substantial usage overlap with range and critical habitat? Neither of these species consume other invertebrates, but their habitat can still be contaminated, and CTP can still kill them in their critical habitat. CTP can contaminate soils, plant nectar, guttation fluid, and it can drift into their habitat on the wind. To be clear, impacts to prey, pollination, and dispersal are all vitally important and should not be discounted, but restricting the definition of harms to habitat to only these factors misses the big picture. The critical habitat for most listed invertebrates should be MA or LAA. This change in evaluation method must be addressed in the final BE.

Looking at species level determinations, most listed insects are correctly determined to be LAA by CTP. However, a couple listed insects species stand out as likely adversely affected despite EPA's claim that they are unlikely exposed due to their location or habitat. The BE justifies NLAA determinations were made citing that certain species live in caves/forests/montane/remote habitats and are unlikely to be exposed. For two species, this justification is not warranted and these calls do not match up with species in similar habitats.

The Miami tiger beetle is known to occur in two locations within its range – Richmond Pine Rocklands and Nixon Smiley. It is threatened by both the direct and indirect effects of insecticide use and is so extremely rare that until 2007 it was considered extinct.[4] The EPA recognizes the extremely limited occurrence of the Miami tiger beetle, but claims it is NLAA because the "…species found in forested/montane/remote habitats (cliff faces, volcanic regions) and no registered forestry uses, thereby rendering exposure highly unlikely." It appears that EPA considers its habitat as "forested", but somehow misses the fact that a citrus orchard occurs directly adjacent to the reserve area (see Figure 1). At the minimum, the determination for the Miami tiger beetle must be LAA.

[4] FWS, "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Miami Tiger Beetle (*Cicindelidia floridana*)," 2021, 86 Fed. Reg. 49945, 49951.

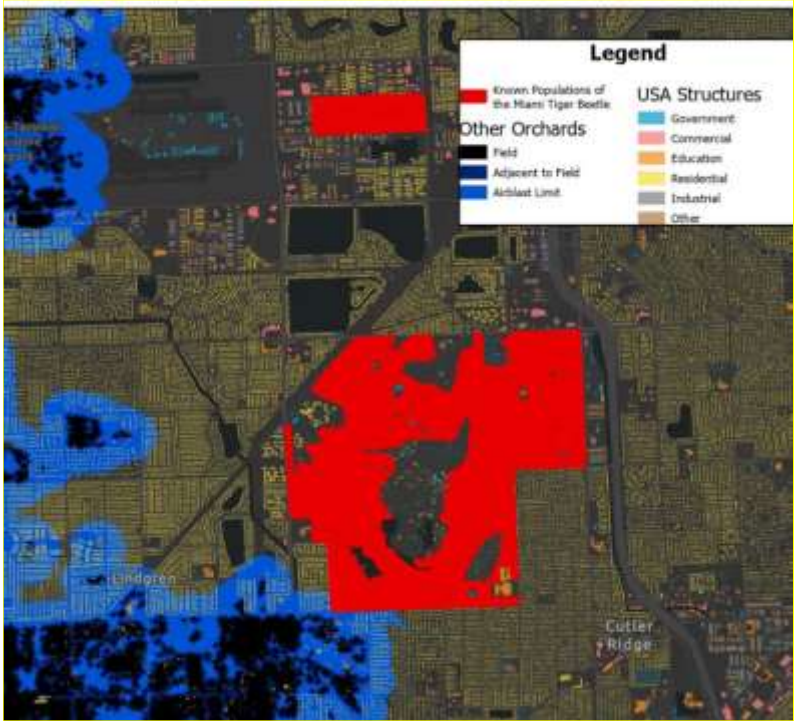

Figure 1. Miami tiger beetle known populated areas show in red and nearby agricultural fields with spray buffers shown in blue.

In the Proposed Interim Decision for carbaryl, the EPA also acknowledges that drift from nearby orchards could reach the species in the south-west section if the wind is blowing in that direction, but argues that nearby buildings coupled with a convoluted wind statement reduce the likelihood of exposure. As we have stated in other comment letters, without an omnidirectional requirement, a windspeed buffer is unenforceable and overly complicated, especially when the proposed statement requires an applicator to make changes based on 1mph wind shifts. Pesticide buffers around occupied sites have already been recommended as an action to ameliorate threats to the beetle.[5] In fact, use of 250-meter spray buffers for truck-application and 400-meter spray buffers for aerials applications are already observed to protect the beetle from mosquito spraying.[6] These sites are well-mapped, monitored, and seemingly understood by the EPA, with a total occupied area of less than one square kilometer.[7]

Bartram's hairstreak butterfly is found in pine rockland habitat in south Florida and on several of the Florida Keys. Its critical habitat is designated in Miami-Dade county, Everglades National

[5] FWS, "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Miami Tiger Beetle (*Cicindelidia floridana*)," 2021, 86 Fed. Reg. 49945, 49951.
[6] *Id.* at 49952; FWS, "Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Miami Tiger Beetle (*Cicindelidia floridana*)," 2016, 81 Fed. Reg. 68985, 68992.
[7] C. Barry Knisley & Rodger Gwiazdowski, *Conservation Strategies for Protecting Tiger Beetles and Their Habitats in the United States: Studies With Listed Species* (Coleoptera: Carabidae: Cicindelidae) 114 ANNALS OF ENTOMOLOGICAL SOCIETY OF AMERICA 293, 295 (2021).

Park and in Monroe County on both public and private land. It shares almost all of its critical habitat with the Florida leafwing butterfly and some with the Miami Blue butterfly. Both the Miami blue and the Florida leafwing received LAA determinations but the Bartram's hairstreak is NLAA. Agriculture is clearly present in the area surrounding one of the Bartram's hairstreak's critical habitat areas (see Figure 2). The call for Bartram's hairstreak is clearly inconsistent with other calls for insects in the same habitat and should be changed to LAA in the final BE.

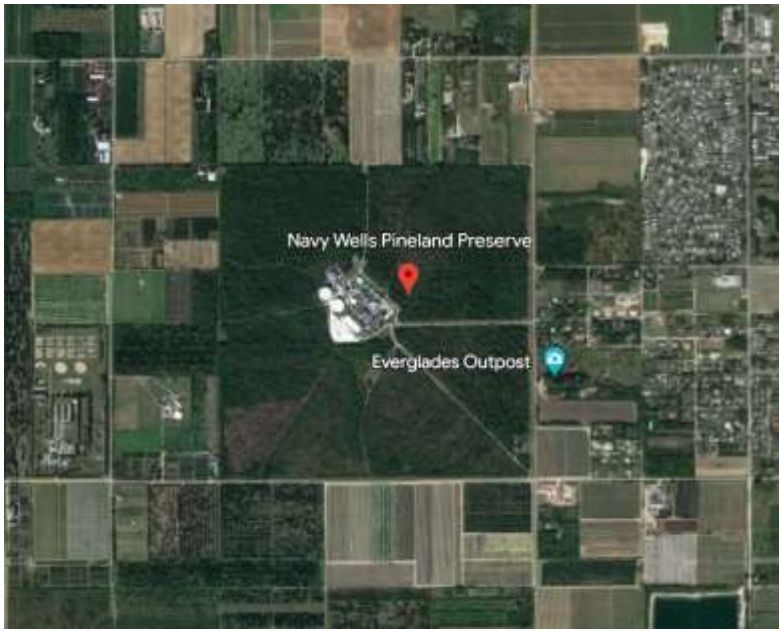

Figure 2. The Navy Wells Pineland Preserve which is designated critical habitat for Bartram's hairstreak butterfly.

C) Pollinator Dependent Plants

The BE identified a large number of plant as at risk of losing their pollinators due to the use of CTP. This is a step forward and we appreciate that EPA is taking the loss of insect pollinators seriously. Pollinators are vital to the reproduction of many flowering plants and many threatened and vulnerable species have special associations with pollinators.

One pollinator-dependent plant was not correctly identified as at risk of losing its pollinator. The Furbish lousewort inhabits riverbanks near potential grazing land in Northern Maine. This rare and unique species is particularly vulnerable to the indirect effect of loss of pollinators because it is only pollinated by a single species of bumble bee.[8] This call should be corrected to an LAA determination.

[8] FWS, "Species Status Assessment Report for (Pedicularis Furbishiae) Furbish's Lousewort Version 1.1" (Maine Field Office, East Orland, Maine, 2018), 4, https://ecos.fws.gov/ServCat/DownloadFile/166496.

The only remaining populations of Florida ziziphus are found on the Lake Wales Ridge – a highly biodiverse ecosystem that is under serious threat from citrus agriculture. While a handful of populations are protected, the largest and arguably most important population is located adjacent to agriculture on a site known as "masterpiece." However, the EPA did not call likely jeopardy for the Florida ziziphus, even though other Lake Wales Ridge plants like the scrub mint, wireweed, Garrett's mint, and Avon park harebells all received likely jeopardy calls. The masterpiece site accounts for 57% of all known plants, has the highest genetic diversity, and is one of the only known naturally reproducing sites in the wild. Its loss could cause significant damage to the overall recovery of the species, as genetic diversity is required for viable reproduction. The Florida ziziphus is insect-pollinated, but the low-genetic diversity means that many genotypes are cross-incompatible and unable to cross-pollinate.[9] The ziziphus is better positioned for open pollination via insects, and the EPA's justification for no likely jeopardy does not consider the full measure of harm that decreased pollinator abundance will present to one of the plant's most important population. The EPA should recognize the substantial risk and call likely jeopardy for the ziziphus.

D) NMFS Species

The BE has correctly identified indirect threats from prey loss to most listed species under NMFS authority, however the BE misses impacts to Atlantic salmon (*Salmo salar*) and to the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). The BE justifies a NE finding for these two fishes based on an "incomplete exposure pathway". We do not understand this rationale and would like clarification. The BEs for the neonicotinoids and carbaryl all state that the Atlantic salmon and Atlantic sturgeon are likely adversely affected by these pesticides. The BE for CTP must be corrected to be consistent with calls for other insecticides.

The Atlantic salmon has a similar anadromous life cycle to Pacific salmonids, spending their first two years in freshwater in the headwaters of several rivers the empty into the Gulf of Maine. NMFS and FWS recognize that agriculture and associated runoff, including pesticides runoff,[10] affects water quality.[11] Atlantic salmon are most vulnerable to contaminates as fry and juveniles and rely on aquatic invertebrates as an essential early food source before they make their way to the ocean. Impaired water quality reduces aquatic invertebrate food for the Atlantic salmon.[12] The route of CTP exposure to Atlantic salmon is clear and the use of CTP is likely to adversely affect this listed species. The NE determination for Atlantic salmon must be changed to LAA.

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[9] Carl W. Weekly & Tammera Race, *The Breeding System of Ziziphus Celata Judd And D.W. Hall (Rhamnaceae), A Rare Endemic Plant of the Lake Wales Ridge, Florida, USA: Implications For Recovery* 100 BIOLOGICAL CONSERVATION 2017 (2001).

[10] FWS, "Endangered and Threatened Species; Proposed Endangered Status for the Gulf of Maine Distinct Population Segment of Atlantic Salmon" (Federal Register, 2008), 51422, https://www.govinfo.gov/content/pkg/FR-2008-09-03/pdf/E8-20412.pdf#page=1.

[11] NMFS and FWS, "Atlantic Salmon (*Salmo Salar*) 5-Year Review: Summary and Evaluation," 2020, 22, https://ecos.fws.gov/docs/tess/species_nonpublish/3390.pdf.

[12] FWS, "Endangered and Threatened Species; Proposed Endangered Status for the Gulf of Maine Distinct Population Segment of Atlantic Salmon," 51422.

The Atlantic sturgeon also has clear exposure to agricultural pesticide runoff. The various population segments of Atlantic sturgeon spawn in freshwater between the salt-front of a river's estuary and the fall-line of the river.[13] Sturgeon larvae spend days to weeks in freshwater until migrating to estuaries where they spend months to years until venturing into the open ocean.[14] Water quality and contamination is a clear threat to the most vulnerable early life states of the Atlantic sturgeon and NMFS recognizes that pesticides are a threat to water quality.[15] The exposure pathway for Atlantic sturgeon is clear. They are exposed to pesticide runoff in freshwater rivers as well as in estuaries where they live for years before transitioning to the open ocean. They are likely adversely affected by CTP and other pesticide contaminates and the BE should be corrected to reflect this.

E) Aquatic and Terrestrial Mollusks

We completely disagree with the analysis in the draft BE for CTP that all but one listed aquatic and terrestrial mollusks would not be affected by CTP. EPA has failed to conservatively address the threat of acute and chronic exposure to this group of aquatic invertebrates. The blanket no effect ("NE") determinations the agency gave to aquatic mollusks—the majority of all listed aquatic invertebrates—must be remedied in the final BE for CTP.

Water quality is of primary concern for the conservation of mollusks and CTP is likely to be widely used and become a consistent pollutant in watersheds across the country. North America has the greatest diversity of freshwater mussels in the world and many species are rare or have severely declined, and far too many are facing extinction. ESA listed species like the fat pocketbook, spectaclecase, snuffbox, and southern clubshell mussels are highly imperiled and inhabit agricultural and/or urban watersheds where exposure to this pesticide is highly likely. In fact, a look at the MAGtool output for aquatic mollusks shows that – even with "usage" data – all aquatic mollusks' (excluding corals and the chambered nautilus) ranges are in the high overlap category with at least one use data layer.

The analysis of impacts to mollusks is not conservative for several reasons, but primarily because the BE analyzed aquatic and terrestrial mollusks separately from other invertebrates. This section primarily concerns aquatic mollusks (e.g., clams and mussels), but it applies equally to terrestrial mollusks (snails) because EPA relies on aquatic mollusks as a surrogate for terrestrial mollusks.[16] EPA has a much more robust dataset available for aquatic invertebrates (that results in a safety threshold that is orders of magnitude more protective) than it does for aquatic mollusks, yet it decides to rely on the much less protective safety threshold for aquatic

[13] NMFS, "Endangered and Threatened Wildlife and Plants; Proposed Listing Determinations for Three Distinct Population Segments of Atlantic Sturgeon in the Northeast Region" (Federal Register, 2010), 61874, https://www.federalregister.gov/documents/2010/10/06/2010-24459/endangered-and-threatened-wildlife-and-plants-proposed-listing-determinations-for-three-distinct.
[14] NMFS at 61874.
[15] NMFS at 61885.
[16] EPA, "Cyantraniliprole: DRAFT Biological Evaluation Effects Determination for Endangered and Threatened Species and Designated Critical Habitats," 2023, 105, https://downloads.regulations.gov/EPA-HQ-OPP-2011-0668-0072/content.pdf. Hereafter CTP Draft BE.

mollusks based on just one study. Listed species must be given the benefit of the doubt under the ESA, and EPA's draft methodology does not do this for aquatic mollusks. EPA must use the protective aquatic invertebrate effect thresholds for all aquatic invertebrates – even aquatic mollusks.

The available information about the toxicity of CTP is minimal and not protective of chronic exposure to long-lived mollusks. Even with a lack of available toxicity studies, the BE shows risk LOC exceedances for acute and chronic exposure[17] and sublethal impacts from CTP include growth inhibition.[18] There appears to be only one study available for the sublethal effects to aquatic mollusks that found the most sensitive endpoint known is and EC_{50}=520ppb for oyster shell deposition conducted with a 4-day study.[19] While this study does at least consider a non-lethal endpoint, it is not protective of chronic exposure due to its short duration. Most aquatic mollusks can have a decades long lifespan – much longer than most aquatic invertebrates – with many endangered mussels living 60-100 years. Freshwater mussels stay in one place their entire lives. For the EPA to look at a study that exposes a mollusk to a pesticide for four days over their 21,900- to 36,500-day lifespan and resultingly make a no effect determination is scientifically indefensible. Studies with longer exposure times are necessary and will almost certainly result in EPA changing those NEs to LAA determinations. The additional use of a 10x uncertainty factor would be justified to account for the database deficiency of not having a suitable long-term, chronic exposure test for mollusks. These uncertainty factors are standard practice in EPA risk assessments.

Beyond toxicity, the BE says that because there are no *direct* effects to fish then there will be no indirect effects to aquatic mollusks that rely on fish for dispersal.[20] We completely disagree with this approach, as it is contrary to basic principles of conservation biology and results in the agency ignoring obvious and significant harms to listed species. Mussels like the Georgia pigtoe in the family Unionoidae are also indirectly threatened by impacts to fish because fish play an essential role in their life cycle by carrying and dispersing the mussels during their glochidia phase. Many endangered mussels have obligate relationships with fish because their larvae need a fish host to survive. There is a clear pathway to harm here – harm to aquatic invertebrates can lead to reduction in fish populations which can lead to harm to listed freshwater mussels that have an obligate or general relationship with fish. The indirect impacts fish and to aquatic mollusks is not fully appreciated in the risk assessment framework and should be improved in the final BE. EPA found that just over 85% of listed fish species deserve an LAA call, many based on indirect effects.[21] The agency must update its operating procedures for how it handles indirect harm at multiple trophic levels. These cascading effects can have serious consequences to imperiled species and are currently unaccounted for in its indirect effects analysis and must be fixed in the final BEs.

[17] CTP Draft BE at 67.
[18] CTP Draft BE at 62.
[19] CTP Draft BE 62.
[20] CTP Draft BE at 74.
[21] CTP Draft BE at Appendix J.

EPA's current approach to assess risk to aquatic mollusks can have terrible consequences. Just take the example of the purple cat's paw pearlymussel. This species is one of the most endangered species in the USA – with population size estimates likely in the low 100s or even less than 100 individuals left on Earth. FWS's own analyses even implicate pesticides in leading to their decline.[22] They have incredibly small ranges and low population counts, and EPA found that the one use data layer overlaps with 93% of the species' range.[23] Even using flawed "usage" data, which was incorporated in to these analyses under a Trump era effort to undermine these analyses, the overlap and potential exposure is undeniable. Despite these species being on the brink of extinction and having the majority of their range and population certainly exposed to CTP, EPA's artificially high effect thresholds make it so that they both got a NE determination. **This facilitates extinction, not conservation.**

At the very least there must be a May Affect call for all aquatic mollusks, given the plain statutory language on how conservative the agency must be at this first step. Given the serious implications harm to fish can have on the reproductive cycle of many listed mollusks, a LAA call is more than warranted for aquatic mollusks based on indirect effects to fish.

III. Proposed Mitigation Measures to Address Jeopardy/Adverse Modification and Incidental Take

We have previously stated that the EPA should refine and target conservation measures by collaborating with the Services. Of utmost importance when designing label mitigations is that they are effective, simple, likely to be followed and enforceable. None of the proposed early mitigations achieve these four requirements. Prohibitions on applying pesticides when the wind is blowing in a certain direction or when it may or may not rain in an amount that will produce runoff in the next two days is insufficient for several reasons. These requirements are rife with subjectivity and are in many ways unenforceable. Mitigations that have a clear potential to be violated will not achieve their intended purpose and do not meet the legal standards required by the Endangered Species Act.

Furthermore, the EPA's continued use of unverifiable "usage data" also undermines conservation measures by failing to account for the authorized use of CTP. Usage data are not the best available science for determining a pesticide use footprint because they are not transparent, reliable or accurately predictive of future use[24] – especially in this era of climate chaos. Reliance on usage data limits the accuracy of the EPA's conclusions regarding likely harm to listed species from carbaryl.

Overall, the BE presents standard mitigations that are inadequate to prevent J/AM. Additionally, this is the first time EPA has intended to address incidental take as an early-mitigation in the absence of a Service BiOp. The BE incorrectly considers that the mitigations to address J/AM from drift and runoff are also adequate to address take. The BE presents no meaningful

[22] https://www.fws.gov/midwest/endangered/clams/purplecatspaw/index.html
[23] CTP Draft BE at Appendix J.
[24] NMFS, "Conference and Biological Opinion on the Environmental Protection Agency's Registration Review of Pesticide Products containing Carbaryl and Methomyl," 2023.

incidental take mitigations. We urge EPA to present meaningful mitigations for addressing unavoidable take to listed species. For mitigations to be successful in advancing conservation, the EPA should endeavor to protect known occupied sites through targeted conservation measures and analyze impacts to species based on the amount of pesticide legally authorized on the label.

Below we propose mitigations that are strong and simple in an effort to strengthen compliance and protect species.

A) Critical Habitat Must be Fully Protected from Pesticides

The proposed early mitigations to address J/AM and incidental take to listed species do not address the serious threat of pesticide use on designated critical habitat. We strongly urge EPA to prohibit all pesticide use in designated critical habitat of all listed species throughout the entire year, excepting any use that directly benefits a listed species or a legitimate conservation or human health objective, such as removing invasive species or treating serious disease.

Critical habitat is essential to the survival and recovery of ESA listed species. Critical habitat is often the only source of remnant, high-quality habitat left for many species and pesticides have no place in these designated areas. Restricting pesticide use in critical habitat is an easy, efficient mitigation that EPA can and should implement for all listed species that will go a long way towards protecting species.

B) Hawaii State-level Mitigations

We urge the EPA to work with registrants to present mitigations to protect endangered plants and animals in Hawaii and other U.S. territories by tailoring protections across the board for all pesticides in these places. Hawaii has by far the most listed species of any state in the nation, 486. Removing Hawaii and other territories from the action area or presenting other broad restrictions would make compliance with the ESA much easier and more efficient. Hawaii has been removed from consideration for other pesticides including for atrazine[25] and EPA is considered removing Hawaii use as a baseline mitigation for the ESA pilot species exposure assessment for the insecticide carbaryl.[26] However, the proposed early mitigations for CTP do not include any mitigations for Hawaii or other territories. This is especially troublesome given that populations of the Hawaiian yellow-faced bee (*H. longiceps*) and the dwarf naupaka will need additional protections by virtue of their proximity to golf courses. Some examples of Hawaii specific mitigations could include geographic restrictions such as removing certain islands from consideration, limiting application to below a certain elevation, and restricting certain uses and application methods. Other particularly vulnerable species will likely need

[25] https://www.epa.gov/pesticides/epa-releases-final-biological-evaluations-glyphosate-atrazine-and-simazine
[26] EPA, "Carbaryl: Draft Evaluation Supporting Proposed Mitigations Predicted to Avoid Jeopardy and Adverse Modification of Designated Critical Habitat and Reduce Take for Four Federally Listed Endangered and Threatened Species," 2022, 84.

tailored, targeted conservation measures to protect them from pesticide exposure. We stand ready to work with you on identifying these tailored measures.

C) Inadequate Protections from Pesticide Runoff

Cyantraniliprole presents considerable risk of runoff, and preventing J/AM and take requires substantial runoff mitigations. CTP is mobile, does not appreciably bind to soil (K_{oc}=241)[27], and has an aerobic soil half-life of 129.8 days[28] and photolysis soil half-life of 12.5 days.[29] The proposed mitigations to address J/AM and take due to runoff rely on the existing label language that requires vegetative filter strips near bodies of water and a pick-list of additional mitigations. The proposed runoff mitigations may be effective at reducing some runoff, but present considerable compliance issues because they lack clear requirements.

For starters, EPA states that to address J/AM and take the estimated environmental concentrations need to be reduced by 20%.[30] It is unclear from the mitigations document where this unambitious 20% reduction goal was derived and greater clarity is needed. EPA calculated EECs from cotton and soy that ranged slightly above the LC_{50} for aquatic insects that are prey for the Carolina madtom and the Neosho madtom and presumably reason that lowering the EECs to the LC_{50} concentration would be adequate to avoid J/AM. There is no evidence or precedent in the FWS malathion BiOp that lowering the EECs down to a concentration that would kill 50% of the exposed aquatic insect prey would avoid jeopardy or adverse modification. EPA must set a more ambitious reduction goal to reduce runoff concentrations to the no observed adverse effect concentration ("NOAEC").

The primary mitigation to reduce runoff is the vegetative filter strip. Filter strips are already required on the CTP label but are vague and do not present users with adequate information. Vegetative filter strips are only effective when properly designed and maintained and can have highly variable effectiveness. The current label language (Exirel) for filter strips states

> "Do not make ground applications within 25' or aerial applications within 50' of lakes, rivers, reservoirs, permanent streams, marshes, natural ponds, estuaries or coastal areas. Do not cultivate within 25' of these aquatic areas to allow growth of a vegetative filter strip."

This language simply instructing users to not cultivate areas within 25' of a body of water is insufficient to promote the proper functioning of a filter strip and must be improved. Simply not plowing an area right next to a waterway is not a vegetative filter strip. If EPA wants to require filter strips, then the label must present requirements and detail about what constitutes a functioning filter strip. Under current label language, the 25' filter strip could be bare dirt or

[27] CTP Draft BE at 7.
[28] CTP Draft BE at 22.
[29] CTP Draft BE at 7.
[30] EPA, "Cyantraniliprole: Evaluation of Potential Mitigations to Address Predicted Listed Species Effects Identified in the Draft Biological Evaluation," 2023, 7, https://downloads.regulations.gov/EPA-HQ-OPP-2011-0668-0071/content.pdf. Hereafter CTP Evaluation of Potential Mitigations.

closely mowed broadleaf plants that provides no benefit. Please see our comments on EPA's ESA Workplan Appendix[31] for our position on the requirements of vegetative filter strips as well as the other runoff mitigations proposed in Appendix B of the mitigation evaluation document.[32] Again, any "advisory" language for filter strips is not "mandatory," and it is not mitigation.

EPA states that the proposed mitigations to address J/AM for listed species is also enough to minimize take.[33] We strongly disagree with this assessment and urge EPA to present additional mitigations to address take. Reducing the EECs to a level that is still toxic to half of exposed aquatic insects is in no way scientifically defensible.

Mitigations should do more than require practices that are already widely adopted. Runoff mitigations must spur real changes in broad farming practices. Requiring growers to do things that already represent general best-practices will be ineffective and will not accomplish pesticide pollution reduction goals. We urge EPA to propose stronger runoff mitigations that are enforceable. EPA should implement a standard, minimum 100 ft buffer from waterways to protect listed and non-listed species. Included with the 100 foot buffer should be a minimum of a 30 foot vegetative filter strip. Given the runoff potential of CTP, wider buffers and vegetative filter strip requirements may be required.

D) Inadequate Protections from Pesticide Drift and Volatilization

The draft BE for CTP presents boilerplate mitigations for drift and volatilization that are inadequate to address the serious, widespread threats to ESA-listed and non-listed wildlife. Wind directional buffers of 60 or 100ft for aerial or 25ft for ground with droplet size restrictions are inadequate to address J/AM. The BE also presents no additional mitigations to address take. We strongly disagree that the proposed limited buffers and droplet size restrictions are enough to address incidental take. We urge EPA to implement a standard, minimum 100-foot omnidirectional buffer for ground applications and a 250-foot omnidirectional buffer for aerial applications to protect listed and non-listed species.

Buffers that include a wind directionality component are simply not going to be adequately complied with and are impossible to enforce. A recent survey of farmers in Missouri indicated that less than half – only 43 percent – actually read the label each time they use pesticides.[34] Four percent of pesticide applicators never checked the wind speed before application and 40 percent of applicators checked wind speed by looking at trees, a very unreliable form of measurement that is often inaccurate. This is how pesticide labels are complied with in the real world. While the label is the law, as we've learned with dicamba, it just doesn't work to have label language

[31] Included in uploaded materials to the docket.
[32] CTP Evaluation of Potential Mitigations at 11.
[33] CTP Evaluation of Potential Mitigations at 8.
[34] Randall, "57 percent of those applying pesticides in Missouri do not read label instructions", July 13th, 2016, State news, Available at: http://www.kttn.com/57-percent-of-those-applying-pesticides-in-missouri-do-not-read-label-instructions/.

that's impossible or unlikely to be complied with.[35] Label mitigations must be simple and easy to implement, or they will be plagued by lack of compliance.

In addition to wider, omnidirectional buffers, we urge EPA to cancel aerial application uses given the increased likelihood of drift compared to ground application. Registrants admit that for other insecticides such as carbaryl, the economic benefit of aerial over ground application is minimal[36] and therefore could be eliminated.

EPA suggests that several agronomic practices could be used to reduce the risk of offsite drift including windbreaks.[37] If EPA believes that this or other mitigations will provide a meaningful reduction in drift that would help address J/AM and/or take, then the agency must make the mitigation mandatory. We remind EPA that "advisory" language is not "mandatory," and it is not mitigation.

E) EPA Must Account for the Greater Toxicity of Pesticide Mixtures

Restrictions on tank mixing and certain multi-ingredient pesticides in listed species habitat must become a common fixture in developing mitigations to prevent jeopardy and adverse modification and minimizing unavoidable take. We understand that this is an area EPA habitually avoids, perhaps because it is a complicated arena to wade into, but the allowance of these mixtures is an unavoidable part of the action EPA is taking and therefore must be mitigated. For all pesticides, we support a requiring a rate reduction when combined with other pesticides that affect the same organ system or broad adverse outcome pathway.

F) Seed Treatment Mitigations

CTP is registered for use as a seed treatment on many crops and presents risk to ESA listed species. EPA's previous risk assessments show that seed treatments present acute and chronic risks to aquatic invertebrates as well as to mammals.[38] CTP as a seed treatment is applied at a lower rate than foliar uses, but can still drift or runoff from the application site. However, EPA ignores the drift effect of abraded seed dust and wind blown dust contaminated with CTP.[39] EPA claims that there is too much uncertainty to reliably quantify this route of exposure from seed dust.[40] Given this potential exposure from drift and runoff, EPA presents no early mitigations for the effects of CTP seed treatments. EPA cannot assume that the current mitigations for CTP will sufficiently minimize incidental take from the impact of seed treatments. If EPA is going to

[35] Nat'l Family Farm Coalition v. USEPA. United States Court of Appeals for The Ninth Circuit. No. 19–70115. 2020. Available here: https://cdn.ca9.uscourts.gov/datastore/opinions/2020/06/03/19-70115.pdf.
[36] James Cowles, Scott Pace, and Craig Bernard, "RE: Proposed Changes to Agricultural Use Labels for Carbaryl (PC Code 056801) for PID Pilot Species (Squirrel Chimney Cave Shrimp, Miami Tiger Beetle, Wireweed, and the Upper Columbia River Steelhead)," September 29, 2022.
[37] CTP Evaluation of Potential Mitigations at 6.
[38] CTP Draft BE at 17.
[39] CTP Evaluation of Potential Mitigations at 28.
[40] CTP Evaluation of Potential Mitigations at 28.

propose efforts to minimize take and prevent J/AM, it must address seed treatment uses in addition to drift and runoff of foliar applied pesticides.

IV. New Uses for Cyantraniliprole

We are very concerned about EPA's on-going registration of new uses for active ingredients. EPA's policy on new uses is that new uses are not subject to consultation under the ESA. We strongly disagree with this approach. New uses present unique and different risks to listed species. Based on EPA's insistence on usage data should be reason enough to argue that new consultation is required for every additional use that is added to a registration. New uses inherently produce different usage patterns and these patterns are not captured in the initial consultation. We have argued many times that reliance on usage data is flawed and this is yet another reason because it purposely ignores new, potential uses. Under the ESA, any new use that can harm a listed species must be considered or otherwise consultation must be reinitiated.

V. EPA Must Fully Comply with the ESA and FIFRA by September 2023

In addition to specific comments on the CTP draft BE, the Centers provides the following comments concerning EPA's duties to complete consultation and "replace its previous order with an order consistent with the ESA by September 2023." *In re Ctr. for Biological Diversity & Ctr. for Food Safety*, 53 F.4th 665, 673 (D.C. Cir. 2022). This means that EPA must comply fully with its substantive ESA duties, not simply initiate consultation. Moreover, when replacing its 2014 CTP registration order with one consistent with the ESA, EPA also must fully comply with its duties under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA").

A) EPA must fully comply with its substantive ESA duties

As EPA knows, the Court of Appeals for the D.C. Circuit granted the Center's Petition for Writ of Mandamus and ordered this strict remedy because for five years, EPA had failed to comply with the court's initial 2017 opinion holding EPA had admittedly violated the ESA, remanding without vacatur, and instructing EPA "to replace the registration order with one 'consistent with [its] opinion,' … *i.e., a new registration order* signed *after* an effects determination and *any required consultation*." *Id*. at 669 (*citing* the initial opinion and order, *Ctr. for Biological Diversity v. EPA*, 861 F.3d 174 (D.C. Cir. 2017) (emphasis added)).

When issuing a new registration order for CTP, EPA must comply with its substantive ESA duties. EPA has a mandatory, substantive duty to "insure" authorizations of pesticides are not likely to jeopardize any species or adversely modify any designated "critical" habitat. 16 U.S.C. § 1536(a)(2); *Ctr. for Envtl. Health v. Wheeler*, 429 F. Supp. 3d 702, 717 (N.D. Cal. 2019); *Id*. at 718 ("The ESA does not simply require the EPA to *initiate* consultation, however, but rather *to consult* with FWS [U.S. Fish & Wildlife Service]. Until the consultation process is concluded, that obligation continues.") (emphasis in original). EPA's duties mandated by the ESA are *not* limited to initiation of consultation. In other words, if EPA simply initiates consultation, followed by years of delay in completing consultation, EPA has not satisfied its substantive ESA duties to avoid jeopardy to species or adverse modification to critical habitats. *Thomas v.*

Peterson, 753 F.2d 754, 764 (9th Cir. 1985) (if agency action is allowed to proceed without substantial compliance with the consultation procedure, "there can be no assurance that a violation of the ESA's substantive provisions will not result. The latter, of course, is impermissible.")

In EPA's first and second status reports to the D.C. Circuit, EPA states that it intends to complete an ESA effects determination for CTP in or before September 2023. *See In re Ctr. for Biological Diversity*, No. 21-1270, Doc #1982706 at 5, ¶ 10 (Jan. 23, 2023) (hereafter First Status Report). EPA has created delay in the process by adding 60 days of public comment to complete the BE, which the D.C. Circuit noted is not required by statute. *In re Ctr. for Biological Diversity*, 53 F.4th at 672. Accordingly, the court granted the Writ and ordered the September 2023 deadline, rather than trusting EPA's internal deadlines. Again, completion of an effects determination does not satisfy EPA's substantive ESA duties.

EPA cannot rely on ESA Section 7(d) to satisfy its substantive ESA duties. Section 7(d) provides that after initiation of consultation:

> [T]he and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures . . . .

16 U.S.C. § 1536(d); 50 C.F.R. § 402.09 (prohibition of irreversible or irretrievable commitments "continues until the requirements of section 7(a)(2) are satisfied."). In its status report, EPA states that "it may still be able to proceed with the action before completing consultation if it determines that doing so" will not violate Section 7(d). First Status Report at 4-5 ¶ 8. If EPA initiates formal consultation, EPA states that it expects to include a determination that registered uses of CTP will not violate Section 7(d). Any such "determination" by EPA that continued use of CTP is allowed by Section 7(d) is untenable.

First, EPA once again puts the cart before the horse—stating it will amend registrations before completing consultation—which will not ensure the consulting agencies agree that EPA's registration actions on CTP will avoid jeopardy to listed species, adverse modification of species' critical habitat, or avoid or limit ESA Section 9 take of listed species. *In re Ctr. for Biological Diversity*, 53 F.4th at 671 (EPA had a clear ESA duty *before* registering CTP).

Second, Section 7(d) is inapplicable here. Courts have generally interpreted the purpose of section 7(d) as ensuring that the status quo will be maintained during the consultation process, assuming the action is not proceeding while consultation is ongoing, unlike the continuing use of CTP here. *Connor v. Buford*, 848 F.2d 1441, FN 34 (9th Cir. 1998). In a case involving EPA's failure to comply with the ESA before it registered numerous pesticides, the Court of Appeals for the Ninth Circuit has explained that Section 7(d) is inapplicable when "the very maintenance of the 'status quo'" is harming endangered species. *Wash. Toxics Coal. v. EPA*, 413 F.3d 1024, 1035 (9th Cir. 2005).

Third, even if Section 7(d) is applicable, EPA cannot take any action that will foreclose reasonable and prudent alternatives. The Ninth Circuit held that the Bureau of Reclamation violated Section 7(d) when it proceeded to renew water contracts prior to *completion* of consultation because the savings clauses in the water contracts did not permit reduction in the amount of water to be delivered, foreclosing a reasonable and prudent alternative. *NRDC v. Houston*, 146 F.3d 1118, 1127-28 (9th Cir. 1998). The Ninth Circuit held that the district court did not abuse its discretion when it rescinded the water contracts because "[w]here contracts have already been entered into, the opportunity to 'choose' has been eliminated—all that remains is the limited ability to make the path chosen as palatable as possible." *Id.* at 1129.

NRDC is analogous to the situation here, where EPA plans to issue a new registration order, as required by the D.C. Circuit, but *prior* to completion of consultation and implementation thereof. Similar to the 40-year water contracts in *NRDC*, FIFRA registrations potentially last for decades, unless suspended or cancelled, whether voluntarily or through FIFRA cancellation proceedings, the latter of which, EPA has acknowledged, could take years.

In view of *NRDC*, the Centers stress that any new registrations of CTP must occur after completion of consultation to ensure that FWS and NMFS agree that EPA is meeting its substantive ESA obligations and not exposing ESA-protected species or their critical habitats to jeopardy or adverse modification while consultation is completed. Otherwise, the continued use of CTP places species and their habitats at risk of harm, potentially extinction.

Fourth, should EPA nevertheless take CTP registration actions prior to completion of consultation, EPA has the burden to demonstrate that any action it takes is "non-jeopardizing" and will not result in destruction or adverse modification of critical habitats. *Wash. Toxics*, 413 F.3d at 1035. As a starting point, without more, "EPA's own 'may affect' determinations generally preclude any conclusion of no-jeopardy," *i.e.*, any "potential for negative effects." *Wash. Toxics Coal. v. EPA*, No. C01-132C, 2003 U.S. Dist. LEXIS 26088, *32 (W.D. Wash. Aug. 8, 2003), *affirmed*, 413 F.3d 1024 (9th Cir. 2005); *id*. at *32 n.17 (injunction did not include species for which EPA had made a "no effect" determination); *see also Greenpeace v. Nat'l Marine Fisheries Serv.* 106 F.Supp.2d 1066, (W.D. Wash.) (injunction granted pending compliance with substantive ESA duties because there were "potential negative effects" on Stellar sea lion critical habitat); *Cf. Southwest Ctr. for Biological Diversity v. U.S. Forest Serv.*, 307 F.3d 964, 973 (9th Cir. 2002) (court declined to enjoin all cattle grazing pending completion of ESA consultation because the Forest Service had taken protective measures—excluding cattle from riparian areas, resulting in improved habitat conditions—that ensured "little, if any, impact on the loach minnow").

Fifth, in any attempt to characterize CTP registration actions as "non-jeopardizing" or not adversely modifying critical habitat, EPA must consider both the *timeframe* for completion of consultation, the multitude of existing threats to ESA-protected species and their critical habitats, including other pesticides, and, in particular, species with limited populations or ability to sustain continued exposure over time.

As for the timeframe, EPA must consider how very long it may take to complete consultation on CTP registrations, thereby resulting in year after year of exposure and repeated harm to ESA-protected species and their critical habitats from CTP and other pesticides. As EPA is aware, since January 2017, the U.S. Fish & Wildlife Service ("FWS") has only completed *one* nationwide consultation on a pesticide, malathion, and FWS only issued that biological opinion after faced with a lawsuit alleging it had unreasonably delayed its ESA duties. *Ctr. for Env't Health v. Wheeler*, No. 18-cv-03197 SBA, 2022 U.S. Dist. LEXIS 60692, *5 (N.D. Cal. Mar. 31, 2022) (FWS agreed through a court-entered settlement that it would complete the biological opinion by February 28, 2022). In other words, it took more than five years and a lawsuit for FWS to issue a nationwide biological opinion for one pesticide. The National Marine Fisheries Service ("NMFS") has a slightly better track record, but not by much. In other words, EPA cannot conclude that its actions are "non-jeopardizing" without scientifically demonstrating that no jeopardy will occur over a potentially extended time period for completion of consultation. *See Southwest Ctr.*, 307 F.3d at 973 (in declining to enjoin all grazing, in addition to Forest Service voluntary measures that resulted in habitat improvement, consultation was nearing completion). There is significant risk that species populations decline or critical habitat is diminished such that there is no chance of recovery.

Moreover, EPA should not be complicit in extending any consultation timeframe. The ESA requires completion of consultation within 90 days of its initiation. 16 U.S.C. § 1536(b)(1)(A).[41] Of course, EPA should complete consultation *before* taking any action CTP registration actions. 16 U.S.C. § 1536(a)(3) (consultation required "on any prospective agency action"); *Ctr. for Biological Diversity*, 861 F.3d at 177-79, 188 n.10. While the ESA contemplates extension of this timeframe, any extension requires that EPA *agree* to it. 16 U.S.C. § 1536(b)(1)(A). Thus, EPA has some control over the timeframe to complete consultation because it is within its discretion not to agree to an extension.[42] *Ctr. for Envtl. Health v. Wheeler*, 429 F. Supp. 3d at 716 (denying motion to dismiss claim that EPA had unreasonably delayed completion of consultation, despite mutually agreed upon extensions).

An assessment of the EPA's own Biological Evaluations illustrates the substantial harm that pesticides continue to cause to threatened and endangered species and their designated critical habitats. EPA must take the threat from these pesticides and other threats into account. By compiling the information in the Biological Evaluations for chlorpyrifos, diazinon, malathion, carbaryl, methomyl, glyphosate, atrazine, simazine, imidacloprid, thiamethoxam, clothianidin and sulfoxaflor (draft) it is readily apparent just how common it is for pesticides to harm species and their critical habitats — in fact, it is the norm, not the exception that pesticides harm species and their critical habitats.

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[41] 50 C.F.R. § 402.14(e)(3) states only that the Services shall deliver a biological opinion "within" 45 days after concluding consultation, meaning that the Services need not take the entire 45 days, especially if the Services conclude any species are jeopardized or critical habitat adversely modified.

[42] The same can be said for any registrant that agrees to any extension pursuant to 16 U.S.C. § 1536(b)(1)(B)(ii).

Of the 1706 listed species evaluated,[43] the EPA itself concluded that:

- 389 species are likely to be adversely affected by all 12 pesticides
- 286 species are likely to be adversely affected by 11 pesticides
- 106 species are likely to be adversely affected by 10 pesticides
- 161 species are likely to be adversely affected by 9 pesticides
- 247 species are likely to be adversely affected by 8 pesticides
- 186 species are likely to be adversely affected by 7 pesticides
- 146 species are likely to be adversely affected by 6 pesticides
- 39 species are likely to be adversely affected by 5 pesticides
- 20 species are likely to be adversely affected by 4 pesticides
- 80 species are likely to be adversely affected by 3 pesticides
- 5 species are likely to be adversely affected by 2 pesticides
- 0 species are likely to be adversely affected by 1 pesticide
- 41 species are likely to be adversely affected by 0 pesticides

Of the 801 listed species with designated critical habitat evaluated, the EPA concluded that:

- 117 critical habitat designations are likely to be adversely affected by all 12 pesticides
- 139 critical habitat designations are likely to be adversely affected by 11 pesticides
- 46 critical habitat designations are likely to be adversely affected by 10 pesticides
- 73 critical habitat designations are likely to be adversely affected by 9 pesticides
- 127 critical habitat designations are likely to be adversely affected by 8 pesticides
- 118 critical habitat designations are likely to be adversely affected by 7 pesticides
- 107 critical habitat designations are likely to be adversely affected by 6 pesticides
- 22 critical habitat designations are likely to be adversely affected by 5 pesticides
- 14 critical habitat designations are likely to be adversely affected by 4 pesticides

[43] Some species, such as the rusty-patched bumble bee, are not included in all 12 BEs because they were listed after some of the BEs were completed.

- 27 critical habitat designations are likely to be adversely affected by 3 pesticides
- 1 critical habitat designation is likely to be adversely affected by 2 pesticides
- 0 critical habitat designations are likely to be adversely affected by 1 pesticide
- 10 critical habitat designations are likely to be adversely affected by 0 pesticides

Should EPA issue new registration decisions prior to completion of consultation, it must take these threats into account.

B) EPA must fully comply with FIFRA

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) governs the registration, distribution, sale, and use of pesticides in the United States. In registering pesticides, the core standard is the "unreasonable adverse effects" standard. That is, EPA applies a cost-benefit analysis "to ensure that there is no unreasonable risk created for people or the environment from a pesticide." *Pollinator Stewardship Council v. EPA*, 806 F.3d 520, 522-23 (9th Cir. 2015).

EPA cannot meet the FIFRA standard to unconditionally register CTP and products containing CTP if it does not complete ESA consultation prior to taking any CTP registration actions because it does not have sufficient information to do so. The Centers maintain that EPA cannot take any registration action prior to completion of consultation, however, at a minimum, any new registrations of the active ingredient CTP and products containing CTP must be limited to conditional registrations. FIFRA provides for conditional registration before generation of required data, which must include data demonstrating the registration actions are "non-jeopardizing" to listed species and not likely to harm critical habitats. 7 U.S.C. § 136a(c)(7). A conditional registration retains EPA authority to condition registrations to benefit listed species, otherwise, it is knowingly violating its ESA Section 7 substantive duties. *Turtle Island Restoration Network v. Nat'l Marine Fisheries Serv.*, 340 F.3d 969, 977 (9th Cir. 2003); *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1053 (9th Cir. 1994)

The FIFRA standard to unconditionally register a pesticide is "higher" and "more burdensome" than the standard for conditional registration. *Nat'l Family Farm Coal. v. EPA*, 966 F.3d 893, 915-16 (9th Cir.2020). EPA may only grant a conditional registration if it "determines that use of the pesticide during such period will not cause *any* unreasonable adverse effect on the environment, and that use of the pesticide is *in the public interest*." 7 U.S.C. § 136a(c)(7) (emphases added); *cf.* 7 U.S.C. § 136a(c)(5) (unconditional registration "will not generally cause unreasonable adverse effects on the environment."). Moreover, unconditional registration allows the EPA to more quickly cancel registrations that are harming listed species of their critical habitats. 7 U.S.C. § 136d(e).

In any case, if EPA takes any registration action prior to completion of consultation, in determining whether there are "any" unreasonable adverse effects, or whether conditional registration is in the public interest, EPA must give appropriate weight to the adverse effect to

species and their critical habitats. FIFRA defines "unreasonable adverse effects on the environment" to mean "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide." 7 U.S.C. § 136(bb). In contrast to FIFRA, Congress enacted the ESA to ensure the survival and recovery of endangered species and their critical habitats. 16 U.S.C. § 1631(b), (c) (purpose to conserve and policy to further purposes). Congress made a "conscious decision" to give endangered species priority over the 'primary missions' of federal agencies." *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 185 (1978). Section 7 is the ESA's "heart," crucial to the conservation and recovery of ESA-protected species. *California ex rel. Lockyer v. U.S. Dep't of Agric.*, 575 F.3d 999, 1018 (9th Cir. 2009). In any cost-benefit analysis, ESA-protected species and their critical habitats must be given the highest priority.

In addition, EPA must undertake a full analysis of costs and benefits as of 2023. EPA cannot rely on a cost-benefit analysis from its January 2014 registration decision. Any benefits of CTP have changed. For example, EPA granted a repeat FIFRA Section 18 Exemption for use of clothianidin on citrus, in part, because there have been "[r]ecent reductions in the effectiveness of cyantraniliprole due to incipient resistance in ACP [Asian citrus psyllid] populations."[44] Moreover, EPA cannot fully rely on status as a reduced risk pesticide. As the D.C. Circuit pointed out, "in truth, cyantraniliprole poses a reduced risk to only some species. EPA's own risk assessment indicates" high or very high toxicity to terrestrial insects and other invertebrates. *In re Ctr. for Biological Diversity*, 53 F.4th at 668-69.

Finally, EPA has FIFRA authority to suspend registrations to protect endangered or threatened species; a fact EPA omits from its status report to the D.C. Circuit. EPA states that it is working with the three registrants for the 22 products containing CTP, and it "believes" it will be able to issue orders amending the registrations in or before September 2023. Status Report at 6-7, ¶¶ 14-15. But EPA claims that if the registrants do not cooperate, EPA may not be able to meet that deadline and will seek additional time from the court. *Id.* at 7, ¶¶ 16-17. EPA claims its only other option is to initiate time-consuming cancellation proceedings under FIFRA Section 6(d), 7 U.S.C. § 136d(b). *Id.* at 7, ¶ 17 and at 2, ¶ 4. If this comes to pass, EPA has a duty under the ESA to exercise its suspension authority. FIFRA provides EPA the authority to suspend use of a pesticide if necessary "to prevent an imminent hazard . . . ." 7 U.S.C. § 136d(b)(2), (c); 7 U.S.C. § 136(l) (defining "imminent hazard" to include when continued use of a pesticide "will involve unreasonable hazard to the survival of a species declared endangered or threatened" pursuant to the ESA. This FIFRA provision would allow EPA to meet its substantive ESA duties.

VI. Conclusions

We generally support EPA's recognition that compliance with the Endangered Species Act will require several strategies, some of which will overlap. Such mitigations can be achieved through broad label changes, either those that encompass the entire U.S., state-level strategies in places

[44] EPA Memo re: Repeat Section 18 – Specific Exemption at 4 (Sept. 9, 2022), EPA-HQ-OPP-2021-0952-0019.

like Hawaii, strategies that focus on high pesticide use areas that have a high concentration of at-risk species (like CA's Central Valley or FL's Lake Wales Ridge), and geographically targeted Bulletins that provide specific conservation measures for species that require unique protections from pesticides.

We again wish to raise our concerns with the EPA's overreliance on the fundamentally flawed FWS malathion BiOp as its guide for predicting jeopardy and adverse modification. The NMFS chlorpyrifos, diazinon and malathion BiOps (as well as many of the regional BiOps completed by NMFS) provide a much more scientifically and legally-sound way of predicting jeopardy and adverse modification and should be the sole methodology used by the EPA moving forward.

Overall, EPA must significantly bolster its proposed mitigations. The early mitigations presented in this BE are inadequate to prevent J/AM and the BE presents no mitigations to adequately address incidental take. If EPA is serious about addressing the harms to pesticides early in the consultation process, then the agency must provide meaningful and impactful mitigation measures.

Thank you for your consideration of these comments,

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